



تحت رعاية صاحب السمو

الشيخ الدكتور سلطان بن محمد القاسمي

عضو المجلس الأعلى للاتحاد، حاكم الشارقة  
الرئيس الأعلى لجامعة الشارقة

مركز البحوث والدراسات  
جامعة الشارقة

ينظم

## الملتقى السنوي الأول للبحث العلمي في جامعة الشارقة

٧-٦ ربيع الثاني ١٤٢٦هـ الموافق ١٤-١٥ مايو ٢٠٠٥ م





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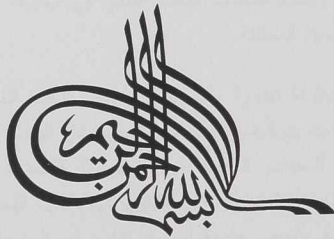
# الملتقى السنوي الأول للبحث العلمي في جامعة الشارقة

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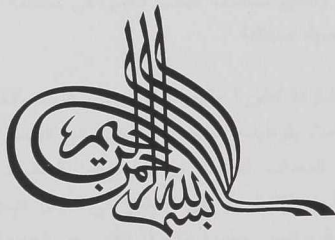


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## مقدمة

يعتبر البحث العلمي في جامعة الشارقة ركناً من أركان نشاطها نظراً لأهميته في زيادة المعرفة وتطوير التطبيقات العلمية وانعكاساته على التنمية الاجتماعية والاقتصادية. وتحرص الجامعة على توفير بيئة متميزة لتحفيز البحث العلمي وتقديم الدعم المادي والعيني والحوافز المناسبة للباحثين. ولتحقيق أهداف الجامعة في مجال البحث العلمي أنشئ مركز البحوث والدراسات في جامعة الشارقة في مارس عام ١٩٩٩ لتلبية الحاجة لتنمية وتنظيم نشاطات البحث العلمي في الجامعة إضافة إلى تنفيذ الأنشطة البحثية والمجتمعية المختلفة.

ولقد حققت جامعة الشارقة تطوراً ملحوظاً في مجال البحث العلمي خلال السنوات الماضية، حيث قامت بتوظيف أكاديميين متميزين في البحث العلمي في مجالاته المختلفة ووفرت المعدات الحديثة في مختبراتها المتعددة. وتواصلت الجامعة سعيها الحثيث والجاد للاستمرار في التطور في مجال البحث العلمي المستهدف ذي الجودة العالية. وتسعى جامعة الشارقة لتكون من الجامعات السباقة في الدولة وفي المنطقة في مجال البحث العلمي، فمن خلال البحث العلمي تقوم الجامعة بتطوير التعليم وتضيف إلى سمعتها الجيدة وتخدم التطور الضروري من الناحية العلمية والمهنية والاقتصادية والاجتماعية في المجتمع. وتسعى جامعة الشارقة في مجال البحث العلمي إلى تحقيق ما يلي:

- التميز البحثي.
- التركيز على البحوث المتكاملة متعددة التخصصات.
- إشراك طلابها في مجال البحث العلمي وتطوير قدراتهم البحثية.
- تشجيع البحث العلمي الجاد والهادف.

ويهدف هذا الملحق إلى توضيح ما توصل إليه البحث العلمي من نمو وتطور خلال السنوات الفائتة في الجامعة والتخطيط للنشاط البحثي المثمر للسنوات القادمة.







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Abstracts**



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مشاريع البحوث المدعومة  
**Funded Research Projects**



## حماية المستهلك من منظور إسلامي

د. عبد الحق حميش

قسم الشريعة - كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

لقد اعتنت الشريعة الإسلامية بحقوق الفرد ومن ضمنها حقوقه المتعلقة باستهلاكه عناية فائقة، وإذا كان المشرع الوضعي الغربي لم يضع حماية المستهلك في قوانينه الوضعية إلا بعد عام ١٩٤٥ م، فإن صياغة حقوق المستهلك في الإسلام تمت في عصر تكوين الرسالة في عهد النبي صلى الله عليه وسلم. موضوع البحث هو حماية المستهلك، الذي أصبحت رعايته والاهتمام بحقوقه من أهم الواجبات الأساسية للدولة المعاصرة بمختلف أجهزتها المعنية. يهدف هذا البحث إلى تقديم خدمة للمستهلك من حيث تثقيفه وتعريفه بحقوقه، وكى يدرك مسؤولياته كمستهلك له حقوق وعليه واجبات، وبحث سبل وقايته ورعايته في ظل اقتصاد معاصر مفتوح.

لقد قسم البحث إلى تمهيد عرف فيه مصطلح المستهلك، وخمسة فصول: الأول منها في قواعد وأحكام حماية المستهلك في الشريعة الإسلامية ببيان نظرية العقود في الإسلام، ومنع الغش والاحتكار والنهي عن بعض المعاملات حماية للمستهلك. وتناول الفصل الثاني قواعد سلوك المستهلك في المجتمع الإسلامي وترشيد الاستهلاك. أما الثالث فعرض وسائل حماية المستهلك مثل مراقبة الأسواق والاهتمام بالموازين والمكاييل والمقاييس والتسعير وضبط وسائل الدعاية... أما الجهات المساعدة في حماية المستهلك (كديوان الحسبة وهيئة المواصلات والمقاييس وجمعيات حماية المستهلك...) فجاغت مباحثها في الفصل الرابع. هذا وخصص الفصل الخامس والأخير لبحث حماية المستهلك الإلكتروني. وختم البحث بعرض نتائج الاستبيان، وأهم ما توصل إليه الباحث من معلومات وتوصيات بخصوص حماية المستهلك من منظور إسلامي.



## منهجية الأصوليين في طرق البيان

د.صبحي محمد جميل

قسم الشريعة - كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

حاولت في هذا البحث أن أقدم دراسة متكاملة في إطار النظرة الشمولية عن البيان ومباحثه وقد قسمت هذا البحث إلى ثلاثة مباحث.

ففي المبحث الأول: تناولت تعريف البيان لغة واصطلاحاً، وكذلك تعريف البيان عند الإمام الشافعي ومراتبه للأحكام عنده من خلال كتاب الرسالة، كما بينت مسلك ابن حزم في البيان وكذلك منهج الإمامية. وفي المبحث الثاني: تناولت طرق البيان عند الأصوليين وهي: البيان بالقول، ويكون قولاً من الله عن طريق تخصيص العام وبيان مدة الفرض، وكذلك بيان القرآن من الرسول صلى الله عليه وسلم بالقول.

كما تناولت البيان بالفعل، وأن البيان الفعلي أقوى من البيان القولي على رأي من رأى ذلك لأن المشاهدة أدل على المقصود وأوضح من القول وأسرع في الفهم وأثبت في الذهن. كما تناولت البيان بالكتابة، والبيان بالإشارة والبيان بإقراره عليه السلام، وكذلك البيان بالترك، والبيان بالإجماع، والبيان بالتنبيه على العلة مع بيان أنواع الدلالة على العلية. ثم ختمت هذا المبحث في آراء الأصوليين في تأخير البيان عن وقت الحاجة إلى الفعل، وكذلك تأخير البيان عن وقت ورود الخطاب إلى وقت الحاجة، كما بينت آراء الأصوليين في تأخير البيان على التدرج. وفي المبحث الثالث: تناولت أنواع البيان، النوع الأول: بيان تقرير وسمي هذا النوع من البيان تقريراً، لأنه مقرر لما اقتضاه الظاهر بقطع احتمال غيره فيكون مؤكداً وقاطعاً احتمال المجاز، إذا كان المراد بالكلام مؤكداً حقيقة، ويكون قاطعاً لاحتمال الخصوص إذا كان مؤكداً عاماً. أما النوع الثاني: فبيان تفسير، وهو بيان ما فيه خفاء في المشترك والمجمل ونحوهما، وذكرت أنواع غير الواضح الدلالة عند الحنفية بالشرح مع الأمثلة والتطبيقات وهي الخفي والمشكل والمجمل والمتشابه. وأما النوع الثالث: فهو بيان التغيير كالاستثناء والشرط ولا خلاف بين العلماء أنهما من قبيل البيان وكلاهما يقصر العام على بعض أفرادها، إلا أن علماء الحنفية اختلفوا في اندراج الاستثناء والشرط في بيان التغيير.

ذهب السرخسي والقاضي أبو زيد إلى أن الاستثناء بيان تغيير والتعليق بالشرط بيان تبديل. وذهب البرزوي إلا أن الشرط والاستثناء من بيان التغيير والنسخ بيان تبديل. ثم بينت في البحث معنى الاستثناء وأنواعه وكيفية العمل بالاستثناء وكذلك الشرط ومعناه، مع بيان الفرق بين الاستثناء والشرط، وذكرت أن تخصيص من قبيل بيان التغيير عند الحنفية وذكرت أنواع المخصص، وأن الحنفية أطلقوا على المخصص المتصل بالقصر، وبينت منهج الجمهور في تخصيص، وشرط تخصيص عند الحنفية.



كما أن مفهوم التخصيص عند الجمهور له معنى أشمل وأعم منه عند الحنفية وأنه يندرج تحت بيان التفسير. كما بينت في هذا النوع من البيان معنى المطلق والمقيد وحالات حمل المطلق على المقيد. أما النوع الرابع: فهو بيان التبديل وأن المراد به عند العلماء النسخ، وذكرت الفروق بين النسخ والتخصيص. أما النوع الخامس: فهو بيان الضرورة، وهو نوع بيان بغير ما وضع للبيان إذ الموضوع له النطق وهذا يقع بالسكوت الذي هو ضده ولكن يلحق باللفظية في إفادة الأحكام، ويتنوع هذا النوع من البيان إلى أربعة أنواع.

النوع الأول: ما يكون في حكم المنطوق لكونه يلزم منه عرفاً أو ما يعلم بمفهوم المنطوق لا بمجرد السكوت. النوع الثاني: السكوت وقت الحاجة، هو بيان ضرورة لأن الساكت لا يسند إليه قول إلا أن سكوته في معرض الحاجة إلى الكلام بيان ويعتبر بيانا ضرورة. النوع الثالث: البيان بضرورة رفع وقوع الناس في الغرر والضرر كالمولى حين يرى محجوره يبيع ويشترى، يكون إذنا له في التصرف والتجارة. النوع الرابع: ما يثبت ضرورة اختصار الكلام كدلالة السكوت على تعيين معدود تعورف حذفه اختصاراً للكلام.





## أثر التوبة في سقوط العقوبة في الفقه الإسلامي

أ.د. عبد الله محمد الجبوري

قسم الشريعة، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

يقوم البحث على دراسة أثر التوبة في سقوط العقوبة في الفقه الإسلامي، وبعد تحديد المراد بالمصطلحات الواردة بعنوان البحث (أثر، التوبة، سقوط، العقوبة) يتناول البحث حقيقة التوبة: وهي الرجوع عن الأفعال المذمومة إلى الأفعال الممدوحة تعبداً لله. وشروطها: الإقلاع عن المعصية في الحال، والندم والحزن على ما سلف من ذنبه، والعزم على عدم العود إلى المعصية في المستقبل، والتخلص من حقوق العباد إن كانت المعصية مما يتعلق بحقوقهم، وأن تكون التوبة تعبداً لله وبخاصة له وهي واجبة على المؤمنين. ويهتم البحث ببيان أثر التوبة في سقوط عقوبات الحدود والقصاص والتعزيرات. فيذكر أثر التوبة في سقوط عقوبة الحرابة إذا تاب المحارب قبل القدرة عليه، وإن الفقهاء اتفقوا في الجملة على سقوط حد الحرابة أما ما يرتكبه المحارب خلال حرايته من حقوق لله أو للعباد للفقهاء اتجاهات متعددة وتفصيل الراجح منها: أن التوبة تسقط عنه حقوق الله دون حقوق العباد لقوة أدلة أصاب هذا الرأي.

أما عقوبات الحدود الأخرى غير الحرابة المختصة بالله (الزنا، والسرقه، وشرب الخمر) فيتناول البحث خلاف الفقهاء وأدلتهم في أثر التوبة في سقوط العقوبة قبل تنفيذها، وبعد مناقشة الأدلة يذكر الرأي الراجح منها. وقد اختلف النقل عن الشافعي في هذه المسألة اختلافاً كثيراً ويحاول البحث تحقيق أرجح الروايات عنه مع بيان أسباب الترجيح، وفي أثر التوبة في عقوبة القذف التي يغلب فيها حق العبد فالفقهاء متفقون على عدم سقوط حد القذف بالتوبة وأن التوبة تزيل سمة الفسق عن القاذف، ولهم خلاف وتفصيل في قبول شهادة القاذف وردها بعد التوبة وقبل إقامة الحد، أو بعد إقامته وقبل التوبة فيتناول البحث أقوال الفقهاء وأدلتهم وبعد المناقشة يشير إلى الراجح منها مع بيان أسباب الترجيح.

وفي أثر التوبة في حقوق العباد إن كانت من الحقوق المالية فإن هذه الحقوق لا تسقط بالتوبة فقط، بل لابد من ردها إلى أصحابها، أو يستحل المستحق فيبرئ منه. وفي الحقوق غير المالية كالقصاص، لا يسقط هذا الحق بالتوبة فقط بل لابد من تمكين المستحق من الاستيفاء فإن شاء أقتص وإن شاء عفا. وفي أثر سقوط العقوبة التعزيرية في التوبة يبين البحث اتفاق الفقهاء على عدم سقوط التعزير إذا كان لحق الأدمي، وخلافهم في سقوطه إذا كان لحق الله تعالى وبعد مناقشة الأدلة يذكر الرأي الراجح منها، مع بيان أسباب الترجيح وقد أثار البحث مسألتين هامتين؛ الأولى: العلاقة بين سقوط الحد بالتوبة، ودرء الحدود بالشبهات. والثانية: المناقشة والرد على من يرى أن القول بسقوط العقوبة بالتوبة يفتح الباب لعدم العقاب والله أعلم.

## تحقيق الجزء الأول من كتاب الزهرات الوردية في الفتاوى الاجهورية للإمام الشيخ علي الأجهوري شيخ الأزهر

د البشير علي حمد الترابي

قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

المشروع هو تحقيق الجزء الأول من كتاب الزهرات الوردية في الفتاوى الاجهورية للإمام لشيخ علي الأجهوري شيخ الجامع الأزهر وهو في الفتاوى التي قام بها الشيخ علي الأجهوري في الأمور التي رفعت له فافتى فيها على مذهب الإمام مالك. والشيخ علي الأجهوري كان إماماً في شيخ وله تعليقات على مختصر الشيخ خليل بن إسحاق العسكري الذي يعد من أشهر المراجع في الفقه المالكي. وكان قد تولي منصب شيخ الأزهر. و الفتاوى هي فقه النوازل وهي رأي المشرع في حوادث تحدث في المجتمع أو تحدث للفرد في نفسه، وفي كثير من الأحيان تكون الفتوى في أمر مستجد مستحدث. وكثير من القضايا والنوازل التي أفتى فيها الشيخ علي الأجهوري تمس حياتنا اليوم كالأوقاف والتعامل في النقد وأمور المتاجرة والأحوال الشخصية. وعمل في الفتاوى هو تحقيق للجزء الأول وقد حصلت على نسختين مخطوطتين من دار الكتب المصرية بالقاهرة والثانية من الخزانة العامة بالرباط المغرب. وكلا النسختين مكتملتين بحمد الله وقد نسخت الجزء من مخطوطة دار الكتب بالقاهرة باعتبارها الأصل وقابلت عليها نسخة الخزانة العامة، وأقوم الآن بتخريج النصوص بعزو الآيات القرآنية الكريمة وتخريج الأحاديث الشريفة والتعريف بالأعلام الوارد ذكرهم والتعليق في بعض المواضع المهمة. مع شرح ما يحتاج لشرح من المفردات والجمل. مثال من الفتاوى: "وسئل عن قول الشيخ ابن أبي زيد القيرواني في رسالته (وعليه أن يصل رحمه...) هل يحمل على الوجوب كما نقله التتائي شارحها أو الندب؟، فاجاب: صلة الرحم واجبة، بل حكي عياض وغيره بالاتفاق على وجوبها، فقال في الإكمال "لا خلاف أن صلة الرحم واجبة في الجملة وقطعها كبيرة". وقال ابن عمر صلة الرحم فرض بلا خلاف ومن تركها فهو عاص باتفاق ولا تجوز شهادته، وهو ملعون في ثلاثة مواضع من القرآن، واختلف في الرحم الذي عليه أن يصله فقيل كل من يحرم عليه نكاحه من أجل القرابة. وقال الشيخ زروق قال القرافي التي يجب صلتها كل قرابة قريبة تنشئ الحرمة، بحيث لو كان أحدهما نكراً والأخر أنثى حرم كل منهما كالعَم والخال وابن الأخت وما سوى ذلك فهي مستحبة - والصلة تحصل ولو بالسلم.



## دراسة بيبليوغرافية ونقدية لترجمات القرآن الكريم إلى اللغة الإنجليزية حتى نهاية القرن العشرين

د. عبدالله عبدالرحمن الخطيب

قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

إن ترجمة معاني القرآن الكريم إلى لغات شعوب العالم كافة وبطريقة صحيحة أصبح ضرورة ماسة لأن بها تتم دعوة الناس إلى دين الله الخالد الإسلام. وترجمة معاني القرآن الكريم إلى اللغة الإنجليزية له أهمية قصوى لأن هذه اللغة اليوم أصبحت لغة عالمية. ويتناول هذا المشروع دراسة معظم ترجمات معاني القرآن الكريم إلى اللغة الإنجليزية، وعددها ثلاثون ترجمة تقريبا. يدرس الباحث كل ترجمة من زاويتين: الأولى: دراسة عن حياة المترجم، والثانية: دراسة نقدية وتحليلية للترجمة وتبيان نقاط القوة والضعف فيها، ويهدف هذا المشروع إلى:

أولا: إعطاء المطلعين على هذه الترجمات تقييما صحيحا لها بحيث يعرفوا نقاط الضعف والقوة فيها. ثانيا: التحذير من تداول الترجمات السيئة. ثالثا: خدمة القرآن الكريم باللغة الإنجليزية، لأن الترجمة نوع من أنواع التفسير. رابعا: نشر هذه الدراسة بعد الانتهاء منها باللغتين العربية والإنجليزية. خامسا: رفع مكانة جامعة الشارقة في مجال البحث العلمي الهادف.

وتأتي أهمية هذا المشروع من حيث إنه موضوع جديد شامل لدراسة ترجمات معاني القرآن الكريم إلى اللغة الإنجليزية دراسة تحليلية، بالإضافة إلى تعريف القارئ لهذه الترجمات بمحتواها، ومدى صلاحيتها، والتمييز بين الغث والسمين منها، خصوصا إذا علمنا أن هناك بعض الترجمات السيئة متداولة بين الناس في الغرب وغيره، وللأسف لا علم لكثير من الناس بأنها ترجمات سيئة مشوهة لرسالة القرآن الكريم الحقيقية.

وقد أنجز بحمد الله تعالى من هذا المشروع أربعة أبحاث وهي:

١- نظرات نقدية لمقدمة وترجمة القرآن الكريم إلى اللغة الإنجليزية ل: ن. ج. داود، نشر في مجلة التجديد- الجامعة الإسلامية العالمية- ماليزيا - السنة السادسة، العدد الحادي والعشرين، فبراير- ٢٠٠١.

٢- مناهج ترجمة المصطلحات الدينية والشرعية في القرآن الكريم (الله - الصلاة- الزكاة- الحج وأسماء السور)، بحث ألقى في ندوة ترجمة معاني القرآن الكريم تقويم للماضي وتخطيط للمستقبل، نظمتها وزارة الشؤون الإسلامية والأوقاف والدعوة والإرشاد ممثلة في مجمع الملك فهد لطباعة المصحف- المدينة المنورة، خلال الفترة من ١٠-١٢ صفر ١٤٢٣هـ/ الموافق ٢٣-٢٥ أبريل ٢٠٠٢.



- ٣- عبد الله يوسف علي مترجم القرآن إلى الإنجليزية- دراسة في جوانب من حياته ونظرات نقدية في ترجمته. قبل للنشر في مجلة الدراسات القرآنية - جامعة لندن بتاريخ: ٢٤/٥/٢٠٠٤.
- ٤- دراسة نقدية لترجمة محمد أسد لمعاني القرآن الكريم إلى الإنجليزية، (رسالة القرآن) مع تعريف بجوانب من حياته، قيد النشر.



## العولمة وتداعياتها والبديل الإسلامي

د. بلقاسم محمد الغالي

قسم أصول الدين - كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

يعيش العالم اليوم عصر العولمة، لذلك تبوأَت هذه الظاهرة الصدارة في دائرة الاهتمام فعددت حولها الندوات الفكرية في الجامعات والمؤسسات المحلية والإقليمية والدولية لكشف مناهجها ومعرفة تداعياتها ومحاولة التخفيف من آثارها الاقتصادية والثقافية والسياسية والاجتماعية. والعولمة ظاهرة اقتصادية تختلف عن العالمية التي تعني التفتح على العالم، وكل ما هو كوني والأخذ والعطاء من الثقافات الأخرى وهي لا تنفي التعارف والحوار والتعاون، بل تقرُّ التنوع والتنافس والتكامل بينما العولمة في جوهرها هيمنة وبسط نفوذ من قبل قطب محدد له الغلبة في الإنتاج والتفوق في التكنولوجيا. وإذا وقع الاختلاف في مفهومها فإن الاختلاف في نشأتها أشد وأعظم. فمن المفكرين من أرجع بروزها إلى عهد الاكتشافات الجغرافية، ومنهم من أرجع ذلك إلى عهد انهيار الاتحاد السوفياتي وبروز القطب الواحد.. ومنهم غير ذلك.

وأهم ما تمتاز به العولمة اختراق الحدود وجعل العالم سوق واحدة تديرها ثقافة الاستهلاك، وتهدف إلى اختزال الهوية وترويج الحداثة. وتداعياتها مدمرة في جميع الميادين الاقتصادية والاجتماعية والسياسية، خاصة في الدول غير المؤهلة ذات الاقتصاد الهش، فإن الآثار الناتجة عن الخصخصة كالبطالة والفقر أمر لا مفر منه بالنسبة إليها. لذلك ثارت الجمعيات الأهلية والنقابات العمالية ثورات عارمة ضد منظمة التجارة العالمية وصندوق النقد الدولي والبنك الدولي التي تعد ذراع العولمة.

ولا تنحصر جبهة الرفض في هذه الفئات فحسب، بل هناك تيار فكري تزعمته الأحزاب العمالية دعا إلى الطريق الثالث وهو منهج وسط بين الرأسمالية المتوحشة والاشتراكية. بيد أن الطريق الثالث عند المسلمين يتمثل في شريعة الإسلام، فهو البديل الأمل للعولمة لاشتماله على مقومات ذاتية وموضوعية جعلته متناغماً مع جميع القدرات البشرية، ومتلائماً مع الفطرة الإنسانية بحكم عالمية العقيدة في الله رب العالمين. كما تبدو الدعوة العالمية في وحدة الدين الحق، مع التعاليم المرنة والتكاليف الواقعية، والتشريعات المتوازنة المتمسمة بالاعتدال في غير إرهاب للنفوس البشرية.

ولقد خاطبت الشريعة الإسلامية في الإنسان أبعاده الفكرية والنفسية والجسدية والروحية فكان الإسلام بحق دين الإنسان، "مطلق الإنسان" كرمه وحمله المسؤولية فتفوق بذلك على سائر الأيديولوجيات والشرايع والفلسفات التي اهتمت بالإنسان، لأنه دين مقوماته من أعظم مقومات الخلود والانتشار مثل دعوة عالمية مفتوحة للأبيض والأسود والأحمر والأصفر ذلك هو البديل الذي يشكل مستقبل الإنسانية.



## التفسير الموضوعي لسور القرآن الكريم

أ.د. مصطفى مسلم محمد، د. احمد عباس البديوي، د. عبدالله الخطيب،

د. محمد عصام مفلح القضاة

قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

إن مشروع التفسير الموضوعي لسور القرآن الكريم موجه لكل طبقات المجتمع في عصر التحديات وعصر المعرفة وعصر المعلومات، فكان لزاماً على الباحثين الذين سيقومون بالتأليف فيه أن يجعلوا تفسيرهم شاملاً متماشياً مع هذا الزمان، فخير تفسير للقرآن هو: تعاقب الأزمان، ومن هذا المنطلق كان ترتيب التأليف في التفسير الموضوعي لسور القرآن الكريم على النحو التالي:

أهداف المشروع:

١. تقديم تفسير كامل لسور القرآن الكريم وفق منهج التفسير الموضوعي.
  ٢. ربط هدايات القرآن الكريم وحقائقه بالواقع المعاصر.
  ٣. إبراز جوانب من إعجاز القرآن الكريم وأسراره وفق معطيات التقدم العلمي.
  ٤. توفير مرجع أساس لطلاب العلم قاطبة وللمختصين من طلاب الدراسات العليا في تخصص التفسير وعلوم القرآن. التعريف بالمشروع:
    - أ. بين يدي السورة ويذكر فيه اسم السورة وفضائلها وهل هي مكية أم مدنية؟
    - ب. ويذكر فيه أيضاً عدد الآيات ومحور السورة والمناسبات الست للسورة.
    - ب. المعنى الإجمالي للسورة بما فيه من استنباطات عقديّة وفقهيّة ولغويّة، وربط المعنى بالواقع الذي نعيش فيه.
    - ج. وأخيراً يتم ذكر الهدايات المستنبطة من كل مقطع من المقاطع في العقائد والأخلاق، مع التركيز على الجوانب الأخلاقية والتربوية.
- الخطة التنفيذية للمشروع: التفسير الموضوعي لون جديد معاصر من ألوان التفسير، لا زال منهج البحث فيه تحت التأصيل، لذا كانت الخطة التنفيذية للسير في هذا المشروع على النحو التالي:

١. دعوة أهل الاختصاص من كل أنحاء الدولة ومراسلة الذين في خارج الدولة، ومناقشة المنهج الأمثل للتفسير الموضوعي، ووضع مبادئ عامة للسير في مشروع التفسير الموضوعي لسور القرآن الكريم.
٢. توزيع سور القرآن الكريم على المختصين في التفسير وعلوم القرآن.
٣. بعد عام واحد من توزيع السور على أهل الاختصاص تشكل لجنة مركزية لتلقي بحوث الباحثين للنظر فيها من حيث الشكل العام، فإن كانت الشروط الشكلية متوفرة في البحث المقدم يتم تحويله إلى المحكمين.

- ٤ . تحويل البحوث المجازة إلى اللجنة العليا للمشروع للنظر في الصياغة النهائية.  
٥ . الطباعة والنشر بإذن الله تعالى.

**Book of  
Abstracts**



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at The University of Sharjah ( 14-15 May 2005 )**

## الثقافات والحضارات بين الحوار والصراع

د. بلقاسم محمد الغالي

قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

ظهرت في العقدين الأخيرين مفاهيم تؤسس لنظام فكري يختلف عن الفترة السابقة لعل أهمها وأكثرها انتشاراً وشيوعاً المفاهيم التالية: النظام العالمي الجديد، نهاية التاريخ، صدام الحضارات، الهويات، العولمة، وأخيراً وليس آخراً حوار الحضارات. ويعتبر الحوار السمة المميزة لهذا العصر، فهناك حوار الأديان، و حوار الثقافات، وحوار الحضارات.

وقد كثرت الحديث عن صدام الحضارات وحوارها ومما زاد النقاش حدة وانتشاراً ما طرحه المفكر الأمريكي صمويل هانتجتون عن "صدام الحضارات: إعادة صنع النظام العالمي الجديد". بالإضافة إلى أحداث ملأت الدنيا وشغلت الأفكار وخلخلت الأوضاع السياسية والاقتصادية والاجتماعية أبرز هذه الأحداث حدث: ١١ سبتمبر ٢٠٠١ وما نتج عنه من ظهور معايير عالمية ترؤجها وسائل عولمية منطوية.

في مثل هذا الجو برزت مقوله صراع الحضارات رغم امتداد جذورها إلى أعماق التاريخ. بيد أننا كمسلمين نؤمن بسنة التدافع و التداول بين الحضارات الإنسانية. وفي هذا المصطلح الإسلامي إشارة إلى المحافظة على التمايز والتنوع والاختلاف. وبذلك نؤكد سنة كونية لمعاني حضارية سامية، أسسها الإسلام في دعوته للحوار والتعايش العلمي و الاعتراف بالآخر.

واستبدل عقلاء الحضارتين الغربية والإسلامية مصطلح حوار الحضارات بدل صراع الحضارات وسار على هذا المنهج مؤتمرات أممية وندوات إقليمية ومحلية تدعو إلى الحوار والتقارب ونبذ العنف والتعصب.

وارتبط حوار الحضارات عند المفكرين بالتنمية المستدامة والأمن الإنساني و الحوار القائم على القيم الإنسانية المشتركة، وذلك ما تؤكد قيم الإسلام المؤسس على قاعدة "يا أيها الناس أنا خلقنكم من ذكر وأنثى وجعلناكم شعوباً وقبائل لتعارفوا". والاعتماد على مبدأ التعارف الإسلامي يحمل في طياته التعاون والقيم الإنسانية المشتركة والمبادئ الأخلاقية السامية مثل التسامح واحترام الآخر والفهم المتبادل ونبذ التعصب والعنف واحترام التنوع الثقافي والاحتكام إلى مبادئ التعايش السلمي وسيادة القانون واحترام كرامة الإنسان والعدالة والمساواة. وفي ظل التحديات الراهنة ينبغي تأسيس مننديات لنشر ثقافة الحوار بعيداً عن الهيمنة وتأسيساً بديننا الحنيف الذي يحث على السلام والتأخي والتسامح ليسود الأمن كافة ربوعنا.





## ثلاثيات الحميدي في مسنده

د. سعيد عبد الرحمن القرقي

قسم أصول الدين، كلية الشريعة والدارسات الإسلامية  
جامعة الشارقة

### الخلاصة

التمهيد: وفيه التعريف بالحميدي وبالثلاثيات عند المحدثين:

الحميدي: عبدالله بن الزبير بن عيسى القرشي الحميدي المكي، أبو بكر، ثقة، حافظ، فقيه، أجل أصحاب ابن عيينه. قال ابن سعد: كان ثقة، كثير الحديث. مات سنة تسع عشرة ومائتين، وقيل بعدها. قال الحاكم: كان البخاري إذا وجد الحديث عند الحميدي لا يعدوه إلى غيره. والمراد بالثلاثيات في اصطلاح المحدثين تلك الأحاديث التي يكون عدد الرواة فيها بين الحميدي والرسول، صلى الله عليه وسلم، ثلاثة. أولاً: مختصر تنفيذي:

- ١- بعد أن أعدت الخطة للسير في هذا المشروع، جمعت الثلاثيات في مسند الحميدي وقد جاءت في مائة وثلاثين حديثاً تقريباً من أصل ألف وثلاثمائة حديث.
- ٢- حققت نص الحديث على نسختين خطيتين للمسند.
- ٣- ساضبط النص بالشكل التام.
- ٤- دراسة السند (رجال الحديث) في ضوء قواعد العلماء في الجرح والتعديل لأقف على درجة الحديث في ضوء شرائط الصحيح أو الحسن.
- ٥- تخريج الحديث: أخرج الحديث من كتب السنة المعتمدة، لأقف على المتابعات والشواهد، ثم أعطي الحكم النهائي للحديث في ضوء طرقه ورواياته.
- ٦- أشرح غريب الحديث.
- ٧- أعمل على استنباط الدلالات والأحكام منها.

ثانياً: مراجعة وتحليل لما تم نشره في هذا المجال: يعتبر مشروع ثلاثيات الحميدي في مسنده موضوعاً بكاملاً، لم يسبق أن تعرض له أحد من العلماء فيما أعلم. ثالثاً: أهداف المشروع: يحقق المشروع الأهداف التالية:

- ١- أن يخدم سنة الحبيب المصطفى، صلى الله عليه وسلم، بتقديم ثلاثيات الحميدي في مصنف مستقل، محقق، ومخرج الأحاديث مع شرح غريبها، وبيان الأخطاء المستتبطة.
  - ٢- أن يقدم لطلبة العلم والعلماء منهجاً جديداً من الدراسات الحديثية
  - ٣- إثراء المكتبة الإسلامية بنوع جديد من مصنفات الحديث.
- رابعاً: الهدف الخاص:
- ١- أن يفيد الطلبة من هذه الدراسة.
  - ٢- أن يكتسب الطالب مهارة في خدمة السنة وذلك بتوظيف علوم الحديث (قواعده وضوابطه) في معرفة الصحيح من السقيم.



خامساً: أهمية المشروع: تتبع أهمية المشروع مما يلي:

- ١- إن المشروع يطرح منهجاً جديداً لخدمة مسند الحميدي خاصة، والسنة النبوية بعامة، إذ أفرد ثلاثيات الحميدي في مصنف مستقل، فالموضوع بكر - كما قلت - لم يسبق أن قام به أحد من العلماء.
- ٢- فيه إضافة جديدة إلى المكتبة الإسلامية.

سادساً: الفوائد المادية للجامعة: يحقق هذا المشروع ربها مادياً للجامعة - بصفته بكراً، وإضافة جديدة إلى المكتبة الإسلامية - فيقبل طلبة العلم عليه والباحثون للإفادة منه.

سابعاً: الفوائد المعنوية: يسجل إنجاز هذا البحث لجامعة الشارقة قصب السبق في خدمة التراث الإسلامي بعامة، وخدمة الحديث النبوي الشريف بخاصة.

هذا فضلاً عن أنه سيحمل اسم الجامعة إلى كل بلد ومؤسسة معرفية وعلمية، وإلى كل باحث وطالب علم أينما وجد. وبهذا يحقق سمعة طيبة للجامعة، ويعطي انطباعاً حسناً عنها، إذ يبرز اهتمام الجامعة بخدمة التراث بصفة عامة، وخدمة الحديث النبوي الشريف بصفة خاصة.

ثامناً: شرح الأمور المتعلقة بأخلاقيات البحث العلمي بالمشروع: المشروع لا يتعارض مع تعاليم الإسلام ولا الحضارة الإسلامية، ولا يتعرض لأي شخص أو هيئة اعتبارية، لا من قريب، ولا من بعيد، وعليه فلا يحتاج إلى موافقة أية جهة خارجية عن مركز البحوث في هذه الجامعة.

تاسعاً: ما أنجز من المشروع: باشرت العمل في المشروع، فخرجت ثلاثيات الحميدي من مسنده، وقابلتها على النسخ الخطية للمسند، والعمل مستمر في تخريج الأحاديث، للحكم عليها، ثم شرح الغريب، وبيان الدلالات والأحكام.



## تخريج الحديث ودراسة أسانيده

أ.د. المكي بن أحمد إقلاينه

قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

اعتنى علماء الحديث بتخريج حديث رسول الله صلى الله عليه وسلم بهدف بيين مواطنه في المصادر التي ورد فيها مسندا، والحكم عليه صحة و ضعفا بهدف العمل بما صح و ترك ما لم يصح عن رسول الله صلى الله عليه وسلم. لأجل ذلك، نجد كتبا جليلة في هذا الجانب اعتنت بالكلام عن الأحاديث المروية في كتب الحديث، أو ما أورده الفقهاء احتجاجا لما ذهبوا إليه في مسائلهم، أو المفسرون في تفاسيرهم، أو غيرهم ممن عولوا على الحديث في مصنفاتهم. و مازال التعويل على ذلك إلى يوم الناس هذا، حتى إن طلاب العلم في الجامعات قاموا بإعداد رسائل جامعية في هذا الباب خدمة لسنة أبي القاسم.

أما علم تخريج الحديث، فقد جاء ذكره عرضا في كتب المصطلح، و لم يفرد له الأقدمون مصنفات تبرز أصوله، و تدلل دروبه و مسالكه، و تؤصل قواعده وفروعه، فإنه مستحدث، تعرض له آحاد المتأخرين بدءا بالشيخ أحمد بن الصديق الغماري المغربي - رحمه الله - مشاركة منهم في تيسير أمر التخريج على طلاب العلم. نظرا لكون التأليف في هذا العلم يعتبر في بدايته - وكل جديد يبدأ ناقصا - ارتأيت أن أدلي بدلوي في هذا المجال بعد تجربة ليست باليسيرة في مجال التخريج والإشراف على مشاريع علمية في هذا المجال على مستوى رسائل الدكتوراه وغيرها لتحقيق جملة من الأهداف:

- ١- توفير كتاب يساعد طلاب علم الحديث على معرفة الكيفية التي يتم بها تخريج الحديث و دراسته سندا و متنا.
  - ٢- تيسير هذا العلم للطلاب و الباحثين.
  - ٣- تبين الضوابط المعتمدة في دراسة سند الحديث و متنه
  - ٤- تعليم الطلاب كيفية تخريج الحديث من مظانه، و طرق معرفة درجته من حيث الصحة.
  - ٥- توقيف الطلاب و الباحثين على الأسس و الضوابط التي يمكن الاعتماد عليها في دراسة الموضوع.
  - ٦- الجمع بين الجانبين النظري و التطبيقي في دراسة علم التخريج حتى يكون أمرا ملموسا لدى الدارسين.
- إبراز كيفية الوقوف على الفوائد الحديثية عن طريق تتبع الطرق المختلفة للحديث، و الموازنة بينها.

## الرواة الذين ترجم لهم النسائي في كتابه الضعفاء والمتروكين وأخرج لهم في سننه، جمع ودراسة وتحليل

د. عواد حسين الخلف

قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

حرص النسائي على انتقاء الرواة الذين يروي لهم في سننه كما أشار في مقدمة كتابه، إلا أن عدداً من هؤلاء الرواة هم ممن ترجم لهم النسائي نفسه في كتابه الموسوم بالضعفاء والمتروكين، فجاء هذا البحث لسبر أولئك الرواة ورواياتهم وتعليل إخراج النسائي لهم على الرغم من ترجمته لهم في الضعفاء والمتروكين.  
أهداف البحث:

- ١- الوقوف على مناهج الأئمة في الجرح والتعديل.
- ٢- تفسير ما ظهره التناقض فكيف يخرج إمام حديثاً لراو ذكر في شرطه أنه لا يخرج لأمثاله.
- ٣- التطبيق العملي لعلوم الحديث و عدم الوقوف على النواحي النظرية فقط.
- ٤- خدمة لكتاب من أهم كتب السنة ألا وهو سنن النسائي.
- ٥- الدفاع عن علمائنا فيما ينسب إليهم من تناقض بالحجة والبرهان وليس بالعاطفة فقط.
- ٦- جمع ملامح مناهج العلماء في الجرح والتعديل الموثقة.
- ٧- بيان أهمية معرفة ألفاظ الجرح والتعديل وأبعادها.
- ٨- بيان كيف يوصف الإمام النسائي بالتشدد بالجرح ويخرج لرواة ترجم لهم في الضعفاء والمتروكين.

### أهمية البحث:

- ١- أنه خدمة عملية لأصل من أصول الحديث لم يسبق أن خُدمها.
  - ٢- الجمع بين الناحية النظرية والتطبيقية في علم الحديث.
  - ٣- تفسير ما ظهره التناقض من صنيع أئمتنا مما قد يستغل استغلالاً سيئاً عند أعدائنا.
  - ٤- الوقوف على بعض الملامح الخاصة بالمناهج الحديثية والتي تدرك بالسبر وإن لم يكن منصوحاً عليها.
- الفوائد المتوقعة من البحث:**

١. تقديم تحليل علمي لإشكال حديثي.
٢. دفاع علمي عن أئمة الحديث لما قد ينسب إليهم من تناقض.
٣. إحصاء رقمي لعدد هؤلاء الرواة والوقوف على حجم المشكلة.



## مباحور سور القرآن الكرىم

أ.د. مصطفى مسلم محمد، د. أحمد عباس البدوي، د. عبدالله الخطيب  
قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

**أهداف المشروع:** يهدف المشروع إلى إبراز محور كل سورة من سور القرآن الكرىم، فإن لكل سورة شخصيتها ومحورها، بدأ من افتتاحيتها إلى خاتمتها. وسائل تحقيق هذه الأهداف:

1. دراسة تفصيلية حول أسباب النزول للسورة والمرحلة الزمنية التي نزلت فيها، حيث إن أهداف السور المكية تنصب على أسس العقيدة (التوحيد، الإيمان باليوم الآخر، إثبات النبوة، وأسس العبادات والأخلاق)، كما أن أهداف السور المدنية تبرز جوانب بناء مؤسسات المجتمع الإسلامي من خلال التشريعات التفصيلية، وتصور المجتمع الإسلامي من فساد المنافقين وغير المسلمين ممن يعيشون في المجتمع الإسلامي، وترمم ما يقع فيه المسلمون من أخطاء، كما تحمي المجتمع الإسلامي من العدوان الخارجي بالتشريعات المتعلقة بالعلاقات الدولية في حالة الحرب والسلام.
  2. إبراز دور المناسبات في توضيح محور السورة، وذلك بالربط بين افتتاحية السورة وخاتمتها، وبين مقاطع السورة ومحورها.
  3. دراسة أسماء السور وربطها بأهداف السورة ومحورها.
- وهذا المشروع يشكل رافداً رئيسياً في المشروع الأساسي الكبير (التفسير الموضوعي لسور القرآن الكرىم). فإن معرفة مباحور السور مع بيان المناسبات في السور وبين السور هما الركنان الأساسيان في التفسير الموضوعي الذي نأمل بعد ظهوره على حيز الوجود أن يكون المشروع الرائد المتكامل لهذا اللون من التفسير الذي يشغل الجانب الأكبر من اهتمام المفسرين المعاصرين على مختلف توجهاتهم، وتنوع مدارسهم الفكرية ومناهجهم لبيان معاني القرآن الكرىم. ونأمل أن تقدم مجموعة بحوث الكتاب والسنة من خلال هذه المشاريع الجزئية المتفرعة عن مشروع (التفسير الموضوعي لسور القرآن الكرىم) جهداً علمياً مميّزاً في الدراسات القرآنية لم تسبق إليه. وتحقق أملاً تطلع إليه طلبة الدراسات العليا في تخصص التفسير وعلوم القرآن، وتوفر مرجعاً أساساً لعامة المسلمين وخاصتهم حول القرآن الكرىم وتفسيره.



## التعريف بسور القرآن الكريم

د. أحمد عباس البديوي، أ.د. مصطفى مسلم محمد، د. محمد عصام القضاة  
قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

أنزل الله سبحانه وتعالى القرآن على رسوله صلى الله عليه وسلم منجماً في بضع وعشرين سنة هي عمر رسول الله صلى الله عليه وسلم في الدعوة إلى الله، ومن رحمة الله جعل القرآن سوراً تسهيلاً للأمة في حفظه في صدورهم ثم فهمه والعمل به، وبلغت سوره أربع عشرة و مائة سورة، منها الطوال و المنين و المثاني و المفصل، بدئت بالفاتحة و ختمت بالناس.

ونحن في هذا البحث سنقوم - إن شاء الله تعالى - بالتعريف بكل سورة من سوره المباركات، من حيث اسم السورة و اشتقاقه و بيان إن كان لها أكثر من اسم و بيان زمان نزولها قبل الهجرة أم بعدها و عدد آياتها، و بيان الآيات المكية في السور المدنية و الآيات المدنية في السور المكية. كما سيتطرق البحث إلى بيان فضائل السورة إن وجدت ثم نذكر أهم موضوع السورة أو موضوعاتها. و بيان ذلك سيكون بما هو معتمد من منقول الآثار بالرجوع إلى أمهات كتب التفسير و علوم القرآن.

الملتقى السنوي الأول للبحث العلمي في جامعة الشارقة  
٧-٦ ربيع الثاني ١٤٢٦ هـ الموافق ١٥-١٤ مايو ٢٠٠٥ م



## الاتجاه الحدائي وموقفه من السنة النبوية المشرفة - دراسة تحليلية تقويمية

د. سعيد عبد الرحمن القرقي، د. صالح أحمد رضا، د. البشير علي الترابي  
قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

التهميد (مختصر تنفيذي): يزداد الاتجاه الحدائي، يوماً بعد يوم، امتداداً لما بدأه الغرب من غزو ثقافي للأمة الإسلامية في قيمها، ومعتقداتها، وشريعتها التي تحتكم إليها. وقد تنوعت أساليب أعداء الله في محاربة الإسلام في مصادرة بعامة، وفي الحديث النبوي الشريف بخاصة، إذ وجهوا جُلَّ اهتمامهم، ومعظم هجماتهم عليه قديماً وحديثاً، وما زالت الهجمة مستمرة، ومتجددة على مصادر ثقافة الأمة وشريعتها، ومع مرور الزمن تتخذ أشكالاً متعددة، وأساليب متجددة.

لقد ظهر قديماً من حارب السنة، ووجه سهامه إليها من جهة ثبوتها، والاحتجاج بها، وقد تولى كبر هذا الأمر المستشرقون والمستغربون من أمتنا حديثاً وقديماً. واليوم في عصر تميز بظاهرة خطيرة، وهي مناصبة الإسلام العدا، بالتشكيك في مصادره وشريعته، وظهر ناس بمنهج جديد، وأسلوب خبيث عرف بالاتجاه الحدائي في التعامل مع السنة النبوية المشرفة. كل ذلك من أجل زعزعة ثقة أمتنا - لا سيما الشباب - بالسنة النبوية التي تشكل مصدراً من مصادر شريعتنا وأصلاً من أصولها للتوصل إلى محاربة الإسلام والمسلمين. والأمة اليوم ممثلة بطلبة العلم وبالعلماء مدعوة للوقوف أمام هذا الاتجاه المنحرف في فهم السنة، وفي تفسيرها وتوجيهها توجيهاً يثير الشبهات حولها، لكشف أهدافه وفضح أساليبه الخبيثة، وإبطال مناهجه الفاسدة، والرد عليهم بموضوعية دفاعاً عن السنة وانتصاراً لها. فمن هنا كان المشروع في غاية الأهمية خدمة لسنة المصطفى صلى الله عليه وسلم. وقد رسمنا خطة البحث على النحو التالي:

أولاً: جمع ما كتب حديثاً في هذا الاتجاه.

ثانياً: تحديد الموضوعات التي تناولها أصحاب هذا المذهب الفاسد حديثاً.

ثالثاً: الرد عليهم بموضوعية وعلم.

مراجعة وتحليل لما تم نشره في هذا المجال: إن موضوع الحدائنة جديد وقديم والتصدي له يقع على عاتق علماء الأمة وطلبة العلم الحقيقيين، وحسب علمي المحدود، فإن هذه الدراسة تشكل باكورة الرد على هذا المنهج المنحرف، أو متممة لعمل فردي تعرض لمواجهه أصحاب هذا المذهب. وهذا يتطلب منا أن نجتمع كل ما كتب في هذا الموضوع، ثم تصنيف شبيهم وبدعهم لتنظيم المواجهة والرد بموضوعية وعمق.

أهداف المشروع:

1- يشكل المشروع خدمة عظيمة لمصدر من مصادر شريعتنا، وأصل من أصولها.



٢- للمشروع مردود معنوي لجامعة الشارقة، إذ يُبرز دورها في خدمة السنة.  
٣- يحمل المشروع اسم الجامعة إلى كل مكتبة، وإلى كل مؤسسة معرفية أو علمية وإلى طلبة العلم أينما وجدوا.  
الفوائد المتوقعة من المشروع:

١- للمشروع فوائد مادية إذا أنجز وطرح في المكتبات، فيفيد منه الطلبة، وكذلك الجامعة تفيد من مردوده المادي.  
٢- وله فوائد معنوية أيضاً. إذ يفيد منه طلبة العلم، ويبصرهم بأداء السنة، ويكشف لهم أساليبهم المتنوعة، فيحذروا. ومن ثم يكون حافزاً للدفاع عن السنة بالرد عليهم.

طرق التحري والتحليل:

١- الخطوة الأولى: جمع الكتب المنشورة في الحدائث وتقصيها سواء أكان من أصحاب الحدائث، أم ممن رد عليهم.  
٢- تقويم ما كتبه في ضوء القواعد والضوابط التي قعدها وأصلها علماء الحديث. والرد عليهم.

الأمر المتعلقة بأخلاقيات البحث العلمي والمتعلقة بالمشروع: المشروع خدمة لسنة الحبيب، صلى الله عليه وسلم، ويتوافق مع رسالة الجامعة. ولا يتعارض مع الإسلام وحضارته، ولا علاقة له بشخص معين، ولا الهجوم على أية شخصية بعينها، بل هو موضوع علمي محض يصنف في باب المناظرات العلمية، ودحض الشبهات التي أثارها المنحرفون، حول سنة المصطفى، صلى الله عليه وسلم. وعليه فلا يحتاج إلى إذن من الخارج.

ملحوظة هامة: المشروع في طور القراءة والجمع وتصنيف الشبه.





## الاتجاه الحداثي وموقفه من النص القرآني

د. بلقاسم محمد الغالي، د. محمد عصام مفلح القضاة

قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

اجتاحت الفكر الإسلامي المعاصر تيارات فكرية منحرفة ظهرت تحت شعارات براءة أطلق عليها "الحدائثة". هذا المصطلح غني بالمعاني لكنه يخضع إلى ملامح: أولها- تنزيل العقل منزلة المرجعية المعرفية الوحيدة في إدراك العالم. ثانيها- تكريس الإنسان هدفاً للتحرر والتقدم. ثالثها- رؤية إلى العالم الطبيعي الذي تسيره سنن طبيعية كما تسير الإنسان السنن الإنسانية والاجتماعية و تجعل منه فاعلاً أصيلاً في تعيين مصيره.

هذه الجحلة نشأت بالغرب و تسربت أروها إلى العالم فتأثر بها تيار فكري في المشرق والمغرب العربي الإسلامي فأخذ يركز اهتمامه على دراسة النصوص التأسيسية للإسلام كالقرآن والحديث. وقد لجأ إلى تطبيق المصطلحات السننية "الدلالية" عليها، كمرحلة أولى من مراحل الدراسة والتحليل هادفاً من وراء ذلك إلى تحريرنا من "الهيبة الساحقة للنص" على حد زعمه. وهو اتجاه يحاول أن يطبق على النص فوائين علم اللسانيات أو علم اللغة طبقاً لمفاهيمه الغربية تلك التي تتعامل مع النصوص المقدسة على أنها مجرد نصوص تخضع للنقد والتحليل اللغوي. ثم بعد ذلك يطبق على النص القرآني نظريات علم الاجتماع و علم مقارنة الأديان و علم الأنثروبولوجيا التي تعتبر الأديان و كتبها مجرد ظواهر اجتماعية وليس لها أساس ميتافيزيقي.

ذلك ما يعتقدّه الحداثيون من العلمانيين والليبراليين و الماركسيين حيث يزعمون أن القرآن والسنة هما العقبة التي تقف أمام التطور بما أضفي عليها من قداسة تمنع من مجرد الاقتراب منها و محاولة تطويع نصوصهما لمتطلبات العصر فهم يريدون التعامل مع النص على أنه وثيقة تاريخية تقرأ بمعطيات عصرها و يقولون كيف تعالج قضايا عصرنا بوثيقة كتبت منذ أربعة عشر قرناً!

هذا التيار المنحرف الموسوم بالحدائثة برزت كتيبه تحت عناوين: "تجديد التراث" "القرآن و الكتاب قراءة معاصرة" "بنية العقل العربي" "نقد النص" "ازمة الثقافة الإسلامية" "مفهوم العقل"، وهي كتب تحتاج إلى كشف مطاعنها و بيان زيف أفكارها و تهاافت أصولها و ضحالة مستنداتها حتى ينكشف الأصيل من الدخيل و حتى يتبين الفرق بين التجديد الإسلامي الذي يبني على أسس ثابتة و ضوابط رصينة و المسلم مدعو إلى الاجتهاد فيها، و بين دعوات تعريبية مشبوهة قد تأتي على الأخضر و اليابس تحت مسميات الحدائثة و ما بعد الحدائثة و التاريخية و السننية و الانسنة و غيرها من ألوان الحدائثة الزائفة البعيدة عن روح التجديد الذي دعت إليه النصوص الثابتة.

فاللهم أهدنا و أهد بنا و ما توفيقى إلا بالله و صلى الله على سيدنا محمد و على

آله و صحبه وسلم و آخر دعوانا ان الحمد لله رب العالمين.

## المناسبات في سور القرآن الكريم

د. عبدالله عبد الرحمن الخطيب، أ.د. مصطفى مسلم، د. احمد عباس البدوي  
قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشرقية

### الخلاصة

يقع هذا المشروع ضمن مشروع ضخم عنوانه: التفسير الموضوعي لسور القرآن الكريم، والمناسبات بين سور القرآن وآياته جزء مهم من هذا التفسير المزمع تأليفه. ويهدف المشروع الى تقديم المناسبات بين سور القرآن كلها وبين فواتح السور وخواتيمها، وذلك لإبراز جانب مهم وهو ترابط القرآن الكريم سوراً وآيات كالسلسلة الذهبية وفق خطة متفق عليها على يد متخصصين في تفسير القرآن الكريم.

وتأتي أهمية هذا المشروع من حيث إنه سيد حاجة ماسة لطلاب العلم والمختصين في علوم القرآن وتفسيره، وإبراز لهذا الجانب الهام من تفسير القرآن الكريم في بيان التناسب في سوره وهو وجه من وجوه الإعجاز القرآني وخصوصاً إذا علمنا أن في إيضاح هذا الجانب رد على كل من يشكك بترابط القرآن الكريم سوراً وآيات. ويتوقع من المشروع فوائد عديدة أهمها:

١. نشر الثقافة القرآنية بأسلوب جذاب ومؤثر.
٢. ترسيخ مكانة جامعة الشرقية في البحث العلمي الهادف.
٣. توفير مرجع أساس لطلاب التخصص في التفسير وعلوم القرآن الكريم.
٤. ويتوقع الانتهاء من المشروع خلال ثلاث سنوات تقريباً.



## التفسير الإجمالي لسور القرآن الكريم

د. محمد عصام القضاة، د. محمد عبداللطيف، د. احمد عباس البدوي

قسم أصول الدين، كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

الحمد لله رب العالمين والصلاة والسلام على سيد الأولين والآخرين نبينا محمد وعلى آله وصحبه أجمعين أما بعد: فإن سور القرآن الكريم تشتمل على موضوعات كبيرة في مجالات عدة، وقد اتجه المفسرون في بيان ما في القرآن الكريم من المعاني اتجاهات عدة، وتمت الكتابة بأحد اتجاهين: أحدهما يقوم على تحليل النص القرآني والوقوف عند معانيه وبيان غريب ألفاظه، والثاني يقوم على استخراج ما في القرآن من موضوعات وما تتطوي عليه من هدايات.

ولما كان الجانب الآخر لم يلق الاهتمام الذي لقيه الجانب الأول، وهو جديد بالبحث والبيان كان هذا المشروع الموسوم (بالتفسير الإجمالي لسور القرآن الكريم)، وهو يتناول الحديث بشكل إجمالي على ما تحويه سور القرآن الكريم من معان عظيمة وفوائد جليلة تتجلى فيها روعة البيان القرآني، ودقة نظمه البديع الرائع وذلك من خلال الحديث عن مقاصد كل سورة من سورته، والبحث في الموضوعات التي تشتمل عليها كل سورة وتجليتها وتوضيحها، كما يتناول بالبحث والدراسة المتأملّة أبرز ما يجمع موضوعات السورة مما يعتبر كالمحور الرئيس للسورة، ويدور حوله محاور فرعية تخدم المحور الأساس وتعطي القارئ الكريم مدى تناسق الآيات والسور بعضها مع بعض، بحيث تُظهر هذه الدراسة القرآن الكريم كالسبيكة الواحدة في سبكه البديع ونظمه الرائع وتآليف آياته وسوره على الوجه الذي أراد الله تعالى بتوجيه أمين الوحي جبريل للنبي محمد صلى الله عليه وسلم إلى مكان وضع الآية أو الآيات، وترتيب السور في مواضعها، مما يثبت بعد ذلك بما لا يدع مجالاً للشك ضرورة القول أن سور القرآن وآياته مرتبة ترتيباً توفيقياً لا توفيقياً اجتهادياً، كما يبرز البحث معالم كل سورة ومناسبات الآيات وأسباب نزولها والفضائل العظيمة لها بشكل مجمل دون إطالة مملة أو اختصارات مخلة. وهو في النهاية رافد من الروافد التي تصب في المشروع الرائد الذي تقوم به مجموعة بحوث الكتاب والسنة في الجامعة تحت عنوان: (التفسير الموضوعي لسور القرآن الكريم).



## An Arabic Proficiency Test

Prof. Mohammad Asfour<sup>(1)</sup>, Dr. Sane Yagi<sup>(1)</sup>,  
Dr. Mohammad Younes<sup>(2)</sup>

<sup>(1)</sup> Department of English Language & Literature

<sup>(2)</sup> Department of Arabic Language & Literature  
College of Arts and Sciences, University of Sharjah

### ABSTRACT

This project is intended to create a standardized test of Arabic as a native language. As far as we know, there is no such test in existence. By "Arabic" we mean Modern Standard Arabic (MSA) and by "native speakers" we mean secondary-school leavers and those with higher degrees. The test at this stage consists of three major components:

- (1) Comprehension & Written Expression
- (2) Syntax & Morphology
- (3) Lexis
- (4) Composition

At a later stage, we hope to be able to include aural-oral comprehension & expression as an integral part of the test. The Arabic Proficiency Test is a unique and innovative testing instrument. It

- Uses authentic rather than artificially fabricated language
- Evaluates competence in language in use rather than outdated language
- Focuses on the communication of meaning rather than metalanguage
- Assesses analytical critical comprehension skills
- Evaluates language production and synthesis
- Examines competence in the succinctness of expression
- Tests grammatical structures in current use rather than archaic syntactic formulae
- Evaluates lexical knowledge
- Assesses thought development and discourse organization

The comprehension written expression component consists of authentic passages selected mainly from modern sources, with questions varying in difficulty from the simple to the complex, with emphasis on inference as a necessary skill in reading. Written expression and reading comprehension are viewed as complementary receptive and productive skills; therefore, they are tested in one context. In the syntax and morphology component, we do not hunt for

common errors but rather competence in identifying and using actual Arabic structures and basic features. "Say and Do not Say" type of errors are avoided because they are prescriptive in nature; our test takes a descriptive linguistic approach to language learning.

In the composition component, students are required to compose an original essay of about 250 words on one of two topics given in the test itself. The purpose is to assess their ability to think and organize their thought in appropriate discursal structures. Like other standardized language tests, our proficiency test has the multiple-choice format in all components except the composition component.





## Diffusion of Islamic Civilization in the Bengal Region of South Asia in the light of Arabic Islamic Inscriptions

Dr. M. Yusuf Siddiq

Department of History and Islamic Civilization, College of Arts and Sciences,  
University of Sharjah

### ABSTRACT

The diffusion of Islamic civilization in Bengal is a complex academic and intellectual issue. The research focuses on the issue of diffusion of Islamic civilization in the region from historical and archaeological perspectives, using the epigraphic evidence as its primary source. Fortunately, the Arabic Islamic epigraphic materials in Bengal are fabulously rich. They offer us a hitherto untapped treasure of diverse cultural and historical information. It is no exaggeration to claim that they provide the most authentic source of documentation for the early cultural history of Islam in the region.

Though geographically distant from the Arabian Peninsula, the heartland of the world of Islam, Muslim Bengal played an important role in Islamic history ever since the region was brought under Muslim rule in the early 13th century. The governors in this remote Islamic province, although appointed from Delhi, often tended to exercise their authority like sovereign rulers, a phenomenon that led toward creating an independent character of the political structure of this region from the very beginning. In fact, from the middle of the 14th century until the last quarter of the 16th century, the region was ruled mostly by powerful independent Muslim dynasties. Muslim Bengal enjoyed great prosperity under some of these independent sultans, its arts and sciences flourished, and its cross-cultural ties were broadened. While Chinese emissaries were received at the royal courts in Bengal, ambassadors of the Bengali sultans traveled as far as Egypt on their diplomatic missions. Towards the end of 16th century, Bengal was finally subdued by Emperor Akbar. Though its status was now reduced to a mere remote province of the mighty Mughal empire, it was still considered one of the richest regions of South Asia. Its ports were used by many pilgrims in the East to travel to Makkah and Madinah. While Hajj provided an ideal ground for the Muslims all over the world to interact with each

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other, for many it was also a rare opportunity for exposure to different pan-Islamic and revolutionary movements.

In general, historical accounts of the Islamic dynasties in South Asia are rich. This is particularly true regarding the central authorities in Delhi, as we find a number of source-books, mostly in the Persian language, recording events of different Sultans and Emperors. Bengal, however, has a very small share in this rich heritage of historical writings. Whatever might have existed once, very little has survived to our age. One example of such lost sources is a manuscript in Persian on the early Muslim rule in Bengal, found by Francis Buchanan in one of the shrines in Pandua in the early 19th century and mentioned by him in his book, *A Geographical, Statistical and Historical Description of the District or Zilla of Dinajpur in the Province or Soubah of Bengal* (Calcutta: 1833). Several factors, including natural calamities such as flood and fire, may account for the lack of extant sources. Prolonged monsoons and the humid weather in Bengal posed an additional challenge to the preservation of such archives.

Another important factor that accounted for the scarcity of materials on the history of Muslim Bengal was the attitude of the imperial chroniclers in Delhi towards this region. Very few among them were ever keen on recording the events of this region because of its distance from the capital. Even if something was written, it usually reflected the official version of the events, such as military expeditions of central authority to subdue the region, as there was always a standing temptation for its governors to rebel. Having been written in the capital, these texts contain not only a general urban bias, but also one of the central government; thus, they seldom provide dependable information on this region.

Though significant attention was paid to writing the political history of Bengal during the British period, very few of the historians were able to write the true history of its people free from any bias. H. Beverly, author of the very first census report of Bengal, describes the masses of this region as "semi-amphibious aborigines of Bengal" (Report of the Census of Bengal, 1872, para. 525). But most importantly, very little has been written about the diffusion of Islam in Bengal, which is perhaps the most important social transformation during the past few centuries in this region. It is this particular field which still needs to be extensively investigated and better understood.

The research project is a unique one. It will not only use new materials and add fresh information to this period of



Islamic history, but it will also attempts to interpret anew the dynamics of Islamic transformation of an important region of Islamic East. The main objective of this research project is to study the cultural implication of the Arabic Islamic inscriptions in the Bengal region of South Asia (comprising essentially present Bangladesh and the Indian state of West Bengal). Thus it aims to analyze the history of the diffusion of Arab Islamic civilization and culture during 1205 -1707 using Islamic epigraphic texts in the region as its primary source. This will be an important study as it will shed new light on the religious and cultural dynamics of a crucial period of Islamic history and civilization in the region. In addition, it will also serve as an important model for developing understanding of the social, cultural and religious transformation in an important Islamic region of South Asia, as it will make extensive use of the rich Arabic epigraphic sources of the area for the first time. This study will help us understand the complex history of the Islamization process in a region which, despite of its having no direct geographical link with rest of the Arabic Islamic world, has a strong Islamic identity and has played an important historical role in the Islamic world.

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## تصميم مقياس للتفكك المعياري

أ.د. محمد بروهوم

قسم علم الاجتماع، كلية الآداب والعلوم، جامعة الشارقة

### الخلاصة

تهدف هذه الدراسة إلى تطوير مقياس للتفكك الاجتماعي تتوفر فيه درجة مقبولة من الصدق والثبات. وتتبقى مشكلة الدراسة من ندرة توفر أدوات عربية لقياس التفكك المعياري تتمتع بخصائص سيكومترية مقبولة، وقد حاولنا تطوير مثل هذه الأداة معتمدين في ذلك على المقاييس والدراسات ذات الصلة في هذا الصدد. وتكمن مشكلة الدراسة الراهنة في معرفة الخصائص السيكومترية لمقياس التفكك المعياري وبناء المقياس الذي يمكن أن تتوفر فيه دلالات مقبولة من الصدق والثبات لقياس التفكك المعياري تكون له قيمة عملية لدى الباحثين العرب. وفي رأينا أن التركيز على الجوانب الذاتية في موضوع اللامعيارية هو أمر عديم الجدوى نظراً لأن مثل هذه الحالات يمكن أن تكون ناتجة عن كثير من الظروف النفسية والاجتماعية. ولذا، فإننا حاولنا تطوير مقياس يمكن أن يقوّم وضع المعايير التي يتبناها الفرد على المستوى الإدراكي، مع المحافظة على أسلوب دوركهايم في تناول هذا الموضوع. فالمعايير تظهر نفسها على المستوى الإدراكي كأوضاع واتجاهات نحو قضايا اجتماعية معاشة، وعليه فقد انصب اهتمامنا في هذه الدراسة على وجود الانسجام أو التناغم المنطقي، والغموض، والتكامل وغياب المعايير لدى الأفراد بمعزل عن انسجامها أو عدم انسجامها مع سلوكهم. فالأشخاص الذين يُشنون في بيانات اجتماعية تنصف بوجود مستوى عالٍ من التغير الاجتماعي، وعدم وجود تجانس، ووجود صراع ثقافي يتوقع منهم تمثل معايير غير واضحة ومتصارعة داخل نظامهم القيمي الاجتماعي. وبناء على ذلك، نعرف اللامعيارية، من الناحية النظرية، بأنها حالة من الغموض والصراع وغياب المعايير.

وقد وقع الاختيار على مجموعة من العبارات وصل عددها إلى (٤٥) عبارة، تمت صياغتها لقياس درجة التفكك الاجتماعي. وقد تم عرض العبارات على خمسة أشخاص من المتخصصين في علم الاجتماع، وعلم النفس، والقياس، والبحث العلمي، والإحصاء وقد حظيت (٢٧) عبارة بموافقة (٩٥%) من المحكمين. واشتملت الأداة على خمسة أبعاد هي: غياب المعايير، وغموض المعايير، وصراع المعايير، والاتجاه المحافظ، والاتجاه التحرري. ويندرج تحت كل واحد منها مجموعة من العبارات تم قياسها على مقياس متدرج مبني على أساس مقياس ليكرت Likert في قياس الاتجاهات يتدرج من موافق بشدة إلى معارض بشدة (+٣ و -٣). وتم على ضوء ذلك صياغة خمس وأربعون (٤٥) عبارة مبدئية تم وضع كل عبارة من هذه العبارات على مقياس متدرج يتكون من سبع نقاط، مع وجود نقطة الصفر التي تشير إلى غير محدد أو غير مقرر، وثلاث مستويات من الموافقة بقابلها ثلاث مستويات أخرى تشير إلى عدم الموافقة على كل جانب من جوانب المقياس. ويمثل طرفي كل عبارة الموقف الجماعي/ المحافظ في جانب



مقابل الموقف الفردي/المتحرر في الجانب الآخر. فالأداة الحالية هي قياس للامبارية، كتفكك معياري على المستوى الفردي: درجة الصراع، والغموض، والاختلاف أو التباين داخل نظام المعتقدات عند الفرد.

وقد تم في المرحلة الأولى من مراحل الدراسة تطبيق الأداة على عينة غرضية من طلبة الجامعات بلغ عددها (٨٨١) طالب وطالبة. وتم تعبئة استبانة الأداة من قبل الباحثين داخل قاعات الدرس. وأدخلت البيانات في ذاكرة الحاسوب وتم تطبيق صدق البناء على عبارات الأداة. وللتأكد من ثبات أداة القياس تم حساب كرونباخ-ألفا للدرجة الكلية حيث بلغ (٠.٨٥). وبينت نتائج الدراسة أن أداة القياس تتمتع بدرجة عالية من الصدق والثبات وقد تم التأكد منها بواسطة صدق المحتوى وصدق البناء. وعليه، فإنه يمكن القول بأن الأداة صادقة، ويمكن الاعتماد عليها. وجرى في المرحلة الثانية من مراحل الدراسة تطبيق الصورة الأولية لمقياس التفكك المعياري، بعد أن تم استبعاد خمس عبارات نظرا لعدم فهم الطلبة لهذه العبارات فهما صحيحا حيث بلغ عدد عبارات المقياس (٢٢) عبارة، على عينة غرضية مكونة من (١٠٠٠) طالب وطالبة موزعين على مختلف الجامعات في دولة الإمارات العربية المتحدة وذلك خلال العام الجامعي ٢٠٠٣/٢٠٠٤. وللتأكد من ثبات المقياس بصورته النهائية تم حساب كرونباخ-ألفا للدرجة الكلية حيث بلغ (٠.٩٣)، وهذا يظهر أن المقياس في صورته النهائية يتمتع بدرجة عالية من الصدق والثبات.



## واقع البطالة في مجتمع الإمارات - دراسة ميدانية

د. أحمد فلاح العموش

قسم علم الاجتماع، كلية الآداب والعلوم، جامعة الشارقة

### الخلاصة

تهدف هذه الدراسة إلى التعرف إلى واقع البطالة في مجتمع الإمارات وذلك من خلال المحاور الأساسية الآتية: التعرف على الخصائص الديموجرافية والاجتماعية والاقتصادية للمتطلين عن العمل في مجتمع الإمارات. التعرف إلى واقع البطالة واتجاهها من خلا بيان الدوافع الكامنة وراء هذه المشكلة. التعرف إلى حجم البطالة ونسبتها في مجتمع الإمارات. وتعد دراسة مشكلة البطالة في مجتمع الإمارات على مستويين من الأهمية: الأول: نظري ويتمثل في توظيف نظريات المشكلات الاجتماعية في مجال بناء أداة تقيس واقع واتجاه هذه المشكلة. الثاني: المستوى التطبيقي ويتمثل في استخدام هذه الدراسة لمعرفة واقع البطالة في مجتمع الإمارات ووضع الحلول المقترحة.

ويتكون مجتمع الدراسة من جميع المتطلين عن العمل في إمارات الدولة (أبوظبي، دبي، والشارقة، وعجمان، ورأس الخيمة، والفجيرة، وأم القيوين). ولأغراض دراسة واقع البطالة فإن حجم العينة المتوقع سيكون حدود (١٠٠٠) مواطن و مواطنة من المتطلين عن العمل. ولتحقيق غرض الدراسة في الكشف عن واقع البطالة، سيتم تطوير أداة الدراسة انطلاقاً من نظريات المشكلات الاجتماعية و الدراسات ذات الصلة. ستعتمد الدراسة على المنهج المسحي بوصفه أكثر المناهج استخداماً لتحقيق الأهداف المشار إليها.

المفردات الأساسية: مجتمع الإمارات، البطالة، المشكلات الاجتماعية، المتطلين.



## Recognition of Handwritten Arabic Characters

Dr. Ashraf Elnagar, Dr. Saad Harous

Department of Computer Science, College of Arts and Sciences  
University of Sharjah

### ABSTRACT

We have developed an off-line Arabic Character Recognition system with emphasis on segmenting handwritten touching numerals. A new approach to separating single touching (and some multiple) handwritten digit strings is proposed. The image of the connected numerals is normalized, preprocessed and then thinned before feature points are detected. Potential segmentation points are determined based on decision line that is estimated from the deepest/highest valley/hill in the image. The partitioning path is determined precisely and then the numerals are separated before restoration is applied. Experimental results on the NIST Database 19, CEDAR CD-ROM and our own collection of images show that our algorithm can get a successful recognition rate of 96%, which compares favorably with those reported in the literature.

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## Performance of Augmented Multi-Dimensional Array Codes Under Memoryless Channel Conditions

Dr. Lami Kaya

Department of Computer Science, College of Arts and Sciences,  
University of Sharjah

### ABSTRACT

In this research project, different augmentation schemes for multi-dimensional array codes and their performance in memoryless channel conditions are investigated. By adding additional information bits to parity check positions of an error-control code, the code rate can be improved. Namely, augmentation is a process of increasing number of information bits in the block while retaining block length and Hamming distance. Possible augmentation methods applicable to multi-dimensional array codes and determine their performance by implementing a computer-based simulation system and testing environment.

Multi-dimensional array codes are generated by sub-codes, which can be either block or convolutional codes, in two or more dimensions. Mutli-dimensional codes are used for random and/or burst error control and computer memory applications. Augmentation process is to add new code words to an existing code, while retaining the block length constant. The effect of this operation is to increase the code rate. It is possible to view existing codes in an entirely new light using augmentation techniques; augmentation can be used for constructing an existing code in a different manner. We have proposed a new low complexity augmentation technique, which allows the design of product (array, matrix) codes with the same block length,  $n$  and minimum Hamming distance,  $d_{min}$  as original row and column (RAC) array codes, but with an increased code rate. These codes are called augmented RAC (ARAC) product/array codes. The following shows and augmented ARAC-RC code constructed from RAC code superimposed with additional  $X_r$  and  $X_c$  information bits. The code rate improvement is  $2/n_1n_2$  in comparison with original RAC code.

$$C_{arac-rc} = \begin{matrix} X_{11} & X_{12} & \dots & X_{1k_2} & O_{1n_2} \oplus X_c \\ X_{21} & X_{22} & \dots & X_{2k_2} & O_{2n_2} \oplus X_c \\ \dots & \dots & \dots & \dots & \dots \\ X_{k_11} & X_{k_12} & \dots & X_{k_1k_2} & O_{k_1n_2} \oplus X_c \\ O_{n_11} \oplus X_r & O_{n_12} \oplus X_r & \dots & O_{n_1k_2} \oplus X_r & O_{n_1n_2} \oplus X_r \oplus X_c \end{matrix}$$



where  $X_{ij}$  ( $1 \leq i \leq k_1$ ,  $1 \leq j \leq k_2$ ) represent information bits in respect to their position in the array. The  $O_i$  ( $1 \leq i \leq n_1$ ) symbols indicate row parity checks and  $O_{n_1 j}$  ( $1 \leq j \leq n_2$ ) represent column parity check bits. The  $k_1$  and  $k_2$  are the number of information bits in each sub-code. The block length of each sub-code,  $n_1$  and  $n_2$  are given as  $n_1 = k_1 + 1$ ,  $n_2 = k_2 + 1$ . The code may be square or rectangular in shape. The augmentation allows us to improve the code rate of these codes, without sacrificing their error control capabilities. The trellis of these codes can be constructed to a similar way of constructed trellises for RAC codes. Once the trellis is constructed maximum-likelihood Viterbi decoder can be used to decode them with hard-decision or soft-decision detection schemes.

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## A Web-Based Early Warning System for Anti-Microbial Resistance

Dr. Ahmed Guessoum<sup>(1)</sup>, Dr. Rawahan Basha<sup>(1)</sup>, Dr. Abdul Ridha A.  
Abdullah<sup>(2)</sup>, Prof. Moslih I Al Moslih<sup>(3)</sup>, Dr. Nizar Farjou<sup>(4)</sup>

<sup>(1)</sup> Department of Computer Science, College of Arts and Sciences, UOS

<sup>(2)</sup> Department of Nursing, <sup>(3)</sup> Department of Medical Laboratory Technology,  
College of Health Science, UOS

<sup>(4)</sup> Family Medicine, Ministry of Health, Sharjah

### ABSTRACT

A major health problem facing the world today is the growing ineffectiveness of antibiotics. This is due to the problem of growing resistance to antibiotics by various infectious bacteria. Indeed, over the years (or decades) various bacteria have managed to mutate in such ways as to survive antibiotics. This was helped by various factors including the overuse of antibiotics (even in cases where they would not be needed), improper duration of the use of antibiotics, non-varied use of antibiotics, etc. The problem is so serious that experts fear a public health catastrophe if (or when) some bacteria manage to become resistant to all known antibiotics. The problem of antibiotic resistance has obvious health as well as economic implications in all countries. For this reason, the problem has been taken seriously and is being actively investigated in various dedicated centers in the West.

This project aims at analyzing and understanding the trends of antibiotic resistance in Sharjah and the UAE and setting up an Early Warning Centre which would give proper advice to health authorities and medical practitioners. In order to tackle the problem, we have designed and implemented a computer program that support the collection and analysis of large amounts of data on antibiotic resistance and allows to carry out analyses and generate a multitude of reports about the various facets of the problem. The software is fully operational and just awaits medical data to be supplied to it. When this is done, the program will be useable through the Internet for the following types of users (through the use of user identifications and passwords):

- The administrator will be allowed to maintain the system and add/remove data and system capabilities.
- The authorized medical labs and centers will be able to supply more data as it gets collected, and get an up to date analysis of the data and trends of the antimicrobial resistance in the country



- The general public and medical practitioners will be able to get some general medical information and advice on the antibiotic resistance problem and suitable antibiotics.

In terms of data collection, we have already collected about 500 medical samples from Sharjah, 730 samples from Dubai, and about 700 samples from Abu Dhabi. Negotiations are under way to be allowed to collect another few hundred samples from Ajman. The computer entry of this data is also largely under way and is to be finalized in the next couple of months.

Once the data collection and entry are finished, we will work on the data analysis and report generation using the already developed software. This will be followed by the writing up of scientific publications as we expect the results to be of prime importance.





## C A D System for Early Detection of Lung Cancer Based on the Analysis of 3D Computer Tomography Images

Dr. Rachid Sammouda, Dr. Ashraf Elnagar

Department of Computer Science, College of Arts and Sciences  
University of Sharjah

### ABSTRACT

Lung cancer remains a leading cause of mortality cancer; its cure rate is very low because it is usually detected at very late stages. In recent years, new technologies have emerged and are capable of detecting lung cancer at an early stage. X-ray Computed Tomography (CT) is the standard for pulmonary imaging. Depending on the scanner hardware, CT can provide high spatial and high temporal resolution, excellent contrast resolution for the pulmonary structures and surrounding anatomy, and the ability to gather a complete three-dimensional (3D) volume of the human thorax in a single breath hold.

In order to help physicians in detecting the lung cancer in its early stage, we are developing a Computer Aided Diagnosis (CAD) System which is composed with the following steps: 1) Lung Regions Extraction, 2) Segmentation of the lung regions, 3) Features Extraction, 4) Cancer and abnormalities detection, and 5) Testing and evaluation of the system. Currently, we have finished the first step for the extraction of lung regions from 3D-CT images using pure basic image processing techniques. This extraction process should be as accurate and reliable as possible because its results will be used as a base to develop a Computer Aided Diagnosis (CAD) system for lung cancer. First, each 2D slice is converted to a set of binary images using the bit-plane slicing technique. Then a sequence of image processing techniques such as erosion, median filter, and dilation is applied to each bit-plane component of the 2D slice. In our study the third lowest bit-plane shows a higher accuracy in the below described algorithm for lung regions extraction. The method has been tested by processing 3D-CT data sets from 4 subjects, and has been successful in extracting the lung regions in almost all cases. Figure 1 shows a 2D-Chest CT image and Figure 2 shows its corresponding lung regions extracted using our method.

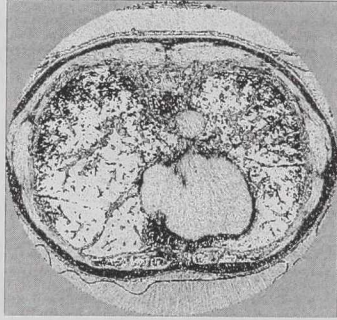


Figure (1). 2D-Chest CT image

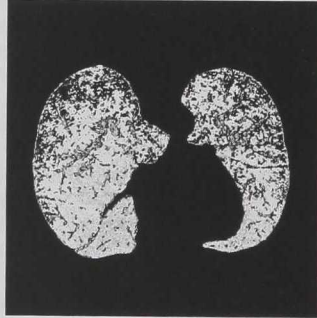


Figure (2). Extracted lung regions.

الملتقى السنوي الأول للبحث العلمي في جامعة البصرة  
٦-٧ ربيع الثاني ١٤٢٦ هـ الموافق ١٤-١٥ مايو ٢٠٠٥ م

# Rapid Modeling & Navigation through Graphically Constructed Non-Linear 3D Surfaces

**Dr. Mohsen Madi**

Department of Computer Science, College of Arts and Sciences  
University of Sharjah

## ABSTRACT

In applications such as CNC machining, highway and railway design, manufacturing industry, and animation, there is a need to systematically generate sets of reference points with prescribed arclengths along parametric curves, with accuracy and real-time performance. Thus, mechanisms to produce a parameter set that yield the coordinates of the reference points along the curve  $Q(t) = \{x(t), y(t)\}$  are sought. Among the benefits of such research is to construct smooth non-linear curves for purposes of performing real-time navigation through 3D populated scenes. The constructed curves in this case are the paths upon which cameras are stationed and thereafter space-translated.

Arclength parameterizable expressions usually yield the parameter set that is necessary to generate the reference points, however, for typical design curves, such expressions are often not available in closed form. It is desirable to find efficient ways to compensate for lack of arclength parameterization. In this research project, several methods for approximating arclength parameterization are studied. These methods are examined for both accuracy and real-time processing requirements. The application of generating uniformly spaced reference points along the paths of several curves is chosen for the purposes of illustration, and bench marking among the presented methods





## Deterministic and Generalized Timed Alternating Finite Automata and Succinct Representation of Timed Languages: Theory and Application

Dr. Abdelaziz Fellah

Department of Computer Science, College of Arts and Sciences  
University of Sharjah

### ABSTRACT

The focus of this research is on generalized timed alternating finite automata, regular languages, and parallel models of computation, an area that has been extensively investigated over the span of several years. Finite automata are one of the first computational models presented in computer science literature, and, certainly, one of the most interesting topics in formal languages. However, several problems related to these attractive models are still being widely investigated due to their applications in almost every area of computer science. For example, in software engineering, programming and object-oriented languages, embedded real-time systems, text editing, spell checkers, and string matching. In recent years, their application has been further extended to include for example, parallel processing, image generation and compression, databases, DNA and molecular computing. Also, they have been proven to be useful tools in complexity theory due to their simple formulation. Consequently, regular languages, finite state automata and parallel models of computation are emerging more than ever before as an important area and tool in computer science.

In this research project, we investigate the succinctness of three fundamental concepts in finite state automata – generalized non-determinism, alternation and timing. Then, we extend the expressive power of these three concepts to several versions of parallel models of computation, such as deterministic and generalized timed alternating finite automata. Then, we focus on the succinctness properties of these automata and analyze their influence and effects on the representation of regular languages. Moreover, the language accepting capabilities of these automata and their relationships with other parallel machines are also studied. Non-determinism and alternation have arisen in concurrency and been used to represent parallel computation. We introduce deterministic timed alternating finite automata, a class of timed alternating finite automata, extended with a finite set of mutually exclusive real-valued

clocks on events which trigger the state transitions. We show how to transform  $n$ -state timed finite automata into  $\log n$ -state deterministic timed alternating finite automata. We then prove that, unlike timed finite automata and timed alternating finite automata, deterministic timed alternating finite automata are closed under all Boolean operations, including the complementation.

In this research, we also aim to develop and integrate a collection of software utilities to manipulate automata and formal languages, in particular timed alternating finite automata. The software is intended for use in both research and teaching.





## New Approach to Image Indexing and Retrieval: Semantic Image Segmentation and Classification

Dr. Zaher Al Aghbari

Department of Computer Science, College of Arts and Sciences  
University of Sharjah

### ABSTRACT

Cluster-based image segmentation techniques search for pixel values in the image that occur frequently. Then, these pixels are grouped together into clusters, which are viewed as hills in the histogram space. A peak (local maximum) of a hill represents the corresponding cluster. If these peaks are then separated by some minimum distance, the image can be segmented using the threshold techniques. These techniques may suffer from large hills that dominate the smaller hills and thus results in a loss of image details in the segmentation process.

The traditional cluster-based algorithms give satisfactory results for images, where the color regions in the image are well distinguished in terms of their colors. But its segmentation quality deteriorates in the following scenario cases:

**(I) Scenario Cases 1:** Although the histogram contains several hills, a large portion of an image falls inside one wide hill, which may contain non-similar colors. This scenario case usually happens with blurred or high contrast images.

**(II) Scenario Cases 2:** The histogram contains a wide spectrum of colors in the image including the two extreme colors in the hue axis. In such a case, there is a possibility that a hill although appears to be slim in the histogram space it may contain non-similar colors that represent non-similar regions. Such a hill needs to be dismantled.

We propose the hill-manipulation algorithm to solve the two cases mentioned above and consequently improve image segmentation. The hill-manipulation algorithm is outlined below:

Algorithm: hill-manipulation

Input: an image

Output: a set of visually coherent segments

1. Use the traditional hill-climbing algorithm to clusters the colors of the image. The idea is to detect each cluster in the image which is represented by a hill in the 3D color histogram, where each hill consists of adjacent colors.

2. Detect and correct the scenario cases. The color histogram topology is affected by many factors, like blurring, noise, low contrast, and colors distribution. All of these aspects can change the shape of the histogram hills, leading to unexpected segmentation result. Thus, we have built algorithms that detect and correct the two scenario cases mentioned above.
3. Filtering out unnecessary small regions. Due to the application re-segmenting algorithms to solve the two scenario cases mentioned in the previous step, many unnecessary small regions may be generated. Thus, a post processing step to filter out such regions is necessary.





## Theory of Coupled Differential Systems

Dr. Khalil T. Al Dosary, Dr. Hishyar Khalil Abdullah

Mathematics & Statistics Division, Basic Science Department,

College of Arts and Sciences, University of Sharjah

### ABSTRACT

We consider the decoupling problem of a system of finite, linear, coupled differential equations of the Schrodinger types. Cao x. Chuan developed some conditions for decoupling this system. We have developed other conditions, which are weaker than Chuan's in order to include more general types of equations.

The objective is to decouple a system of coupled differential equations of the type:

$$(p + f_0)y_0 = By_1, \quad (p + f_1)y_1 = Cy_0$$

where  $p$  is an operator of differentiation of the form

$$p = \sum_{n=1}^N a_n \frac{d^n}{dx^n}$$

and  $a_n$ 's are functions of  $x$ , with  $B(x)$ ,  $f_0(x)$  and  $f_1(x)$  are assumed to be differentiable functions, without increasing their order.

**Project Benefits and Significance:** The Project Significance Is to introduce a method of separation of a system of finite, linear, coupled differential equations. We discuss first the conditions which govern this separation in the case of a system of two coupled equations. It is then shown how these results may be extended to the case of a system of finite number of coupled equation for which a general theorem on the separability is formulated.



# Discrete Boundary Value Problems: Existence and Uniqueness

Dr. Raghib M. Abu-Saris, Dr. Khalil Al-Dosary  
Mathematics & Statistics Division, Basic Science Department,  
College of Arts and Sciences, University of Sharjah

## ABSTRACT

A discrete boundary value problem (DBVP) is concerned with dynamical system whose evolution is governed by a recurrence relation and is subject to boundary conditions. The recurrence relation determines the future state of the dynamical system in terms of the present state and the past state(s). On the other hand, boundary conditions give information on both initial and final desired states.

Our immediate concern in this project is to establish necessary and sufficient conditions for the existence of a unique solution of DBVP. Despite the mathematical nature of this problem, it is important for real world applications. It can be used as a test for the validity of the constructed mathematical model.





## Fuzzy ideals and fuzzy modules with some finitness conditions

Dr. Ali Jaballah, Dr. Fathi B.Saidi

Mathematics & Statistics Division, Basic Science Department,  
College of Arts and Sciences, University of Sharjah

### ABSTRACT

The concept of fuzzy sets was introduced in 1965 by Lotfi Zadeh for the purpose of investigating systems that are not precisely defined. Fuzzy mathematics has since then attracted considerable attention, primarily due to its surprisingly successful and highly visible applications in theory and in the real world. Fuzzy sets play now an important role in many areas of research such as fuzzy logic, fuzzy algebra, fuzzy geometry; and has recently seen many applications in several fields such as robotics, computer graphics, decision and control, linear programming, linguistic, psychology, etc... In this research project, we investigate the problem of identification of a given fuzzy set with its corresponding collection of level sets and, more generally, the problem of characterization of all fuzzy sets corresponding to a collection of subsets of a given set. The problem of identification of a fuzzy set with its corresponding collection of level sets and its corresponding range has been widely used in the literature for the study of fuzzy sets. This is one of the cornerstones of fuzzy mathematics. Many global notions of fuzzy sets have been characterized by level sets. It is therefore important to know whether this identification is always possible. Representation of a family of subsets of a set by a fuzzy set, were used to study several fuzzy concepts such as fuzzy topological spaces and fuzzy algebraic structures.

We obtain in this research several characterizations of the fuzzy sets corresponding to a given collection of subsets of a fixed set. Necessary and sufficient conditions for both existence and uniqueness of such fuzzy sets are established. We show, among other things, that uniqueness is related to several algebraic and topological properties, such as cardinality, well-orderedness, min-max property, and the concept of nowhere dense sets. To shed more light on the problems of existence and uniqueness and to further support our results, we presented several examples that show, among other things, that the corresponding family of fuzzy sets may be uncountable, countable, or a singleton. Finally, we have also raised several unanswered questions. These questions are left as open problems for further investigation.



## New Antihypertensive Agents Syntheses of some new 7 (substituted) Benzofurylpyrazolo [4,3-d] pyrimidine-7-ones

Prof. Salim S. Sabri<sup>(1)</sup>, Prof. Mustafa M. El-Abadelah<sup>(2)</sup>

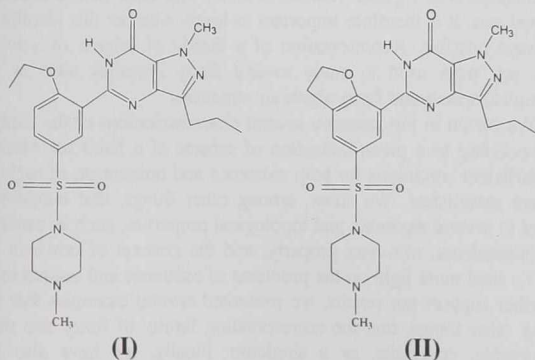
<sup>(1)</sup> Dean, College of Arts and Sciences, University of Sharjah

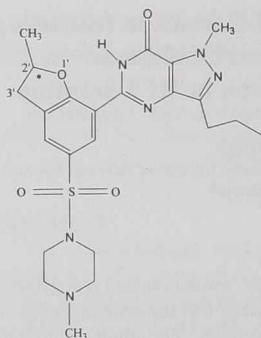
<sup>(2)</sup> Department of Chemistry, College of Sciences, University of Jordan  
Amman, Jordan

### ABSTRACT

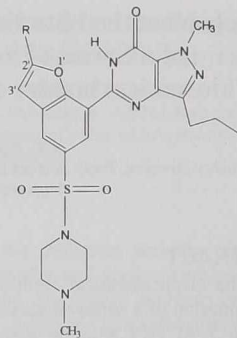
Interest in the discovery of new antihypertensive agents for the treatments of cardiovascular diseases has recently been reviewed. Sildenafil(I) citrate has been introduced as a potential drug for the treatment of hypertension, and angina(I). Quite recently, we have synthesized a new derivative II (we call it Biagra) considered as analog of Sildenafil (I). The compound "biagra"(II) shows in vivo antihypertensive activity which amounts to ~60% of that report for Sildenafil (I). Accordingly, there is a need in the art to carry out structural modifications on the "Biagra" molecule in order to hopefully improve the observed biological activities

The present project aims preparing a set of compounds (III – VII/Scheme 1) for bio assay comparative studies. For Structure (I) and (II) – see chart 1)





(III)



(VI)

الملقى المستوى الأول للبحث العلمي في جامعة الشارقة  
٧-٦ ربيع الثاني ١٤٢٦ هـ الموافق ١٤-١٥ مايو ٢٠٠٥ م

# Electrochemical Studies of Corrosion Inhibition of a Series of Semicarbazides and Thiosemicarbazides on Iron in HCl Solution

**Dr. Ayssar Nahle**

Chemistry Division, Basic Science Department, College of Arts and Sciences  
University of Sharjah

## ABSTRACT

The electrochemical studies of the inhibition and the effect of concentration of a series of semicarbazides and thiosemicarbazides on iron in 1 M HCl solution were performed. The studied inhibitors included the following: semicarbazide (SC), 4-phenyl semicarbazide (PSC), thiosemicarbazide (TSC), 4-methyl-3-thiosemicarbazide (MTSC), 4,4-dimethyl-3-thiosemicarbazide (DMTSC), 4-ethyl-3-thiosemicarbazide (ETSC), and 4-allyl-3-thiosemicarbazide (ATSC).

The percentage inhibition increased with the increase of the concentration of each inhibitor. The presence of the sulfur group in the thiosemicarbazide (TSC) instead of the oxygen group in the semicarbazide (SC), has caused the percentage inhibition to drop with all concentrations. The presence of the phenyl group in 4-phenyl semicarbazide (PSC) showed to have lower inhibition, throughout all concentrations, than the semicarbazide (SC). 4-ethyl-3-thiosemicarbazide (ETSC) showed to have higher efficiency of corrosion inhibition than 4-allyl-3-thiosemicarbazide (ATSC) at concentrations below  $1 \times 10^{-4}$  M; whereas at higher concentrations, these two inhibitors had similar % inhibition that reached about 77 % at concentration of  $1 \times 10^{-2}$  M. 4,4-dimethyl-3-thiosemicarbazide (DMTSC) had better inhibition than 4-methyl-3-thiosemicarbazide (MTSC) due to the increase of the number alkyl groups in the structure. Furthermore, the increase in the length of the substituted group lead to an increase in the inhibition efficiency at the same concentrations as it was evident with 4-methyl-3-thiosemicarbazide (MTSC) and 4-ethyl-3-thiosemicarbazide (ETSC). 4-ethyl-3-thiosemicarbazide (ETSC) was found to be the best inhibitor at all concentrations compared with the other studied inhibitors. The degree of inhibition for all the inhibitors closely followed the adsorption isotherm of the inhibition on the metal surface





## Industrial Field Survey Study of the Major Plastics Industries in the United Arab Emirates

Dr. Ideisan I. Abu-Abdoun, Mr. Ibrahim A. Abdul-Rahman  
Chemistry Division, Basic Science Department, College of Arts and Sciences  
University of Sharjah

### ABSTRACT

The electrochemical studies of the inhibition and the effect of concentration of a series of semicarbazides and thiosemicarbazides on iron in 1 M HCl solution were performed. The studied inhibitors included the following: semicarbazide (SC), 4-phenyl semicarbazide (PSC), thiosemicarbazide (TSC), 4-methyl-3-thiosemicarbazide (MTSC), 4,4-dimethyl-3-thiosemicarbazide (DMTSC), 4-ethyl-3- thiosemicarbazide (ETSC), and 4-allyl-3-thiosemicarbazide (ATSC). The percentage inhibition increased with the increase of the concentration of each inhibitor. The presence of the sulfur group in the thiosemicarbazide (TSC) instead of the oxygen group in the semicarbazide (SC), has caused the percentage inhibition to drop with all concentrations. The presence of the phenyl group in 4-phenyl semicarbazide (PSC) showed to have lower inhibition, throughout all concentrations, than the semicarbazide (SC). 4-ethyl-3- thiosemicarbazide (ETSC) showed to have higher efficiency of corrosion inhibition than 4-allyl-3- thiosemicarbazide (ATSC) at concentrations below  $1 \times 10^{-4}$  M; whereas at higher concentrations, these two inhibitors had similar % inhibition that reached about 77 % at concentration of  $1 \times 10^{-2}$  M. 4,4-dimethyl-3-thiosemicarbazide (DMTSC) had better inhibition than 4-methyl-3-thiosemicarbazide (MTSC) due to the increase of the number alkyl groups in the structure. Furthermore, the increase in the length of the substituted group lead to an increase in the inhibition efficiency at the same concentrations as it was evident with 4-methyl-3-thiosemicarbazide (MTSC) and 4-ethyl-3-thiosemicarbazide (ETSC). 4-ethyl-3-thiosemicarbazide (ETSC) was found to be the best inhibitor at all concentrations compared with the other studied inhibitors. The degree of inhibition for all the inhibitors closely followed the adsorption isotherm of the inhibition on the metal surface



## Developing an experimental tool and a theoretical model to investigate the thermal properties of building materials in UAE

Dr. Bashir M Suleiman<sup>(1)</sup>, Dr. Khalil A. El- Saadi<sup>(1)</sup>, Mr. Bassam R. Khader<sup>(1)</sup>, Mr. Omar M. Adwan<sup>(1)</sup>, Dr. Hishyar Khalil Abdullah<sup>(2)</sup>

<sup>(1)</sup> Physics Division, <sup>(2)</sup> Mathematics & Statistics Division,  
Basic Science Department, College of Arts and Sciences,  
University of Sharjah

### ABSTRACT

The aim of this project is to investigate the thermal conductivity of different samples of building materials such as bricks, marbles, tiles, concrete etc., that is being used in the construction of houses, hospitals, universities, schools and all general – purpose public building in the United Arab Emirates. These materials carry significant value in the construction and development of this country, particularly from the climatic, geological and environmental points of view. Adjusting the thermal properties of such materials will lead to a better thermal insulation making the homes healthier and comfortable throughout the year.

This project is divided into three stages: The first stage is to develop the experimental tool by collecting the different parts of equipments and integrate them to have a complete measuring system. Then calibrating the measuring system by using standard samples The second stage is to conduct a global survey and collect all possible information regarding all materials that are being used in the building material industry. This will include all types that are available in UAE and used in various parts of buildings during construction stages. Then a selection of the specific materials that we are interested in its thermal properties will be decided The third stage is to develop a theoretical model for determining the bounds and/ or estimating the effective thermal conductivity of a multiphase system given the volume fractions and the conductivities of the components. Then the model can be used to characterize macroscopic homogeneous and isotropic multiphase materials either by determining the bounds for the effective thermal conductivity and/or estimating the overall conductivity of the random mixture. This type of research will be useful to this university and UAE from many aspects. The local factories of bricks, concrete slabs, tiles, and others will be able to improve the quality of their products. This







## Growth and Characteration of CdS thin films for solar cell fabraction

Dr. Ala A.J. Al-Douri<sup>(1)</sup>, Dr. Abdalla A. Alnajjar<sup>(2)</sup>

<sup>(1)</sup> Physics Division, Basic Sciences Department, College of Arts and Sciences

<sup>(2)</sup> Director, Research and Studies Center

University of Sharjah

### ABSTRACT

An extensive review of the morphological, chemical and structural properties of polycrystalline CdS thin films is carried out. CdS has long been used as window layer material for high efficiency, heterojunction CuInSe<sub>2</sub> and CdTe solar cells. Numerous techniques have been used to deposit thin-film CdS. This includes molecular beam epitaxy, physical vapor deposition, sputtering, close-spaced sublimation (CSS), and chemical bath deposition (CBD). The latter two techniques are currently being used to produce CdS/CdTe heterojunctions for photovoltaic applications. However, for reasons that are not clear, CBD produces better CdTe and CuInSe<sub>2</sub> solar cells. The drive for high efficiency cells has led to increased interest in understanding and optimizing the growth of CdS by CBD, for instance, CBD-grown CdS may contain residual organic compounds left from the growth process. A heat treatment of CdS thin films prior to the deposition of CdTe is a straightforward method for reducing impurities and possibly improving CdS/CdTe device performance. Furthermore, research has shown that the grain size in the CdS films significantly increase with heat treatment. In this work the CBD method is used to deposit thin film of CdS. The framework of the project is to establish the effect of various deposition and post-deposition parameters on the properties of CdS thin films, and optimization of the CdS thin films used for solar cell.

Primarily results shows the heat treatment, with and without CdCl<sub>2</sub>, has critical effect on the quality of the CdS thin films. This is likely to play a key role in fabricating low-cost, large-scale solar cells for various terrestrial applications. The investigation is currently carried on the following lines of research:

- Assess the effect of post-deposition treatment, film thickness, bath temperature, substrate type and temperature, on the performance of CdS thin films
- Understanding the chemistry and morphology of CdS thin films.



- Establishing a cutting-edge research on the effect of heat treatment on characterization of polycrystalline thin films
- Optimization of various parameters affecting the behavior of CdS thin films for solar cell devices.

الملتقى السنوي الأول للبحث العلمي في جامعة الشارقة  
٦-٧ ربيع الثاني ١٤٢٦ هـ الموافق ١٤-١٥ مايو ٢٠٠٥ م

# Spectroscopic Study and Optical Characterization of Bulk II-VI Semiconductors

**Dr. Hussain Alawadhi**

Physics Division, Basic Science Department, College of Arts and Sciences  
University of Sharjah

## ABSTRACT

A tetrahedrally coordinated II-VI semiconductor with a fraction of its group II ions randomly replaced with transition metal ions – a Diluted Magnetic Semiconductor (DMS) – displays spectacular magnetic and magneto-optic phenomena. Originating in the spin-spin exchange interaction between the 3d electrons of the transition metal ions on the one hand and the band electrons on the other hand, it exhibits striking magnetic-field-induced circular birefringence (the Faraday effect), huge red-shift of the excitonic recombination radiation, and enormous linear birefringence (the Voigt effect). In addition, the magnetic interaction between the transition metal ions is known to occur mostly through an antiferromagnetic coupling. This, too, leads to magnetic phenomena unique to the DMSs: magnetic phases due to long-range magnetic ordering along with the associated collective excitations. This class of materials has become a good model in Spintronics: a new discipline which has recently become one of the key research areas connected with the magnetic-recording and semiconductor industries. One of the other interesting properties of DMSs is the broad range of compositions which in general can be realized, and the possibility to vary the band structure and lattice parameters with composition. This unique flexibility or tunability make these alloys particularly attractive for scientific research and potential applications, for instance in magnetic heterostructures.

Based on this background, a systematic study of several classes of II-VI DMSs has been undertaken in collaboration with a well known group in this field at Purdue University (USA). Three types of binary II-VI semiconductors were chosen as the base materials: CdTe, CdSe, and ZnTe. These bases were chosen because bulk single crystals of these binaries could be grown at Purdue University. For the transition metal ions, Fe, Co, Ni, Cr, V and Ti were chosen to form the DMSs. In this study, several spectroscopic techniques like Raman, photoluminescence, and modulation are used to characterize the DMSs. The measurements are all done at low temperatures (below 10 K) and sometimes at high magnetic fields up to 6 T. The samples used





are all single crystals grown in-house using the Bridgeman technique. The sample compositions are determined either directly using electron microprobe and ICP, or indirectly using the bandgap.

The work in this study started in the summer of 2001 and it is still in progress. Since then, the results of the study have been published through three papers in international journals plus several other conference presentations.

# The Role of Optimism in the Belief-Adjustment Model for Audit Judgement: An Empirical Study

Prof. Mohamed E. Ibrahim

Department of Accounting, College of Business and Management,  
University of Sharjah

## ABSTRACT

Auditors make numerous decisions during the course of an audit. They often use heuristics as efficient and effective means of making decisions in difficult settings (Hachenbrack 1992). However, the use of such heuristics may leave them vulnerable to a variety of biases, errors, and inconsistencies that cause their judgments to deviate from normative decision theory (e.g., Libby 1981, Ashton and Ashton 1995). One such non-normative bias is recency effect (Hogarth and Einhorn 1992). Decision makers who receive a mixture of information or evidence in the sequence of bad news and good news (or negative and positive) tend to make less extreme (more regressive) judgments than those given a mixture of information in the sequence of good news and bad news. Such an effect has serious implications for audit risk and the cost of the audit.

Recent studies (e.g., Messier 1992, Ibrahim and Shehata 1993, Glover 1997, Hoffman and Patton 1997, and Ibrahim and Shome 1998, Krishnamoorthy, Mock, and Washington, 1999, among others) have demonstrated that accounting judgments in different contexts were subject to such effects. These effects seem to be robust phenomena and other attributes of the audit process, such as decision aids, or auditors' personality dimensions (e.g., optimism) may help explain such effects. This project employed the belief-adjustment model to examine the validity of recency effects in different auditing environments and the moderating effects of optimism on the magnitude of such effects. The researcher used an experimental methodology that involved a sample of senior auditors with more than one year of experience and audit managers of different accounting firms. The experimental materials consisted of Scheir and Carver's (1985) scale of optimism and an audit task requiring judgment on accounting contingencies developed by Ibrahim and Shehata (1993).

Collected data were analysed using analysis of variance for repeated measures and regression analysis. The results indicate significant differences in judgment (i.e., recency effects) between those who





received mixed evidence in the order of positive/negative and those who received the mixed evidence in the order of negative/positive evidence. However, pessimistic auditors tended to have stronger recency effects than optimistic auditors.

**Key words:** Belief adjustment, order effects, mixed evidence, and optimism.



## Finance and Economic Growth: Evidence from Arab Countries

**Dr. Hussein. A. Al-Tamimi**

Department of Business Administration, College of Business and Management,  
University of Sharjah

### ABSTRACT

The paper estimates the causal relationships between financial development and economic growth for selected Arab countries using cointegration, Granger causality, and the impulse response function techniques. The results indicate that, in the long run, it seems that financial development and real GDP growth are strongly linked. However, in the short-run, the linkage is weak as Granger causality tests and the impulse response functions indicate that causality between real GDP and financial development exists only in four cases, namely Egypt, Kuwait Bahrain and Morocco. The results for Egypt, Kuwait and Bahrain reveal the existence of supply-leading phenomenon which is expected as all these three countries have relatively an advanced financial system and in turn diversified financial instruments. For example Egypt has an active stock exchange since 1990 and the same in the case of Kuwait and Bahrain in which they also have an active stock exchange since 1977 in the case of Kuwait and 1989 in the case Bahrain. The results for Morocco unexpectedly indicate the existence of demand- following phenomenon. This phenomenon according to Patrick is the case of developed countries in which Morocco is not one of them. The results are not expected because the financial system in Morocco is not a highly sophisticated one as is the case in the developed countries. For example it has inactive stock exchange although it was established in 1929(Jbili et al. 1997), also Morocco's GDP per capita is much lower than those in developed countries, for instance it was \$ 3,300 in 1999 compared with \$ 32,500 in United States, and 23,100 in Japan.

However, the findings do not strongly support what have been reached by most of the empirical studies in which the supply -leading phenomenon is dominant in the early stages of economic development or the positive role of the financial institutions. The results for the other four countries (i.e. Algeria, Jordan, Saudi Arabia, Syria) do not tell us whether it is the financial structure that induces economic development or vice versa. The results for Algeria, Saudi



Arabia and Syria are expected because these three countries don't have an advanced financial system, for example they don't have an organized financial markets which facilitate the diversification of financial instruments and in turn make more funds available to finance economic development process.

The results for Jordan is not expected because this country relatively has an advanced financial system. For example it has an organized stock exchange since 1976, in addition it has a diversified banking system, which includes 19 commercial banks five of them are foreign banks.





## The Appropriateness of “New Public Management” to United Arab Emirates

Dr. Abu Elias Sarker

Department of Business Administration, College of Business and Management,  
University of Sharjah

### ABSTRACT

Public management as an intellectual enterprise has undergone changes over the years. Its meaning, rubric, scope, functions and modus operandi have come under severe scrutiny particularly, since the 1980s, apparently because of its failure to cope with the exigencies of modern society. Thus, we observe the emergence of the New Public Management (NPM). Although the model was originated in Western countries, it has invaded the administrative arena of non-Western countries. The new model promises a leaner and better government, empowerment, customer satisfaction and better mechanisms of public accountability. These are all possible if there is a focus on professional management, explicit standards and measures of performance, output controls, separation between strategic and operational matters, greater competition in the public sector, segregation of units and so forth. Developing countries in different continents have been experimenting with diverse aspects of this new model. The results are mixed. While there are some glimpses of success, there are also incessant cases of failures. On account on various reasons, the question of successful implementation of the model in the developing world remains ubiquitous. It is argued that non-Western countries are not prepared socially, economically, politically and culturally to undertake market-oriented administrative reforms on a massive scale. It has been argued that although there are some indications of capitalist transformation, the informality of the economy is still an important variable in the system, whereas the NPM model presupposes the existence of a formal market economy. There are also some glimpses of administrative incapacity resulting in the failure in implementing reforms. This research investigated the applicability of the new model in the context of public organizations at both federal and local government levels in UAE. In the age of globalization, UAE's administrative system has also been influenced by the international forces. The research investigated the extent of NPM implementation, the extent of support for reform, and obstacles to implement the NPM agenda. The preliminary findings reveal that the extent of implementation is medium, indicating



that the pace of administrative change is neither low nor high. It is also revealed from the findings that in terms of support for the reform, most respondents are in the middle. Finally, most respondents remain in the middle in comprehending the obstacles to NPM-oriented reforms. It appears that the public administration system in UAE is selective in choosing reform items. The study also shows that, the system is quite comfortable with the conventional mode of administration that it has developed over the years along the Weberian line.



## An empirical exploration of Strategic Planning Practices in the Arabian Gulf Region

Dr. Attahir Yusuf

Department of Business Administration, College of Business and Management,  
University of Sharjah

### ABSTRACT

The study has established an association between the incidence of planning and a host of business and management oriented variables. And by testing the relationship between planning and performance, the study provided evidence to corroborate the existing understanding that planning is beneficial to business organizations. Some of the major findings of the study include the evidence that many of the firms do not having a planning process despite the fact that most of them are long-term planners. The hope is that strategic planning may not be seen just as a ritual but as a way to chart a bright future for the firm. The study also showed that a majority of the firms are either Prospectors or analyzers indicating the important role innovation plays in the region's business environment and the continued uninterrupted growth many sectors of the business environment have been experiencing over time. The relationship between strategies planning also showed that in the context of business firms in the Gulf, Prospector firms have considerable performance enhancement than all the other strategy types. This supports the opinion that strategy positively influences performance. The significance of this finding is the fact that it relates to firms in the Arabian Gulf which is a different location entirely from the traditional areas (of the West) where earlier studies on the relationship between strategy and performance were undertaken.

The Arabian Gulf firms also appear to be generally cautious and not overly aggressive in entering new markets or taking the lead and proactiveness in introducing and marketing new products to the market. Thus, the companies are inhibited by the high level of risk associated with a "pioneering" status. Also the issues our companies place greater priority on are mostly long-term oriented while their business practices are generally "business" oriented. In addition, it was discerned that given a particular strategic focus, firms tend to adopt a distinctive set of business practices. Prospector firms for instance, focus on human resource issues most as opposed to non-prospector firms. The implication is that Prospector firms tend to be employee centered to allow for greater creativity and innovation characteristic of such firms.



## International Joint Ventures in the UAE: A study of Perceived Determinants of Success and Failure

**Dr. Ali Hammoutene**

Department of Business Administration, College of Business and Management,  
University of Sharjah

### ABSTRACT

This research compares the perception of UAE and expatriate managers towards joint venture success and failure. The aims of this research are twofold: (a) to determine the degree of similarity and divergence between the perceptions of each group of managers vis-à-vis selected success and failure variables, and (b) to test a number of research hypotheses. The research will use a two-independent sample t-test as it would provide useful information on which to compare similarities and divergences in the pattern of managerial perceptions. In addition to the calculation of the mean, standard deviation and rank for each group, it provides F-values and their respective two-tail probabilities, the t-values, degrees of freedom, and two-tail probabilities to determine the significance of differences between the perceptions of the two groups.

Current literature review on international joint ventures reveal that among the success factors there are substantial differences in the perceptions of both groups of managers. The success factors on which managerial perceptions diverge greatly relate to (a) the incorporation of licensing and management contracts by the joint venture, (b) an acceptable level of transfer pricing, (c) a competent managerial team, (d) the selection of a suitable partner, (e) the enhancements of exports, and (f) autonomous decision-making powers. Similar perceptions of success were discernable in two factors, namely (a) compatibility of corporate cultures and (b) majority ownership of the joint venture's capital. The comparison of managerial perceptions of failure seem to indicate notable differences on the following factors: (a) bureaucracy and inflexible regulations, (b) differences in major goals, (c) selection of an unsuitable partner, (d) other partner's insufficient contribution and commitment, (e) conflicts over decision-making and management style, (f) unsatisfactory performance, (g) global versus national orientation, (h) unacceptable transfer pricing, and (i) diverging domestic and international marketing policies. Managerial perceptions are similar on: (a) perception of unequal benefits and costs and (b) absence of mutual trust.

Companies interested to form international joint ventures need to be sensitive to these factors to reduce managerial conflicts and the causes of failure also, it may be useful for both senior management teams in a venture to focus on these factors to enhance communications between the two partners, particularly in the start-up phase of the joint venture. By reducing the differences, or at least being aware of them, foreign and local firms may effectively contribute to a successful joint venture.





## Extending an Object-Oriented Language with Support for Components Completing a Book on Object-Oriented Programming

Dr. Walid Al-Ahmad

Department of Management Information System,  
College of Business and Management, University of Sharjah

### ABSTRACT

Component-based software development emerged as a promising paradigm to deal with the ever increasing need for mastering a system complexity, its evolution and reuse, and driving software engineering into sound production and engineering standards. However, there are still limitations and challenging opportunities in achieving these goals. Lack of adequate language-level support for component-oriented programming is just one of the limitations.

A review of the history of programming languages evolution, from procedural to modular through object-oriented languages, reveals that each programming paradigm has introduced a new abstraction which changed the way programming was perceived. Procedural languages introduced the concept of a structure or record as a new abstraction to group data fields together. Similarly, modular languages introduced the concept of module or package to group logically related program elements. Finally, object-oriented languages introduced the concept of class to model real-world entities that represent the key abstractions of the problem domain. Component programming languages should not be an exception in this regard and should have a new programming abstraction for grouping logically related elements which constitute the component. The creation of such an abstraction is one of the objectives of this research work.

Currently, components are developed using object-oriented languages such Java or C#. Such an approach to component development does not satisfy the requirements of a component. However, the object-oriented programming languages can be used as a foundation on which we can develop better support for component programming. Classes in the object-oriented paradigm can be viewed as the building blocks of a component.

Another objective of this research work is to provide solutions to alleviate some of the problems related to software engineering

principles such as encapsulation and substitution. Such principles are very crucial and must be guaranteed by components. Implementation inheritance in object-oriented programming poses a problem for component-oriented programming because it undermines the substitution requirement of components. Also, the encapsulation techniques and mechanisms as provided by object-oriented programming are not adequate for component-oriented programming.

To test the feasibility of the proposed solutions, an existing object-oriented language such as Java will be extended with new features. A preprocessor facility will be implemented to translate the code written in the extended language to the original language.





## Intangibles as Economic and/ or Wasting Resources: Empirical Evidence from UAE

Dr. Yousef Shahwan

Department of Accounting, College of Business and Management,  
University of Sharjah

### ABSTRACT

Accounting for intangibles has become a subject of great controversy in the accounting profession throughout the world. The central issues surrounding intangibles are whether they should be capitalized, and if so, then whether they should be amortized. In United Arab Emirates, no study has attempted to assess whether investors place value on intangible accounting numbers when valuing Emirates resident firms. This situation needs further investigation in order to contribute to the current debate. Thus, this study is the first attempt to investigate the market perception of assets intangibles for Emirates over a period of two years, 2000 and 2001. It is also the first attempt to examine whether amortization of intangibles is value-relevant to investors when valuing Emirates resident firms.

As the existence of intangibles is increasing in recent days reporting, intangibles, in some cases, comprise a significant percentage of total reported assets. Evidence to the effect that the market perceives intangibles as economic resources when determining the value of a firm would provide some support for the proposition that intangibles should be recognized as assets on the statement of financial position. On the other hand, if such evidence does not exist, then the best presentation of the firm's resources may result in from omitting intangibles from the statement of financial position. If intangibles are recognized as assets, then the issue that arises with respect to the statement of financial performance is whether intangibles decline in value over time or whether they maintain their values indefinitely. Evidence that the market perceives intangibles as wasting resources when determining the value of the firm would provide some support for the proposition that investors view intangibles as assets that are expected to decline in value over time, thus, capitalization and systematic amortization may result in a better representation of the firm's resources and performance. On the other hand, if this evidence does not exist, the resources and performance of the firm may be represented better by allowing firms to capitalize intangibles and to review their balances annually to determine whether they should be reduced in value.



# The Degree of Harmonization between the Jordanian, the Saudi Arabia and the United Arab Emirates Accounting Practices

**Dr. Sawsan Halbouni**

Department of Accounting, College of Business and Management,  
University of Sharjah

## ABSTRACT

Due to the explosive growth in and challenges of international business and the spread of international investment activities, there is a need to understand the variety of financial reporting practices around the world, in order to help users and decisions makers to evaluate investment opportunities.

Despite of recent problems in Middle East, the Middle East Countries represent a great potential market. Therefore, those countries are now encouraging local and foreign investments in order to create a more open and accessible economy providing more profitable and realizable business opportunities. The main research issue is how accounting harmonization taking place in some of Middle East Countries. To deal with it, three issues are formulated as follows: Is it advantageous for Middle East Countries to achieve accounting harmonization? What is the process and to what degree is accounting harmonization-taking place in some of Middle East Counties, and what is the best option for Middle East Countries to achieve accounting harmonization?

Jordan, UAE and the Saudi Arabia are the three Middle East Countries chosen to achieve the objective of this research. Jordan represents some of the Middle East Countries that have adopted the IASs without any trail to reflect the environmental and cultural factors. The United Arab Emirate's (UAE) represents other Middle East Countries' that nothing specified by the Company Law and the Securities Stock Law concerning the accounting standards that should be adopted by listed companies, while Saudi Arabia represents the only Middle East Country who tries to have its own national accounting standards that reflect the environmental and cultural factors through the modification of the Western Europe and American accounting standards.

To achieve the objective of this research, the degree of harmonization of accounting practices between the Jordanian, the UAE and the Saudi Arabia accounting practices will be measured by





using the the raw" C index proposed by Van der Tas (1988), Developed and used by Archer and Mcleay (1995), Morris and Parker (1998), and Pierce and Weetman (2002).

Moreover, this research also will attempt to implement the chi-square test which was suggested by Tay and Parker and used by Emenyonu and Gray (1992) and Herrman and Thomas (1995) in order to have an opinion on the significance of differences and extent of harmony as at end of 2002 in respect of the de facto measurement practices of companies from the three countries covered by this research.

An investigation will be made of the degree of harmonization between the Jordanian, the UAE and the Saudi Arabia reporting practices for 1999/20 and 2001/02. The periods are selected reflecting the facts that the IAS recognition in the Company Law and the Security Commission Law in 1997 in Jordan and after issuing a number of accounting standards by SOCPA in Saudi Arabia. In fact, there were no legal requirements concerning assets and profits valuation in the Company Law or the Security Law in the UAE. Therefore, it is interesting from the research point of view to determine the degree of harmonization between the Jordanian, the UAE and the Saudi Arabia accounting practices in the absence of the UAE legal requirements. The research expectations are that the degree of harmonization between the three countries accounting practices will increase, due to the fact that the same environment has its effect on the accounting practices.

## **Toward a More Efficient Global Branding Strategy: A Conceptual and Empirical Cross National Study**

**Dr. Nizar Souiden<sup>(1)</sup>, Dr. Norizan M. Kassim<sup>(2)</sup>, Dr. Heung-Ja Hong<sup>(1)</sup>**

<sup>(1)</sup> Department of Business Administration, College of Business and Management,  
University of Sharjah

<sup>(2)</sup> Department of Business Administration, College of Business and Economics,  
University of Qatar, Doha, Qatar

### **ABSTRACT**

Despite the maturity of brand research, there is a surprising diversity in the ways academics and practitioners deal with branding issues. This diversity is reflected in the ways companies manage their brand portfolio (Laforet and Saunders, 1994). A number of theories have been advanced to elucidate how customers evaluate and select a particular product (Bettman, 1970; de Chernatony and Dall'Olmo Riley, 1998; Jamal and Goode, 2001; Kim and Chung, 1997; Lee and Ganesh, 1999; Low and Lamb Jr., 2000; Mitchell and Olson, 1981; Muthukrishnan and Kardes, 2001, Woodside and Clokey, 1974). Yet, most of these attempts have either explored a restricted number of traditional brand related factors (e.g., country of origin effect, brand image effect) or proposed complex brand evaluation models. The current study sought to bridge this gap by bringing together the most pertinent factors in a single model and examining their combined impact on consumers' evaluation. Particularly, it intends to first, contribute to the marketing theory by explaining how companies should manage their brand elements in a way that enables them to formulate a sound brand strategy. Second, it supports and empirically tests our model in some dynamic markets, such as the US, Asia and Middle East. A structural equation modeling approach is used to test our hypothetical model. The results of the study show that consumers' brand evaluations is jointly measured by the country, corporate, brand, and product factors and that the proposed model is valid, reliable and partially invariant across cultures.





## Internal Audit Function and the Effectiveness of Internal Control Structure in the UAE Organizations

Dr. Ibrahim H. Balkir

Department of Accounting, College of Business and Management,  
University of Sharjah

### ABSTRACT

In the wake of recent corporate failures, many reforms were undertaken to restore user confidence. These reforms have increased the pressure to prevent or at least reduce fraudulent financial reporting through new regulations, commission reports, and standards (e.g., Sarbanes-Oxley Act of 2002 and the resulting SEC rules to implement its provisions and others). In this regard, the design and implementation of all transaction processes and the related controls and monitoring activities should insure that transactions are properly recorded, processed, summarized, and reported and that the reliable processes are in place to formulate accounting estimates.

Professional standards and regulations place specific responsibilities on internal control system particularly internal auditing for the discovery of material mis-statements in financial reports. Certain factors have been shown to increase the likelihood of fraudulent financial reporting. One warning sign is the potentially pervasive effect of a weak internal control system consistent with a weak internal audit function and individuals. In consequence, improvement of internal control is among the most prominent remedies. Internal audit is in the spirit of internal control activities. It is imperative for internal audit function to be in a position which tolerates objectivity. The usual audit mechanics of determining the presence of the procedures used by the auditee, including the controls set up by auditee management is not enough. The internal auditors must go further so as to ascertain that these auditee actions and controls have actually resulted in the achievement of the goals and objectives. It is presumed that the basic purpose of internal auditing can be directly related to auditing in those scope areas pertaining to professional standards. The auditing in any one of the scope areas would have the objective of determining that controls exist and are effective in ensuring that the parts of the auditee organization are functioning in this area in such a manner as to appropriately serve the auditee organization as a whole.

This research is an attempt to investigate the effectiveness of internal audit function in the internal control structure of the United Arab Emirates organizations. Effectiveness is appraised by the traits of internal audit function specifically independence, professional proficiency, scope of work, performance of audit work, and management of the internal auditing department. In attaining the objective of this research, a questionnaire is considered as the instrument for collecting data from companies listed in the capital markets in the United Arab Emirates





## Factors Influencing Individual Investor Behavior: An Empirical Study of the UAE Financial Markets

Dr. Hussein A. Al-Tamimi

Business Administration Department, College of Business and Management,  
University of Sharjah

### ABSTRACT

The paper aims at identifying factors influencing the UAE investor behavior. This paper develops a modified questionnaire. The questionnaire included thirty four items that belonged to the five categories, namely self-image/ firm-image coincidence; accounting information; neutral information; advocate recommendation; and personal financial needs. The main findings of previous studies can be summarized as follows:

1. There is no support for the overreaction hypothesis.
2. Investor over-reaction to a long series of bad news could produce predictable mispricing of stocks
3. The presence of an analyst summary recommendation report reduces the disposition error for gains but not for losses.
4. Classical wealth – maximization criteria are important to investors.
5. The recommendations of brokerage house, individual stock brokers, family members and coworkers go largely unheeded
6. A strong demand for information about product safety and quality, and about the company's environmental activities
7. A strong form of the analyst summary recommendation report, i.e., one with additional information supporting the analysts' position further, reduces the disposition error for gains and also reduces the disposition error for losses.

The study intends to answer the following questions:

QUESTION 1: Does the factors related to self- image/firm-image coincidence have an effect on the the behavior of the UAE investor?, and what is the relative importance of the effect of each factor on the the behavior of the UAE investor?

QUESTION 2: Does the factors related to accounting information have an effect on the the behavior of the UAE investor ?, and what is



the relative importance of the effect of each factor on the the behavior of the UAE investor?

**QUESTION 3:** Does the factors related to neutral information have an effect on the the behavior of the UAE investor?, and what is the relative importance of the effect of each factor on the the behavior of the UAE investor?

**QUESTION 4:** Does the factors related to advocate recommendations have an effect on the the behavior of the UAE investor?, and what is the relative importance of the effect of each factor on the the behavior of the UAE investor?

**QUESTION 5:** Does the factors related to personal financial needs have an effect on the the behavior of the UAE investor?, and what is the relative importance of the effect of each factor on the the behavior of the UAE investor?

In order to get the answer on the research questions, 500 questionnaires will be randomly distributed to 500 individual investors in both Dubai Financial Market and Abu Dhabi Securities Market. It is worth to mention here that the total number of investors who dealt with Abu Dhabi Securities Market was 66,772 investors and 154,041 investors of Dubai Financial Market at the end of 2004.



## Shop-floor performance measures and contemporary practices in manufacturing firms: a cross-country (UAE-Egypt) comparative study

Dr. Ahmed Bahgat Abdel-Maksoud

Department of Accounting, College of Business and Management,  
University of Sharjah

### ABSTRACT

It has been argued that the nature of manufacturing performance measures appropriate for different elements of technological, managerial, organisational and environmental factors is a useful area for further research. Moreover, many commentators recommend that future research should be on ensuring that manufacturers remain sensitive to the emerging possibilities for using different performance measures to guide their enterprise's activities.

This research study provides a framework for exploring the relationships between the measurement of non-financial performance at the shop-floor of UAE-Egyptian manufacturing firms and a range of 37 contingent factors incorporating technological, managerial, organisational and environmental factors. The study has three main objectives: The first objective is to provide descriptive statistics about contemporary characteristics of the specified technological, managerial, organisational and environmental factors and the use of non-financial performance indicators in manufacturing firms in both countries. The second is to examine whether these contingent factors are associated with the existence and importance of 19 non-financial performance measures grouped into five evaluation categories actually used on the shop-floors of manufacturing firms. The third is to develop a 'shop-floor non-financial performance measures scorecard'. That is, a mathematical model that examines the cause-and-effect relationships between shop-floor performance evaluation categories in use in manufacturing firms in UAE and Egypt. Different statistical analysis techniques will be applied in pursuance of the objectives of this research study.

The issue of appropriate performance measures is highly significant because it can affect commercial success. The objectives of this research will assist in a better understanding of performance measurement in manufacturing firms and will contribute to more effective management of manufacturing enterprises in both countries.



It also will enhance organisations' knowledge about the use of non-financial measures in performance measurement systems.

The SFNFPMs 'scorecard' could be used to help achieve internal harmony/integrity of the shop-floor measures applied and makes apparent any lack of coordination and completeness. It also will be useful in making the shop-floor performance measurement system a 'forward facing' control system thereby mitigating the problem of the historical nature of accounting data.



## مستقبل نظم النقل الذكية في دولة الإمارات العربية المتحدة

د. باسم يونس

قسم الهندسة المدنية، كلية الهندسة، جامعة الشارقة

### الخلاصة

يهدف هذا المشروع البحثي إلى التعرف على أحدث ما تم التوصل إليه عالمياً في مجال نظم النقل الذكية Intelligent Transportation Systems, ITS وتطبيقاتها في البنية التحتية لنظام النقل المتاح في دولة الإمارات العربية المتحدة وأساليب الإدارة المرورية المتبعة. فإنه من المتعارف عليه دولياً اليوم أن استخدام تطبيقات نظم النقل المتطورة بإمكانه أن يحصن من الخصائص التشغيلية لنظم النقل المتاحة. ولكن هذا التوجه مكون من هيكلية متعددة الطبقات بأدوات محددة وتقنيات ملائمة لظروف وبيئات معينة.

وحرصت دولة الإمارات العربية المتحدة في كافة مراحل تطورها على مجارة الركب الدولي في إتباع الوسائل والسبل الكفيلة بتحقيق الرخاء الاجتماعي والنمو الاقتصادي. وقد كان للطرفة الاقتصادية وما صاحبها من طفرة عمرانية وتوسع في التنمية الحضرية دور كتب في دخول دولة الإمارات اليوم إلى مرتبة متقدمة بين كافة دول العالم. فدولة الإمارات تمتلك إحدى أفضل البنى التحتية في مجال النقل والاتصال وشبكات الطرق والتي هي عماد نظام النقل في دولة الإمارات العربية المتحدة تغطي مساحات واسعة وتمتد إلى ما يزيد عن ٥٠٠٠ كيلو متر من الطرق المرصوفة حسب أعلى المواصفات والمقاييس الدولية كما وإن موانئ الدولة الجوية والبحرية تعتبر من أفضل مثيلاتها عالمياً. وقد كان لهذه الشبكة المتطورة والبنية التحتية، والتي تشكل عصب الاقتصاد التجاري في دولة الإمارات في دورها كمرکز عالمي للاستيراد وإعادة التصدير بل والتصنيع في مناطق مخصصة ونقل هذه المنتجات إلى كافة أنحاء العالم. إن التوسع في التنمية الحضرية وما صاحبها من بناء لمراكز تجارية وسكنية، ترتبط عن طريق شبكة طرق مترامية بين مدن الدولة الرئيسية وجيرانها من دول المنطقة، قد ابتدأت آثاره السلبية الظهور بصورة أوضح بكثير عما قبل. فقد أصبحت الزيادة المستمرة في أحجام المرور داخل المدن المختلفة لدولة الإمارات العربية المتحدة تثير العديد من التساؤلات عن التأثير السلبي على البيئة وعن الوسائل التي يجب اتخاذها للحد من مثل هذه التأثيرات ويأتي ذلك خصوصاً في ظل القصور الواضح في استيعاب أحجام المرور المتزايدة على شبكة الطرق وخصوصاً في ساعات الذروة الصباحية والمسائية في الأيام العادية.

وهذه الآثار السلبية لم تكن ندرتها في السابق قد باتت ملحوظة بشكل سافر في المدة الأخيرة، ويبدو أننا أفننا ما كنا نتمتع به من سيولة في المرور وعدم وجود فترات انتظار طويلة... الخ مما أصبح اليوم ذكرى خصوصاً في فترات الذروة الصباحية أو المسائية



بل وفي أثناء السباق العادي لأي يوم من أيام الأسبوع. ولا شك أن الإختناقات المرورية التي بتنا نعاني منها بشكل يومي وفي عدة مناطق ونون وقت محدد ما هي إلا النتيجة الطبيعية لازدهار اقتصادي ملموس وتوسع في نطاق التحضر في كافة أرجاء الدولة وما صاحبه من ازدياد في عدد السكان وازدياد ملكية المركبات الخاصة وارتفاع نسب الشاحنات نتيجة النمو الصناعي والاقتصادي في مدن الدولة. وحيث انه من المسلم به دوليا أن التوسع في بناء الطرق الجديدة لا يمكن أن يلبي الاحتياجات المتزايدة للطلب على النقل والحركة بدون الأخذ بالاعتبار للتحفظات الخاصة بشؤون البيئة واستعمالات الأراضي، كان لابد من التوجه إلى نظم النقل الذكية والتي يتم تطويرها باستمرار والتي أصبحت تعتبر جزءا أساسيا من عملية تخطيط النقل.

ما هي نظم النقل الذكية؟ مع زيادة التقدم العلمي خصوصا في المجالات التقنية والتطورات اللامتناهية في استعمال تقنيات الحاسوب عالميا، إضافة إلى انحسار الحرب الباردة والذي أدى إلى توجه العديد من الشركات التي كانت في مجالات الدفاع العسكرية إلى النواحي المدنية. وقد جاءت هذه الشركات مزودة بكم هائل من الأبحاث والتقنيات المتقدمة والتي كانت حتى وقت مبكر حكرًا على الاستعمالات والأغراض العسكرية. وأدى هذا التنافس على سوق النقل إلى تطوير مركبات حديثة تمتلك الكثير من الذكاء الاصطناعي والقدرة على أداء أفضل وتحكم أكثر فعالية في المركبات التقليدية. بل أن هذه المركبات بإمكانها اتخاذ قرارات حاسمة أثناء عملية القيادة من شأنها تلافي العديد من الأخطاء المسببة للحوادث المميتة وسواها.

وتلعب هذه التقنيات المتطورة دورا هاما في إتاحة المجال لاستغلال السعات المتاحة في شبكة الطرق بشكل أفضل عن طريق اختصار المسافات بين المركبات وزيادة السرعات الأمانة على هذه الطرق بالإضافة إلى تلافي التأخيرات وطوابير الازدحام الناتجة عن الحوادث وهذا كله من شأنه أن يساهم في خفض الأثار السلبية للجوانب المعنية وبالتالي تحسين البيئة المرورية وبالتالي العامة.

إن شبكة الطرق المتطورة وباقي بنية النقل التحتية في دولة الإمارات لم تستفد حتى الآن كما يجب من وجود هذه التقنيات المتطورة. فما عدا مدينتان (دبي و أبو ظبي) لم يحدث أي استخدام يذكر للتقنيات الحديثة.



## Bio-Availability of Organic By-Products Generated From Waste Sludge Using Hydrothermal Treatment

Dr. Abdallah Shanableh<sup>(1)</sup>, Dr. Samir Jomaa<sup>(2)</sup>

<sup>(1)</sup> Department of Civil Engineering, College of Engineering,  
University of Sharjah

<sup>(2)</sup> Institute of Environmental Technologies, Urbanism and Building, Tunisia

### ABSTRACT

This study is limited to confirming the bio-availability of the dissolved organic by-products of hydrothermal treatment to support simultaneous biological phosphorus removal and denitrification. The study extends the previously confirmed use of the by-products to support denitrification to further confirming their bio-availability as a carbon source to support simultaneous biological phosphorus removal and denitrification. The experimental program, which was conducted at Quesneland University of Technology in Australia, involved producing dissolved hydrothermal by-products from sludge and using the by-products as the main carbon source to support biological nutrient removal (BNR) in two sets of sequencing batch reactor (SBR) experiments. Prior to conducting the SBR experiments, the general bio-availability of the by-products was confirmed through BOD5 testing using BNR seed microorganisms. The production of hydrothermal by-products from the sludge was assessed using reaction temperatures in the range of 150-450oC. The results confirmed that the quantity of the dissolved by-products peaked at 50-60% COD removal and that the composition in terms of the relative quantities of soluble COD, volatile fatty acids (VFAs) and acetic acid can be modified according to the hydrothermal treatment conditions. Using an H2O2 dose of 100% of the COD, the production of soluble organic by-products from mixed primary and secondary sludge reached: soluble COD of 0.5 mg/mg VS; VFAs of 0.23 mg as COD/mg VS; and acetic acid of 0.18 mg as COD/mg VS. The SBR treatability results confirmed that the BNR micro-organisms readily used the dissolved by-products, especially acetic acid, for active biological phosphorus release and uptake and denitrification, with nitrification taking place during the aeration periods of SBR operation. Mass balance analysis confirmed that the by-products quantities were adequate for internal recycling into BNR wastewater treatment plants.

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## The effects of foundation width and fiber stiffness on model tests for the bearing capacity of sand with geogrid reinforcement

Dr. Maher Omar

Department of Civil Engineering, College of Engineering, University of Sharjah

### ABSTRACT

Geosynthetics are a very rapidly growing industry all over the world. They are now being used in increasing degrees in various civil and environmental-related structures. The primary function of Geogrid is reinforcement. They are now being primarily used as a reinforcement material in the construction of the back fill of earth retaining structures, and stabilization of earth embankments. They are also used as a reinforcement of base courses of paved and unpaved highways. However, its utilization in reinforcing soil for increasing the ultimate and allowable bearing capacity of shallow foundations is now being widely tested by various researchers, and federal and state highway authorities.

The results of most of the studies available at the present time are based on laboratory model tests. The purpose of this research project is to investigate the ultimate and allowable bearing capacities of a shallow foundation stabilized by reinforcement of Geogrid layers. Laboratory model tests will be conducted to determine the variation of Ultimate Bearing Capacity Ratio ( $BCR_u$ ) with total depth of reinforcement ( $d/B$ ), location of first Geogrid layer ( $u/B$ ), height between Geogrid layers ( $h/B$ ), number of layers ( $N$ ) and length of Geogrid layers ( $L_r/B$ ). Based on the model test results, the variation of  $BCR_{max}$  as a function of relative density of compaction, stiffness of fiber and width of reinforcement will also be presented.



## Concrete Weld: Long-Span Beams from Precast Elements

Dr.Samer A. Barakat

Department of Civil Engineering, College of Engineering, University of Sharjah

### ABSTRACT

Welding is a process in which metallic parts are connected by heating their surfaces to a plastic state and allowing the parts to flow together and join with or without the addition of other molten metal. For concrete elements, it is not possible to adopt the above-mentioned welding process. Therefore, the proposed research will concentrate on developing a technique to be adopted for concrete welding using steel fibers. The concrete weld joint technique will be used to produce continuous long-span beams using pre-cast elements.

45 prismatic concrete beams (0.20 width x 0.22 depth x 1 meter length) were casted. Each beam was reinforced with 2#12 bars at bottom and 2#10 bars at top and designed number of stirrups was provided to avoid shear failure. Beams were joined together using concrete mix design similar to that used in the pre cast beams. The concrete mix used for welding was reinforced with different percentages of steel fibers. The variables were joints lengths between the pre cast elements (100 mm, 200 mm and 300 mm). The steel fiber contents were (1%, 2 % and 3 %). The welded beams were cured for 28 days and then tested in the Portal Frame up to failure using static vertical two-points loading system.

Experimental comparison was carried out between welded beams and the reference beams of similar length, mix design and reinforcement. Test results indicated that the increase of steel fibers content and the gap length between the pre cast beams would improve the flexure behavior of the welded beams. The proposed technique could be used to produce long-span beams from pre-cast elements.

# Oversaturation Conditions at Signalized Intersection

**Dr.Zaher Khatib**

Department of Civil Engineering, College of Engineering, University of Sharjah

## ABSTRACT

The role of the vehicle is more important today than ever before in history, and this importance has lead to congestion in metropolitan areas. This congestion, in some cases, can be so severe that there is gridlock in the center of the business district and the flow of traffic and goods is completely stopped. There are several methods to reduce the delay and keep traffic flowing in the city center, but most of these methods are very expensive and in some instances not feasible. The goal of this research is to generate some strategies to alleviate this congestion at signalized intersections through the signal timing parameters. These strategies will be able to be applied to any oversaturated system.

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## Size effects on estimating the fracture toughness of concrete

Dr. Hisham Abdel-Fattah Ibrahim, Mr. Zaid Al Sa'adoon

Department of Civil Engineering, College of Engineering, University of Sharjah

### ABSTRACT

The fracture behavior of concrete plays an important role in the overall assessment of the concrete performance in structures. One important fracture parameter is the fracture toughness  $K_{IC}$  defined as the ability of the material to absorb energy in the presence of cracks. In general, the higher the  $K_{IC}$  value for a certain type of concrete, the better the performance of this concrete in the presence of cracks. The fracture toughness of concrete is influenced by a variety of factors such as the strength of concrete ( $f'_c$ ), temperature, type of concrete, percentage of reinforcement and size of concrete member. A lot of research has been carried out to investigate those factors. However, due to the limitations of the sizes of the testing machines used in the experimental work, most results have been reported for small size specimens. Here at the University of Sharjah, the Heavy Structures lab contains experimental set-ups that can enable us to study full-sized specimens and thus obtain more reliable values for the  $K_{IC}$  of concrete. The aim of this research is to study experimentally the size effects of the concrete on its Fracture Toughness. An experimental program is being carried out on different size beams all made of plain concrete and pre-notched at mid-span. From previous experimental work conducted by the P.I. of the project, all beams have a span-to-depth ratio of 4 and the ratio of crack length  $a$  to beam depth  $b$  of 1/6. Each beam tested shall be analyzed using the finite element method in order to develop a numerical scheme for predicting the Fracture Toughness of different size beams. So far, several local companies have expressed interest in the project and decided to provide the P.I. with new types of material to be studied for their fracture properties





## Fracture Behavior of Fiber Reinforced Concrete

Dr. Salah Altoubat

Department of Civil Engineering, College of Engineering, University of Sharjah

### ABSTRACT

Synthetic fibers have been used to improve the early age cracking behavior of plain concrete. A new polymeric fiber was developed to enhance the structural properties of concrete including toughness and post-cracking strength of plain concrete.

The new macro fibers can be added to concrete at a dosage rate up to 0.75 % whereas micro fibers cannot be easily added at such high dosage rate. The structural benefits of this new synthetic macro fiber added to plain concrete had to be validated with full-scale slab tests. The purpose of this study was to measure and compare the structural response of plain and synthetic fiber reinforced concrete slabs on ground under monotonic loading. Full-scale slab tests were completed on plain and fiber-reinforced concrete slabs.

The monotonic testing was performed on 2.2 m by 2.2 m slabs with a nominal thickness of 127 mm. All slabs tested rested on top of a 0.20 m layer of low-plasticity clay contained inside a steel containment box (5.08 m x 2.44 m x 0.31 m). The average k-value in the tests was 114 MPa/m. Normal concrete were used in this study with water to cement ratio varied between 0.49 and 0.51. The fiber content used in the testing was 0.32 and 0.48 percent by volume of concrete. The key mechanical properties of the slab measured during load testing were tensile strength, first crack strength, flexural strength, and ultimate strength.

The research included full-scale slab testing under interior, monotonic loading and investigated the improvement in the behavior and flexural strength of the concrete slab when the new synthetic macro fibers are added to the concrete. The results showed the fibers significantly improved the concrete flexural and ultimate strength of the slab. However, the fibers did not alter the tensile cracking load of the plain concrete slab or the beam flexural strength. Embedded strain gages indicated the synthetic fibers effectively re-distributed the load throughout the slab as cracking progressed. Load - deflection measurements showed the fibers increased the ductility of the concrete slab which helped mobilizing the full post-cracking strength, thus increased ultimate strength of the concrete slab.



## Land Erosion and its Effect on Roads and Roads' Structures in Sharjah, United Arab Emirates

Prof. Mamdouh Nouh, Dr. Zaher Khatib

Department of Civil Engineering, College of Engineering, University of Sharjah

### ABSTRACT

The main objectives of this proposed study are to examine the roads and road structures' damages due to flash floods, and set-up guidelines for adequate design of the roads' structures in the United Arab Emirates, in general, and in the Emirate of Sharjah, in particular.

The damages and its causes would be identified and classified. Available rainfall records, supported by new ones, would be used to develop a reliable methodology for estimation of the design rainfall hyetograph as well as the design rainfall depth for a specific duration and a specific return period. Common runoff models would be then applied in some drainage basins, and the model of best results would be modified to be able to generate runoff hydrographs of acceptable accuracy. The processes of watershed erosion and local scour around bridge piers and abutments in the study areas would be investigated, and the developed runoff model would be incorporated in the erosion processes to develop reliable methodologies for the prediction of the watershed erosion, the local scour, the channel erosion and deposition, and the sediment delivery ratios. The design criteria for roads and roads' structures would be investigated and then modified to consider the distinguished characteristics of climate in the United Arab Emirates. The research project represents significant contributions to the body of knowledge, in general, and to the development processes in Sharjah, in particular. It develops reliable methodologies to predict the design hyetographs and hydrographs as well as sheet erosion in the distinguished climate of arid and semiarid areas. In addition, it introduces new roads' design parameters and assess its effectiveness in the design of roads and its structures in these areas. For the state of Sharjah, accurate information on various hydrologic and geologic parameters as well as on effective design factors for roads and its structures would be provided. These types of information would be beneficial for all Ministries and Institutions involved in Water and Road Development and Management in Sharjah; including among others, Sharjah Municipality, The Ministry of Electricity and Water, and The Ministry of Defense. In addition, the research project would

be an opportunity for technical staff and engineering students as well as nominated staff from co-sponsored organization to be involved in studying and generating solutions to one of the serious practical problems in Sharjah. proposed research project would be followed by a professional program (s) to train engineers from public and private sectors on using the developed models and methodologies.



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## Electromagnetic radiation from cellular phones in the presence of the human head and methods to minimize its effect

Dr. Abdul-Kadir M. Hamid, Professor Maamar Bettayeb  
Department Electrical & Electronics Engineering, College of Engineering,  
University of Sharjah

### ABSTRACT

The recent development of mobile communications has drawn attention to the biological effects of electromagnetic fields. Apart from the controversy over the possible health hazards due to the so-called nonthermal effect of the EMF's, the electromagnetic interaction of a mobile phone with a human head should be quantitatively evaluated in order to establish the safety of wireless communications. The project aims at the development of a general Finite Difference Time Domain (FDTD) three-dimensional real-time simulator of the electromagnetic radiation from radiating devices such as cellular phones and personal computers. The finite difference time domain (FDTD) method is used to numerically solve Maxwell's equations. The method is suitable for this problem because of its ability to include different structures and different media. It is also capable of producing results for multiple frequencies using a single simulation. The simulator should be capable of obtaining the radiation patterns, input resistance and reactance, and efficiency of more than one cellular phone in the presence of human head. To increase the accuracy of the computations, perfect absorbing boundaries have to be used for the truncation of the computation domain. The PML layer method is currently the most effective and widely accepted method by the computational EM society. For these reasons, the PML technique will be adopted in this project. Several important radiation-related quantities can be extracted out of the simulation. All the field components given by the simulation are near field values. To plot the radiation patterns of the structure under consideration, a near to far field transformation is carried out. The radiated power and radiation impedance can be obtained by calculating the time-domain voltages and currents. Also the resonance of the radiating structure is obtained from the frequency domain analysis of the radiation impedance by checking the zero crossing of the reactance curve. The simulation results are of a great value to people who often use cellular phones as well as companies manufacturing the mobile

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phones. For example, the input impedances and radiation patterns of several phones with or without the presence of the human head is extracted. These patterns indicate the radiation directivity and strength such that EM interference among phones as well as with the human head can be significantly reduced or avoided. Another important parameter is the rate of RF energy deposition, called specific absorption rates SAR, which can be computed in order to evaluate the amount of the microwave power absorbed by the head. Evaluation of the maximum SAR is especially important when part of the body is exposed to electromagnetic radiation from nearby cellular phones. Thus, the estimation of SAR in the human head during the use of cellular phones has become a matter of great concern. The outcome of such a study can influence the design of future mobile phones. To find out technical and none technical ways for users to minimize the radiation hazards and to feed the results of this project to the local telephone company. Based on the results of the study, a set of recommendations can be put forward relative to the use of mobile phones.





## An Improved Arabic Text-to-Speech Conversion System with Applications

Dr. Yousif A. El-Imam

Department of Computer Engineering, College of Engineering,  
University of Sharjah

### ABSTRACT

The area of computer generated Arabic speech or Arabic speech synthesis is an interesting field from both research and applications points of view. From a research point of view, the speech synthesis problem of Arabic is relatively new and challenging, as there are numerous problems to solve to reach high quality or near natural computer generated speech. Furthermore, the results of research on this area could readily be utilized in sister areas like speech recognition and machine translation. From an application point of view, there are many applications for speech synthesis. The ultimate application is a spoken output channel for the computer, but there are other applications in the telecommunications industry, aids to the vocally and visually handicapped, and in education.

Over a million people speak the Arabic language. It is a rich language and besides its use in homes, offices, and pan Arab organizations, it is used as the medium of instructions and education in almost all schools, up to grade 12, in the Arab world. Research on Arabic speech technology and the applications of computer-based speech are vital if we are to cope with the current trends in information technology.

In recent times there have been tremendous advances in the technology of computer speech, namely text-to-speech (TTS) conversion and its applications for western languages, predominately English, French, Italian, German, and other west European languages. Realizing the importance of this vital area of research and development, research on computer-based Arabic speech synthesis has started in the middle of the 1980s. This was made to cope with the advances in speech and information technologies and to bridge the technology gap between the European languages and Arabic. The results of these late attempts are that a working TTS conversion system, with unlimited vocabulary, for Arabic became available. The text-to-speech conversion system though it can be used as is in certain applications, yet it needs further work in the following two domains:

- To enhance the quality of speech generated by the TTS system;
- To Realize applications for the TTS system.

These two areas of research are not the only problems to be tackled in the area of computer-based Arabic speech generation but they are the immediate theme of this research proposal. Each of these areas of research will be addressed in this proposal.





## Power-and Time-Efficient Object Access on Air Channels in a Mobile Computing Environment

Dr. C. Chehadeh

Electrical & Electronics Engineering Departments, College of Engineering,  
University of Sharjah

### ABSTRACT

Advances in technology and communication have made the realization of a nomadic computing environment a reality. While mobile, users are capable of accessing data networks using portable computing devices via wireless connections, while mobile. In such and environment users are able to access information anytime and from anywhere.

Broadcasting, one way communication for all within a geographic vicinity, has been suggested as a possible solution for the various limitations within this new environment, such limited bandwidth. Form an object-organization perspective, the object-oriented methodology has been accepted in on proper data-modeling technique for joining distributed multimedia-type data.

As in the conventional distributed environments, the user has the requirement of accessing the data in the least amount of time. As an additional requirement, within this mobile environment, the user needs to access the needed data with minimum power dissipation.

The goal of the work is to generate a number of schemes in which the data objects can be (i) mapped (ii) indexed on parallel air channels in a manner that effectively satisfies the listed two requirements.





## Prevalence of TT-virus infection among liver diseases and normal individuals in the UAE

Prof. Moslih I Al Moslih <sup>(1)</sup>, Dr. Raed O. Abu Odeh <sup>(1)</sup>, Dr. Yu-Wen Hu <sup>(2)</sup>

<sup>(1)</sup> Department of Medical Laboratory Technology, College of Health Science, University of Sharjah

<sup>(2)</sup> Faculty of Medicine, University of Ottawa, Canada

### ABSTRACT

TT virus (TTV) and TTV-like viruses (TTVLs) have been reported to be associated with non A-E hepatitis. To date the link between these viral infections and liver disease remains uncertain. To determine the rate of infection and genetic characteristic of TTV in different populations, a total of 446 serum samples from different populations from Al-Noor private hospital in Abu Dubai, and Sharjah Municipality public health clinic, UAE. Nationals subjects (106 healthy, 48 with HBsAg and 46 with antibody to HCV) and non nationals most of them were from south east Asia; India, Pakistan, Bangladesh, Indonesia and Philippine and others from Arab countries living UAE (129 healthy, 74 with HBsAg and 46 with antibody to HCV) were tested by PCR method. For cloning and genotyping, eight healthy positive TTV DNA PCR products amplified (4 nationals and 4 non nationals) were cloned and sequenced (using different sets of primers) and compared with the DNA sequences of GenBank. The results showed that the rate of TTV infection in nationals; healthy, and subjects with HBsAg or antibody to HCV were 34.9% (37/106), 97.9% (47/48) and 95.7% (44/46) respectively. Where as the rate of TTV infection in non nationals for healthy, and subjects with HBsAg or antibody to HCV were 89.1% (115/129), 89.2% (66/74) and 84.8% (39/46) respectively.

Using 5' untranslated region (5' UTR) based primers. The amplified PCR products for 8 serum samples from healthy individuals (4 healthy nationals and 4 healthy non nationals) were molecularly cloned; 8-11 clones for each sample (71 clones) were analyzed. 83.1% (59/71) of the TTV clones were classified into group 1-4, 16.9% (12/71) into a novel genetic group (group 5). Genotyping of the national healthy subjects carried more than one genotype of the viruses, (between 2-4 genotypes), where as non national carried (between 4-6 genotypes). These genotypes were genotype, 1(21/71), 3(6/71), 11(13/71), SENV(12/71), SanBan(6/71), 12, 1/71, and unclassified viral isolates, 12/71. Slight differences regarding gender were found between male



and female, national and non national subjects within and between both groups ( $P > 0.05$ ). In conclusion, the rate of infection of TTV in the national population is lower significantly from the non nationals and several genotypes were isolated with a common multiinfections. The rate of TTV infection in different populations in same geographical region may be influenced by the standard and style of living and the health care for each group in this study.



## Screening insect vector populations, *Anopheles stephansi* and *A. culix* for the presence of Malarial Parasites, *Plasmodium falciparum* and *P. vivax* in the UAE

Dr. P. Towner, Dr. M. Wasila

Department of Medical Laboratory Technology, College of Health Science,  
University of Sharjah

### ABSTRACT

Many insect species are so closely related that unless you are a specialist entomologist it is difficult to tell them apart on morphological grounds. With the advent of molecular biological techniques it is now routine to be able to identify a single insect using the polymerase chain reaction, PCR. This requires a sample of the DNA from the insect and a knowledge of the gene sequence from each insect species so that PCR primers can be synthesised and used in the PCR. Not all of the genome of each insect is required. Most protocols have focused on using the gene sequences of the ribosomal RNA genes. These are multicopy and exceedingly similar between species. However, the small differences that do exist between them is sufficient to allow the synthesis of gene-specific primers. These are species specific and if judiciously chosen can be used in a multiplex PCR and reveal different sized PCR products depending on which species is present in the sample. The taxonomy of insects and especially mosquitoes is of great importance to pest control officers because these insects are the vectors for many diseases such as malaria. If a mosquito is carrying a large plasmodium infection it is possible to identify these parasites from the salivary gland of the fly using microscopy. Trace infections would be difficult or impossible to detect routinely unless the test was based on PCR. The protocol used to identify the mosquito can also be used to identify plasmodium, albeit with different sets of primer pairs. This project has two aims. 1. To establish a reliable PCR protocol to identify mosquitoes present locally. 2. To determine whether any local mosquitoes harbour plasmodium.

To date we have shown that mosquitoes from Africa (Chad and Sudan) are positive for up to three different plasmodium species. However, we have not yet identified the types of mosquito. This was because we had PCR primers specific for European mosquitoes whereas the local and African mosquitoes are sufficiently different in their ribosomal RNA genes that they do not give a positive reaction.



## Prevalence, significance and genotyp(s) of Hepatitis G in UAE

Dr. Raed O. Abu Odeh, Prof. Moslih I Al Moslih

Department of Medical Laboratory Technology, College of Health Science,  
University of Sharjah

### ABSTRACT

Several viruses are implicated in causing hepatitis (inflammation of the liver); of these we mostly hear about hepatitis A, B, and C (caused by hepatitis A, B and C viruses, respectively). More recently GB virus-C/Hepatitis G virus (GBV-C/HGV), collectively known as Hepatitis G, was discovered. Several studies had shown that the virus is widely spread and has been reported to be associated with other hepatitis infections (i.e. non A-E hepatitis). The aim of my project was to determine the rate of infection and genotypic characteristics (i.e. genetic variations) of HGV in the United Arab Emirates (UAE). In this study a total of 379 plasma/serum (blood) samples representing different populations in the UAE and comprising healthy as well as patients positive for HBV and HCV were screened using RT-PCR/nested PCR of the 5'-untranslated region (UTR). National subjects (n=168) and non-nationals residing in the UAE (n=211) were tested. The results obtained showed that the rate of GBV-C infection in healthy nationals, and those positive for HCV or HBV were 11.1%, 14.3 %, and 5.7%, respectively, compared to 8.3%, 33.3%, and 8.6%, respectively, in non-nationals. No statistically significant correlation between infection with HGV and HCV or HBV ( $p > 0.05$ ) was found.

Genetic analysis of the 5'-UTR (a highly conserved region in HGV) a total of 83 clones from 8 and 6 healthy nationals and non-nationals, respectively, revealed the prevalence of the European/North American genotype 2 when compared to the 5 reference genotypes in GenBank. The results of the above study prompted us to further study the virus rates of infection and genotypic characteristics in other countries in the region



## Early detection and accurate genotyping of hepatitis C virus in chronic liver disease using advanced molecular techniques in UAE

Prof. Moslih I Al Moslih<sup>(1)</sup>, Dr. Yu-Wen Hu<sup>(2)</sup>, Dr. Falah Al-Khateb<sup>(3)</sup>  
Dr. Raed O. Abu Odeh<sup>(1)</sup>

<sup>(1)</sup> Department of Medical Laboratory Technology, College of Health Science,  
University of Sharjah

<sup>(2)</sup> Faculty of Medicine, University of Ottawa, Canada

<sup>(3)</sup> Department of Radiotherapy, Tawam Hospital, Al-Ain, UAE

### ABSTRACT

Over 170 million people, roughly 3% of human population are infected with hepatitis C virus in the world. This is a serious worldwide public health concern, constituting a major cause of chronic hepatitis, cirrhosis, and hepatocellular carcinoma. The aim of this study is to establish a simplified NAT assay (S-NAT) for early detection of HCV infection in chronic liver diseases and healthy individuals in UAE, in order to improve the safety of the blood supply and improve the diagnostic procedure for chronic liver disease patients in the UAE. The second part of this study is to establish a HCV genotyping assay for clinical services, because the determination of the HCV genotype is important for therapeutic regimen, especially certain genotypes of the virus are more resistant to treatment with interferon and/ or ribacirin than others. Serum samples from 147 chronic liver diseases, 375 healthy individuals and 28 Cancer patients other than hepatocellular carcinoma. The results show a higher prevalence of HCV infection in chronic liver disease 46.3%(68/147) in comparison with healthy individuals, 1.3% (5/375). The prevalence of the genotypes for these isolates 3a,3b,1a,5, 1b, 2, 3a and b, 4, and 1a and 1b were 39.7 (27/86), 14.7(10/68), 13.2 (9/68), 11-8 (8/68), 5.9 % (4/68), 4% (3/68), 4% (3/68), 2.9% (2/68), and 2.9 % (2/68) respectively. Liver function enzymes, AST and ALT were higher in those patients with liver disease than healthy subjects or subject with other types of disease (cancers other than HCC).

Liver biopsy was taken from four randomly selected patients with HCV infections show infiltrated of lymphocytes, plasma cells and eosinophils extending through the limiting plate into adjacent parenchyma. Reticulin stain showed fibrosis in the portal areas and fibrous tissue bands extending into the parenchyma. Two which indicate chronic hepatitis (grade  $\frac{3}{4}$  inflammation stage 3 fibrosis).



## The effect of “short draw” coagulation samples on Prothrombin time (PT) and Activated Partial Thromboplastin Time (APTT) Tests

Dr. Ahmad H. Sultan, Mr. Omar Chebbo

Department of Medical Laboratory Technology, College of Health Sciences,  
University of Sharjah

### ABSTRACT

Prothrombin Time (PT) and Activated Partial Thromboplastin time (APTT) tests are two most frequently ordered routine tests for hospitalized patients and the PT for out patients to monitoring their oral anticoagulant therapy. These tests are used by physicians and surgeons to assess, detect, diagnose monitor coagulation defects and coagulation factor(s) deficiencies; and monitor patients on heparin oral anticoagulant therapy. In addition, PT AND APTT are useful in differentiating coagulation factor(s) deficiency from those caused by coagulation facto(s) inhibitors. The significance of these two tests makes it clear that accurate and practice results are essential for sage treatment as well short term (heparing therapy) and long term oral anticoagulant therapy. To ensure reliable quality results, pre-analytical, analytical and post analytical errors should be minimizes, If not eliminated. This study will focus on a major quality assurance component that contributes to pre-analytical error (blood sample to anticoagulant ratio). This ratio can be altered by “short draw”, where there is not have enough blood to achieve the required standard ration of 1 (anticoagulant): 9 (whole blood) ratio for PT and APTT test. The study will compare PT and APTT results for samples drawn with 1:8 and 1:6 ratio to those drawn with the standard 1:9 ration. Significant findings will identify the seriousness of “short draw” and provide strong justifications for stricter implementation and monitoring guidelines. Such guidelines should be enforced with uncompromised rejection criteria for short coagulation samples. This will eliminate a major preanalytical error and ultimately increase the reliability of Pt and APTT test results, which will be of great importance to physicians in UAE, who are monitoring patients on oral anticoagulants or treating patents with hereditary or acquired coagulation disorders.

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١٥-١٤ مايو ٢٠٠٥  
٧-٦ ربيع الثاني ١٤٢٦ هـ الموافق ١٤-١٤



## Bone Mineral Density, Diet and Exercise in Students at the University of Sharjah, UAE

Mrs. Penelope Bell<sup>(1)</sup>, Dr. P. Towner<sup>(2)</sup>, Dr. Abdulghani Mehailia<sup>(3)</sup>

<sup>(1)</sup>Department of Medical Diagnostic Imaging, <sup>(2)</sup>Department of Medical Laboratory Technology, College of Health Sciences

<sup>(3)</sup>Basics Sciences Department, College of Arts and Sciences  
University of Sharjah

### ABSTRACT

Bone mineral density is measured in order to diagnose bone loss and to predict a person's risk of fracture. Excessive bone loss leads to bones breaking from minimal injury – a condition known as Osteoporosis. Each individual builds up a store of bone during childhood, reaching a maximum level (Peak Bone Mass PBM) at around 20 years. This bone store remains at a constant level until age 35, after which it reduces with increasing age. At any age a bone density measurement can be performed and compared with a known reference. Currently the reference range to which the Arab population is compared is compiled from European subjects. Previous research in Arab countries has indicated that the normal Arab bone density is lower than Europeans. If this is true, bone density measurements performed on equipment which uses such reference ranges will overestimate fracture risk. This research project aimed to demonstrate that the Arab mean bone density measurement is lower than the mean for Europeans, thus supporting the need for an Arab reference range to be available.

Although genetics primarily define the PBM which a person will achieve, lifestyle factors play an important part. The amount and intensity of exercise done, calcium intake, smoking, caffeine consumption and carbonated drink intake are all considered to effect bone density. This project aimed also to identify the presence, quantify and link these and other lifestyle factors to measured bone density.

The project has three phases. Phase one, utilizing quantitative ultrasound of the heel bone, is nearing completion with 150 females and 85 males scanned to-date. Phase two has begun and entails participants having dual energy xray absorptiometry scans of the hip region. This is the World Health Organizations recommended method of accurate bone density measurement. Phase three will be to perform high resolution magnetic resonance imaging of the heel in order to examine the structural parameters of bone tissue.



In this presentation, preliminary results will be produced which describe the characteristics of the participants recruited and begin to confirm some of the assumptions mentioned above. Data collection is continuing and not expected to be completed until the end of May 2005.





## Screening of Urinary Tract Infection among pregnant ladies of Sharjah

Dr. Abdulridha Abdullah <sup>(1)</sup>, Prof. Moslih Al Moslih <sup>(2)</sup>

<sup>(1)</sup> Department of Nursing, <sup>(2)</sup> Department of Medical Laboratory Technology,  
College of Health Sciences, University of Sharjah

### ABSTRACT

Asymptomatic bacteriuria (presence of pathogens in the urine of asymptomatic patients) is a major concern during pregnancy. When left unidentified and untreated, upper urinary tract infection (UTI) and further complications, which are life threatening for both mother and fetus, may develop. To determine the prevalence of asymptomatic bacteriuria in pregnancy in the Emirate of Sharjah, United Arab Emirates (UAE), midstream urine (MSU) samples from 505 pregnant women, representing different populations, were screened using urine culture and urinalysis (macroscopic and microscopic).

Urine cultures showed heavy growth ( $\geq 10^5$  Colony Forming Units (CFU/ml) in 4.75% (24/505) of the samples, 16/24 (66.66%) of these isolates were *Escherichia coli*. These *Escherichia coli* from asymptomatic bacteriuria of the pregnancy were then serotyped and compared (by serotyping) with 16 *Escherichia coli* isolates from women with symptomatic bacteriuria (community acquired infection). The common serotype in asymptomatic bacteriuria is O112ac, while in community acquired UTI the common serotype is O86a.

The urinalysis showed 1.38% (7/505) positive results for the Nitrite dipstick; only 4/7 had a positive urine culture. The leukocyte esterase dipstick showed 11.68% (59/505) were positive and only 4/59 were positive by urine culture. The microscopic examination showed 35.6% (180/505) positive results (more than 5 WBC/HPF); only 16/180 had a positive urine culture. Antibiotic sensitivity tests carried out on the 24 positive culture samples ( $10^5$ CFU/ml) showed high sensitivity to Garamycin, Augmentin and Fosfomycin.

In conclusion, relying on urinalysis alone (dipstick methods and microscopic examination) to identify asymptomatic bacteriuria in pregnant women may be misleading; more than 80% of the true positive cases may be missed. All pregnant women would benefit a urine culture and a sensitivity test done at their first antenatal clinic visit to prevent complications on both the mother and the fetus.



## Survey on the Smoking Counseling Practices of UAE Physicians

Dr. Manal Awad<sup>(1)</sup>, Mrs Randa Fakhry<sup>(1)</sup>, Mrs Mona El Kouatly<sup>(2)</sup>,  
Mrs Hawra Al Hashimy<sup>(3)</sup>, Dr. Jennifer O'Loughlin<sup>(4)</sup>

<sup>(1)</sup> Department of Nursing, <sup>(2)</sup> Department of Health Services Administration,

<sup>(3)</sup> Department of Medical Diagnostic Imaging,  
College of Health Science, University of Sharjah

<sup>(4)</sup> McGill University, Canada

### ABSTRACT

**Background:** Tobacco use is one of the chief preventable causes of death in the world. Reports from the World Health Organization indicate that there are approximately four million deaths per year attributed to tobacco use and that this figure is expected to rise to 8.4 million by the year 2020.. In the UAE, several measures were taken to reduce the prevalence of tobacco use, such as, increasing taxation to 100%, banning advertising on national television and radio stations and imposing regulations that prohibit smoking in government offices.

Nevertheless, the physician's role in promoting smoking cessation is very important, physician communication about the benefits of smoking cessation and encouragement to quit have proven to be successful.

**Objective:** The overall purpose of this study is to document cessation-counseling practices of general practitioners in the UAE and identify correlates of these activities.

**Methods:** A cross sectional mail survey was conducted to all general practitioners in private practice in the emirates of Sharjah, Dubai and Abu Dhabi.

**Results:** Of the 354 eligible general practitioners, 218 (Total 61%, males: 65%, females: 35%,  $p < 0.05$ ) completed the questionnaire.

Despite the favorable beliefs/attitudes about cessation counseling, only 35% of the general practitioners provided assistance or advice on how to quit smoking to half or more of their patients who smoked. In addition, although a high percentage of the physicians ascertained the smoking status of their patients and encouraged them to quit (71%), relatively fewer (42%) offered written educational materials on smoking cessation, 39% discussed setting a quitting date, 20% recommended the use of nicotine patch and 12 % indicated that they set an appointment with patients who smoke to discuss quitting. In this study, physicians

who knew how to assess the stages of patient's readiness to quit smoking were significantly more likely to indicate high self-efficacy scores compared to those who did not know (means=13.2 and 9.1 respectively, t test,  $p<0.001$ ), and to provide support to significantly more patients who were prepared to quit smoking ( $p<0.05$ ).

Furthermore, correlates of counseling completeness (proportion of patients to whom counseling is provided, number of visits in which counseling is provided and number of minutes per visit devoted to counseling) included self-efficacy to provide counseling (OR=1.2, 95% CI= 1.03, 1.2,  $p<0.05$ ). Gender, age and nationality were not associated with counseling completeness.

Conclusion: Support, training and intervention programs to overcome lack of awareness, knowledge, and low self-efficacy could increase and enhance cessation-counseling practices among general practitioners in the UAE.

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## An examination of the role and function of psychiatric nurses in an Arab clinical practice in UAE

Dr. Sana Hawamdeh

Department of Nursing, College of Health Science,  
University of Sharjah

### ABSTRACT

**Aim of the study:** the main of the study was to describe the role and function of all grades of psychiatric nurse in clinical practice in UAE as to clarify the nature and scope of psychiatric nursing services.

**Background and rationale:** the psychiatric nursing role in recent years has undergone a period of great change. There is a new emphasis on health promotion, early intervention, community development, with nursing being provided closer to where people live and work as well as making access to services easier for vulnerable groups of the population. Role ambiguity and difficulty with defining psychiatric nursing work is a constant theme in the psychiatric nursing literature and this leaves the profession of psychiatric nursing rather vulnerable during this period of intense change.

**Design and methods:** a descriptive qualitative research design with multimethods approach to data collection was utilized involving three disparate but complimentary methods.

**Results and findings:** following data analysis, seven categories of nursing role were identified; these included both independent and interdependent roles. A major proportion of psychiatric nursing related to monitoring patient's physical care, genuine relating, and teaching patients with an emphasis on giving advice and telling the patient and the family what to do. The assessment and maintenance of patient's safety was also important as mental health problems may place the patient or others in a position where their physical safety is threatened.

**Conclusion:** it concluded that our understanding of psychiatric nursing is far from complete and immediate challenge is to determine the knowledge and skills base required for independent therapeutic roles in response to changing mental care needs.



## Patient satisfaction: The perspective of patients from an Arabic background

Dr. Amanda Henderson<sup>(1)</sup>, Ms. Nazneen Maymoun<sup>(2)</sup>

<sup>(1)</sup> Department of Nursing, College of Health Science, University of Sharjah

<sup>(2)</sup> Department of Nursing, Al-Qassimi Hospital, Sharjah

### ABSTRACT

Measuring health care in hospitals is not a new concept; health outcomes have been extensively researched for decades. A clinical perspective, associated with a medical model of health, has traditionally dominated this research. However, clinical measures alone cannot examine the totality of a patient's hospital stay. One alternative measure, that has been used to explore patients' opinions about their care, is patient satisfaction. A phenomenological approach to patient satisfaction emphasises the social reality of patients' experiences. From this perspective, patient satisfaction can be treated as patients' reflections upon and satisfaction with their lived hospital experiences. Patients' experiences occur in a particular health system that is influenced by that country's institutions including, but not exclusive to, the religion, family, education, economy and government. Patient satisfaction literature is representative of Western models of health. The danger in adopting satisfaction evaluation tools and knowledge from studies from other countries is that the work may not be reflective of what patients of Arabic background consider important to be satisfied with their experience.

The objective of this research is to comprehensively identify what patients of Arabic background believe is important to be satisfied with a hospital experience. Inductive research, using patient interviews with elective surgery patients, is being conducted to collect data to describe satisfaction concepts from the perspective of U.A.E national citizens. The objective of analyzing the data is to organise the data into themes. Continuous coding during the research allows data reduction and analytic categorisation of data, comparison of data, and recoding or regrouping of themes where necessary. The research is in progress and interviews will be continued until no new themes emerge. Pilot results have identified twelve preliminary themes important to make a patient's hospital stay satisfactory. These themes support that patients want to be cared for by competent doctors and nurses in a friendly manner. Importantly, they want to be informed



about their health status and outcomes, be comfortable and pain free and have their medications correctly given. Communication with health providers and being treated in a respectful manner are also identified as important themes. Cleanliness of the facility and food themes have also emerged. The theme of family support has strongly emerged and the context of this theme influences the overall hospital experience. Although results are not conclusive, some differences from similar western based research have emerged. Final results will provide specific knowledge about patient satisfaction that is culturally relevant to patients from an Arabic background.

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## Plasma leptin is a marker for insulin resistance in nondiabetic young adults independent to age, body mass index and lipid metabolism

Dr. Abdulridha Abdullah <sup>(1)</sup>, Dr. Haidar A. Hassan <sup>(2)</sup>

<sup>(1)</sup>Department of Nursing, <sup>(2)</sup>Department of Physiotherapy,  
College of Health Sciences, University of Sharjah

### ABSTRACT

Obesity is a highly prevalent disorder that is associated with decreased longevity and increased morbidity from various diseases including diabetes mellitus, hyperlipidemia, hypertension and cardiovascular diseases. The process of weight gaining is complex and involves interactions of different factors: genetic, environmental and neuroendocrine.

Leptin, the protein product of *ob* gene, is produced primarily by adipose tissue and is secreted into the bloodstream where it is delivered to the brain and finally it reaches the hypothalamus. Specific receptors for leptin have been identified in the hypothalamic nuclei which express neuropeptides and neurotransmitters involved in certain functions. It has been found that leptin regulates food intake, metabolic rate and energy expenditure, and reproductive function. Therefore, leptin provides a feedback signaling system which transmits information regarding adipose tissue energy stores to the central nervous system. Disruption of this system could result in excessive food intake, decrease metabolic rate and energy expenditure, and severe obesity. Many researchers found that plasma leptin concentration is directly related to the degree of obesity and other authors described important gender-based differences in the regulation and action of leptin in humans. These findings were supported by another work which suggested a decline in plasma leptin concentration with weight loss correlates with the loss in fat mass in men; but not in women. Such findings have important implications regarding differences in body composition in men and women and may account for gender differences in response to hypocaloric treatment and maintenance of lost weight.

The aim of this study is to find the correlation between plasma leptin concentration and various measurements including gender, BMI, lipid profile among non-diabetic adolescents.

## Validity and Reliability of a Disease- Specific Questionnaire Module (the EORTC QLQ BR23) in Assessing the Quality of Life of Breast Cancer Patients in an Arab Sample

Dr. Manal Awad <sup>(1)</sup>, Dr. Srdjan Denic <sup>(2)</sup>, Dr. Amanda Henderson <sup>(1)</sup>, Mrs. Mona El Kouatly <sup>(3)</sup>.

<sup>(1)</sup> Department of Nursing, <sup>(3)</sup> Department of Health Services Administration, College of Health Science, University of Sharjah

<sup>(2)</sup> Department of Internal Medicine, Faculty of Medicine, United Arab Emirates University

### ABSTRACT

The concept of quality of life (QoL) in health care has featured heavily in discussions and literature in recent years. It is now used more frequently as an outcome measure in cancer research. Primarily because patients' perceptions of their quality of life provide insight into their needs and therefore, is considered an important aspect of the assessment process. The European Organization for Research and Treatment of Cancer (EORTC) developed a breast cancer specific quality of life (QoL) questionnaire (QLQ-BR23), to be used as a quantitative measure of health-related quality of life in clinical trials of cancer patients. The validity and reliability of the original English language QLQ-BR23 has been thoroughly established. Subsequently, it has been extensively used in clinical trials and other cancer research, to assess breast cancer patients experience with the disease and its treatment.

This questionnaire has been translated and validated in many European and other languages such as Persian, Chinese and Japanese. The main purpose of this testing was to confirm the validity and reliability of the scale in these languages for further use in cancer research. Although the EORTC have conducted an Arabic translation of the QLQ-BR23, an extensive assessment of its validity and reliability is needed. This will give more confidence in its use to assess QoL of Arab breast cancer patients.

Therefore, the main objectives of this study is to assess the reliability and validity of the Arabic version of QLQ-BR23 among 120 breast cancer patients seeking treatment at Tawam Hospital, Al-Ain, UAE. The internal consistency of this scale will be assessed using Cronbach alpha. In addition, to assess the convergent validity of the scale, Pearson's

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correlations coefficient will be used. Evidence of item convergent validity is defined as a correlation above 0.4 with its own scale. In order to evaluate the ability of the scale to discriminate between groups that are known to be different, "Known Groups Comparison" will be used to evaluate the extent to which the QLQ-Br23 is able to discriminate between subgroups of patients differing in clinical status. It is hypothesized that patients who received mastectomy will report lower scores on body image, sexual function and lower KPS scores (<60) compared to those who receive breast conservative treatment

Validation of the Arabic version of the QLQ- BR23 is crucial to the conduct of future research that evaluates the Arab women's experience with breast cancer and its treatment. In addition, results of this study will allow possible integration of QoL assessment into routine cancer patient care in Arab countries.





## The Importance of the Continuous Professional Development in the Health Section in UAE

Dr. Amina M. Almarzouqi<sup>(1)</sup>, Mrs Mona El Kouatly<sup>(1)</sup>,  
Dr. Abdul-Ghaffar Mohammed<sup>(2)</sup>

<sup>(1)</sup> Department of Health Services Administration, College of Health Science,  
University of Sharjah

<sup>(2)</sup> Assistant Undersecretary of Curative medicine, Ministry of Health

### ABSTRACT

**Background:** Continuing Education (CE) of practicing nurses contributes to the personal, professional and career development of professional nurses. Also, it has short-term and long term impact on the delivery of healthcare services.

In the UAE, the Ministry of Health (MOH) is under mounting pressure to improve the delivery of healthcare services. CE programs can be designed to promote nursing role development and specific clinical development.

**Objective:** The overall purpose of this study is to provide a deeper understanding of the continuous education programs (if available) and to identify and examine aspects of continuing educational needs of the currently employed nurses in Sharjah, Ajman and Dubai Emirates in the UAE.

**Methods:** A pilot study was conducted among 22 nurses working in public hospitals in Sharjah, Ajman and Dubai.

**Results:** Most of the nurses (71%) were females. The mean age was 27 years (SD= 4.8 years). More than half (57%) were single. The mean value of the total years of experience as a nurse was almost 5 years (SD= 2.8 years). Around two thirds (63%) were holding a diploma degree. Slightly more than half of the nurses (53%) were employed on full-time basis. Around two thirds (64%) of the nurses had attended a CE program in the last 5 years. Out of those who did not attend any CE program, 26% were willing to attend similar programs in the future (if offered). The majority of the CE programs (86%) were offered outside the hospital. Unfortunately, 64% of the hospitals did not arrange any CE program in the last two years. The most convenient time for offering CE programs was after work. Out of those who attended CE programs, 42% applied the acquired concepts in their daily practice. Slightly more than one third (37%) of those who attended CE programs reported that their job performance has

improved. More than two thirds of the nurses (68%) reported a need for CE programs. 14 % of the nurses needed CE programs in the areas related to choose the ophthalmoscope examination, breast examination and preparing clinical equipment for the GP.

**Conclusion:** Most nurses are willing to attend CE programs to improve the delivery of healthcare services. Hospital managers are urged to encourage nurses to attend CE programs by making these programs available and accessible to the working nurses. Continuous education and professional development has to be one of the priority strategies to upgrade the nursing care and performance.

Collaboration and coordination between the educational organizations and the services especially the health services organizations is essential and has to be stronger.





## Microbial quality and aflatoxin in animal feeds

Dr. Mariam Hassan Shenasi

Department of Environmental Health. College of Health Science,  
University of Sharjah

### ABSTRACT

Aflatoxins are potent acute toxins and hepato-carcinogens affecting a large number of species including calves, sheep (Palmgren and Hayes, 1987), Arabian camels (Abbas and Ali, 2001) and human (Turner *et al.*, 2000). After the discovery of the aflatoxins, research has concentrated on the presence of these toxins in food and animal feeds.

Aflatoxins are produced by three main *Aspergillus* species: *A. flavus*, *A. parasiticus* and *A. nomius*. There are four major metabolites of aflatoxins referred to as B<sub>1</sub>, B<sub>2</sub>, G<sub>1</sub>, and G<sub>2</sub>, which are often found on crops originating in tropical and subtropical regions where typical environmental conditions for the growth of aflatoxigenic moulds and their production of the aflatoxin can occur at very high levels (Deacon, 1997; Kurtzman *et al.*, 1987; Frisvad *et al.*, 1999). Some UAE agricultural crops such as date fruits found to be contaminated with aflatoxigenic moulds and aflatoxin B<sub>1</sub> (Shenasi *et al.*, 2002). According to Smith *et al.* (1994) the order of toxicity, mutagenicity and carcinogenicity is B<sub>1</sub> > G<sub>1</sub> > B<sub>2</sub> > G<sub>2</sub>. Aflatoxin B<sub>1</sub> can be converted to other carcinogenic metabolites such as aflatoxin M<sub>1</sub> that occurs in lactating animals, which they secrete in their milk.

This study was aimed to examine microbial quality, the presence of aflatoxigenic *Aspergillus* spp. and their metabolites in animal feeds. Attention was directed to the pathogenic bacteria including: *Escherichia coli*, *Bacillus cereus*, *salmonella* spp., *Listeria* spp. and *Staphylococcus aureus*. Sixty samples of animal feeds were collected from Sharjah State under aseptically conditions. All samples showed an absence of aflatoxins and no detectable level of pathogenic bacteria. However high fungal counts were associated with 10% of the total samples. Total counts of *A. flavus* ranged from 5.00 to 10 (SD±0.6) log<sub>10</sub>cfu/g. However the samples were found contaminated with other moulds which merited further investigation.



## Noise Exposure, Noise Annoyance, Knowledge and Practice of Workers in Industries in Sharjah Industrial Area

**Dr. Hafiz Omer Ahmed**

Department of Environmental Health, College of Health Science,  
University of Sharjah

### ABSTRACT

**Introduction:** Occupational exposure to excessive noise is commonly encountered in a great variety of industrial processes. The resulting auditory and non-auditory effects are a well-recognized and global problems, and affect many subjects both civilians and military. When engineering controls can not be used to reduce noise, workers exposed to high noise levels should always use hearing protection devices (HPDs) to protect themselves from noise related adverse health effects. However, previous studies have shown that workers do not always use HPDs when required, and the use of HPDs in industries is very low; ranging between 12% and 50 %. Researchers have reported feeling of discomfort, interference with job performance and lack of knowledge of the workers about adverse health effects of noise to be of the reasons of not using HPDs by workers. Others reported that the use of HPDs is related to noise levels and noise annoyance. In United Arab Emirates, many industries have been established and most of them (46%) located in Sharjah Emirate. However, few studies have been conducted to investigate the occupational hazards, their adverse health effects and the knowledge & practice of the working population towards the occupational hazards. Against this background, the investigator decided to conduct this research

**Objectives:** To measure the noise levels in each of the selected industry, to evaluate the knowledge and practice of workers towards noise, to assess noise annoyance among workers and to review the control measures adopted to control the occupational hazards in general and noise in particular in each industry.

**Subjects and Methods:** A sample of 600 to 750 workers from at least 4 different industries will be involved in this cross sectional study. The industries will be selected randomly from Sharjah Industrial Area.

Estimates of noise levels and personal noise exposure will be determined using sound level meter and noise dosimeters respectively.



Interviewer – administered questionnaire will be used to assess the knowledge and practice of workers towards noise

Statistical Analysis: Data will be entered and analyzed using Statistical Package for Social Science (SPSS). Bivariate and multivariate analysis techniques will be used to analyze the data.

Significance and Potential Benefits of the Project: A noise map will be established for each industry. Control measures will be recommended to control noise in areas where it exceeds the standard. Subjects exposed to high noise levels will be identified and measures to protect them will be suggested. In addition, a hearing conservation program will be recommended for each industry and its components might include; hearing protection devices, regular noise assessment and education to raise the knowledge and awareness of the employees about the adverse health effects of noise.

Finally, the findings of this study will help the concerned authorities such as Sharjah Municipality in their plans & strategies in Occupational Health and Safety area

The significance and benefits of the project include the determination of the factors that influence knowledge and practice of workers towards noise and the estimation of the noise exposure levels in each industry. Finally, the findings of this study will help the concerned authorities such as municipality in their plans & strategies in occupational health and safety area

A noise map (noise levels for each area in each industry) will be established for each industry. Subjects exposed to high noise levels will be identified and measures to protect them will be taken. Control measures will be recommended to control noise in areas where it exceeds the standard. In addition, a hearing conservation program could be usefully established within the industries and its components might include; hearing protection devices, regular noise assessment and education to raise the awareness of the employees about adverse health effects of noise. Finally, the findings of this study will help the concerned authorities such as municipality in their plans & strategies in occupational health and safety area

The factors that influence knowledge and practice of workers towards noise and that influence the attitudes to noise & occupational hazards among management will be determined. The control measures adopted to control the occupational hazards in each industry will be reviewed. Noise exposure levels in each plant and personal noise exposure will be estimated and compared with the standards.



## The prevalence of respiratory symptoms and lung function impairment among Sharjah Cement Workers

Dr. Hafiz Omer Ahmed<sup>(1)</sup>, Dr. Abdulridha Abdullah<sup>(2)</sup>

<sup>(1)</sup> Department of Environmental Health, <sup>(2)</sup> Department of Nursing,  
College of Health Science, University of Sharjah

### ABSTRACT

**Introduction:** The rate of industrialization in the UAE has increased significantly over the past decades. There is growing concern about the health hazards of such industrial technology and the need for implementing effective safety measures for the prevention of possible adverse health effects. Several researchers have reported that chronic occupational exposure to Portland cement dust leads to a greater prevalence of chronic respiratory symptoms and signs such as cough, sputum, wheezing and dyspnoea and alters the pulmonary function indices. However, other researchers have reported that long term exposure to cement dust does not affect the respiratory morbidity. Currently there are nine cement manufacturing factories within the Emirates, one of them in Sharjah Emirate, which is an indicator for the importance of cement manufacture to the UAE. In view of this and due to contradictions in the literature regarding the health effects of the cement dust the investigators decided to conduct this research.

**Objectives:** To estimate the level and the chemical composition of cement dust in the plant, to determine the prevalence of respiratory symptoms and lung function impairment among workers exposed to cement dust and to formulate appropriate recommendations based on the findings.

**Subjects and Methods:** A sample of 150 to 200 workers exposed to cement dust will be selected randomly from Sharjah cement factory. The non-exposed group will consist of 150 to 200 subjects randomly selected from population not exposed to cement dust or respiratory irritants or sensitizers. Subjects who have been working at Sharjah cement or/ and have resident in the UAE for less than 12 months will be excluded from the study.

Levels and chemical composition of cement dust will be determined using Dust sampler & analytical instruments.

Lung function test will be done by portable spirometer (Vitalograph 2120).



Interviewer – administered Modified Respiratory Symptoms Questionnaire based on the British Medical Research Council (MRC) Questionnaire will be used to assess the respiratory symptoms.

Statistical Analysis: Data will be entered and analyzed using Statistical Package for Social Science (SPSS). Bivariate and multivariate analysis techniques will be used to analyze the data.

Significance and Potential Benefits of the Project: The level and the chemical composition of cement dust in the plant will be determined. Control measures will be recommended to control dust in areas where it exceeds the standard. Subjects exposed to high dust levels will be identified and measures to protect them will be suggested. Subjects with abnormal lung function tests will be advised medically.

Finally, the findings of this study will help the concerned authorities such as Sharjah Municipality in their plans & strategies in Occupational Health and Safety area.





## Art in Conflict: Historical Analysis of Modern Art by Palestinian Women

Dr. Judy Bullington

College of Fine Arts, University of Sharjah

### ABSTRACT

The earliest production of modern art in the Western sense emerged in Palestine in the mid twentieth century. Although few women gained access to this patriarchal enclave initially, today there are more female than male Palestinian art students enrolled in regional art schools. Therefore, it can be argued that the emerging voice of the new generation of Palestinian artists is increasingly female. This project will utilize primary source material in the form of firsthand documentation of the challenges facing contemporary women in Palestine who—whether living under occupation or as part of the global Palestinian Diaspora—remain committed to the visual arts as a mode of expressing and recording their experiences, aspirations, disappointments and losses. Interviews with women artists living in Jerusalem and the West Bank serve as the foundation for exploring the realities of artists' professional development in a militarily controlled environment and identifying the strategies artists have devised to negotiate those realities. Comparative studies between these artists and those living outside the occupied territories (Jordan, Syria, Lebanon, France, England, and the United States) will be used to explore thematic continuity in the visual arts and the marginalization of Palestinian women artists across geo-political borders.

This research is interdisciplinary. It contributes to the contemporary academic fields of cultural, global, and women's studies. It negates the assumption that art made by Palestinian women artists is homogenous and seeks instead to understand how meaning emerges from the interaction of specific social situations and aesthetic encounters. The focus is shifted from defining which works of art can be categorized as Palestinian women's art to enquiring how Palestinian women's art articulates difference in its material specificity and at its particular historical locus. A research baseline consisting of personal interviews with artists, a collection of digital images of works of art, photographic documentation of artist's studio spaces, and archival data—much of it in the form of pamphlets, exhibition catalogues and brochures relating to art exhibitions that are not available outside their



local venues—has been established. Interpretation and analysis of this data will be developed through further archival research and the application of critical strategies that provide new insights into understanding the notions of difference and subjectivity. Gilles Deleuze's writings on cultural studies, which examines the process of becoming a subject rather than defining what is a subject, and Felix Guattari's philosophical work on liminal subjectivity and the ethico-aesthetic paradigm, which recognizes the creative nature of *communitas* or community formation in transnational situations, will inform the critical and analytic strategies used for interpreting the visual and textual data amassed through this research on Palestinian women artists.

الملتقى السنوي الأول للبحث العلمي في جامعة البصرة  
٦-٧ ربيع الثاني ١٤٣٦ هـ الموافق ١٤-١٥ مايو ٢٠١٥ م



## Water Quality and Circulation Patterns in Khalid and Al-Khan Coastal Lagoons in Sharjah

Dr. Abdallah Shanableh<sup>(1)</sup>, Dr. Maher Omar<sup>(1)</sup>, Dr. Ayssar Nahle<sup>(2)</sup>

<sup>(1)</sup> Research & Studies Center, University of Sharjah and Department of Civil Engineering, College of Engineering, University of Sharjah

<sup>(2)</sup> Research & Studies Center, University of Sharjah and Basic Sciences Department, College of Arts and Sciences, University of Sharjah

### ABSTRACT

The Khalid lagoon is one of the most important features of the City of Sharjah and its socio-economic environment. The lagoon is located at the heart of the city and is surrounded by high rise buildings, markets, recreational parks, entertainment and cultural centers, and busy commercial districts. The area surrounding the lagoon is widely used by Sharjah residents for recreation and socializing and the lagoon itself is used for recreational sports, boating and commercial activity. The lagoon is connected to the Arabian Gulf by a narrow channel (Al-Khour) through which water is exchanged between the lagoon and the Gulf. The Al-Khour channel is heavily used by commercial boats and ships, and the land use surrounding Al-Khour channel is predominantly commercial.

Similar to the Khalid lagoon, the nearby Al-Khan lagoon is also connected to the Gulf through a channel. The Al-Khan lagoon is used for recreational fishing and boating and the area surrounding the lagoon is less developed than the area surrounding Khalid lagoon, but development is increasing rapidly. The Al-Khan lagoon is the smaller of the two with a total surface area of approximately 1.5 million m<sup>2</sup> and a depth of approximately 5-7 m. The surface area of the Khalid lagoon is about 3 million m<sup>2</sup> with a depth of 3-7 m.

Water circulation and flushing in the two lagoons is mainly driven by tidal and wind activities. However, the flushing of the main body of the Khalid lagoon and behind the semi-island in the Al-Khan lagoon are limited. The poor flushing characteristics of parts of the lagoons encourage the accumulation of pollution, which is detrimental to the water quality and poses potential risk to human health, the environmental and the beneficial uses of the lagoons.

In addition to fulfilling many social and economic benefits, the Government of Sharjah invested in building Al-Qasbaa Canal connecting the two lagoons in part to help improve the flushing characteristics in the two lagoons, and consequently



improve water quality,. The canal is about 1 km long, 5 m deep and 30 meters wide. The canal was commissioned on 8 November 2000. A gate was provided on the Khalid end of Canal. Operation of the gate was planned mainly to allow water flow in one direction, from Al-Khan lagoon into the Khalid lagoon but not in the opposite direction.

The major purpose of this report is to present and discuss the results of a baseline study that was undertaken prior to commissioning of the Al-Qasbaa Canal between the two lagoons. The study was undertaken in a collaboration with the Environment and Protected Areas Authority in Sharjah. The purpose of the study was to document, as much as permitted by the limited resources available, the water quality and circulation patterns in the two lagoons and assess the potential impacts of connecting the two lagoons by the Al-Qasbaa canal on water circulation and exchange patterns.

In terms of water quality, the available data clearly show that the Al-Khan lagoon was cleaner than the Khalid lagoon. The data also indicate a significant accumulation of sediments which reduced the depth to almost 1/2 to 2/3 of the original depth in the Khalid lagoon.

The modeling results suggested that in terms of water circulation and water quality, an always open Al-Qasbaa canal can have a positive impact on the Khalid lagoon and some negative impact on Al-Khan lagoon. The simulation showed that the flushing characteristics in the Khalid lagoon would significantly improve while the Al-Khan lagoon would receive waters from the more polluted Khalid lagoon



## Investigation of The Sharjah Waste Disposal Sites and Remediation Alternatives

**Dr. Abdallah Shanableh, Dr. Maher Omar**

Research & Studies Center, University of Sharjah and Department of Civil Engineering, College of Engineering, University of Sharjah

### ABSTRACT

In the second half of 2000, representatives of the Environment and Protected Areas Authority (EPAA) and the University of Sharjah (UOS) met to discuss their concerns regarding the old waste disposal site near the University City. At the time in 2000, it was estimated that Sharjah utilized the site for about 20 years for waste disposal. Initially, the site, which is about 12 km away from the heart of the city, was relatively far away from the small city of Sharjah. However, and as a result of unprecedented growth during the 20 years, the city grew and expanded beyond the disposal site. The population also rapidly grew to reach approximately 500,000 in 2000/2001. In 2001, the area surrounding the disposal site developed to include universities, technical colleges, private schools, mixed commercial/residential areas, and industrial areas. In the year 2000, the Executive Council of the Government of Sharjah called for the formation of a Special Committees for Solid Waste Management in Sharjah, to consider the issue of the old and current waste disposal sites, in addition to all matters related to waste management in the Emirate of Sharjah. The committee was to be headed by the Director General of the Sharjah Municipality and to include representatives from the Environment and Protected Areas Authority (EPAA), the University of Sharjah, and from other Organizations in Sharjah. In its first meeting, the Special Committee formed a Technical Committee, Chaired by the Director General of the EPAA who is also a member of the Executive Council, and included professionals from the University of Sharjah and Sharjah Municipality.

The fourth joint meeting of the Special and Technical Committees for Solid Waste Management in Sharjah, which took place on Wednesday 22 February 2001, was focused on initiating a study to characterize the Sharjah old waste disposal site and to recommend potential remediation alternatives. During the meeting, the chairman of the committee requested that the University of Sharjah (UOS) help develop the investigation plan, including identifying locations for obtaining waste, soil and water samples



within the disposal site. The chairman asked the University representative on the committee to report back with a preliminary sampling plan by 25-26 February 2001. Between the 22 and 26 February 2001, the University team developed the investigation plans and, accompanied by a representative of the Environment and Protected Areas Authority, inspected the site. The site investigation aimed at developing a conceptual understanding of the site and the site-specific problems associated with it. The purpose was to use the investigation results to develop and evaluate alternative remedies and to recommend the most feasible alternative. The investigation was not meant to provide a detailed assessment of the risk associated with the site or to develop detailed cost estimates for the selected remedies. The detailed assessment was left to the firm to be contracted to clean the site. The objectives of the preliminary investigation were to:

1. Develop a conceptual understanding of the problem, in terms of the extent of contamination and the general risk associated with the landfill.
2. Develop and evaluate alternative potential solutions to the problem.
3. Recommend the most appropriate alternatives and the approximate costs involved.
4. Develop the investigation results into a background document that can be submitted to contractors for purposes of confirmation and implementation of appropriate solutions.
5. Organize a technical team that can follow up with this specialized type of work to ensure its quality and adequacy.

The investigation plan included preparation of base maps, identification of site features, waste characterization, sub-soil characterization, water and leachate quality characterization, assessment of ground water hydrology, assessment of landfill gas and odor, and assessment of the general risk posed to human health and the environment. Subsequently, the actual site investigation was conducted according to these plans. In summary, the investigation revealed that the waste layer at the disposal site was relatively shallow (3 to 6 meters). Because of the shallowness of the waste layer, the disposal area was found to be fairly large (approximately 1.7 km<sup>2</sup>). The bulk density of the waste was in the range of 500 – 1250 kg/m<sup>3</sup>, the total volume was estimated to be about 7 million m<sup>3</sup> and the total mass was estimated to be 5 million tons. A part of the landfill (approximately 0.2 km<sup>2</sup>) contained mainly construction and demolition waste and another part contained tires, with the majority of the area was filled with mixed

domestic solid waste. The total area of the disposal site was approximately 2.5 km<sup>2</sup> of which 1.7 km<sup>2</sup> was used for disposal and the remaining area consisted of excavated depressions. The depressions were originally prepared for waste disposal but were abandoned when disposal stopped nearly 5-6 years ago. The groundwater table in the area was locally elevated to few meters below the ground surface, which resulted in flooding the lower layers of the buried waste. Unless it rained, the top layers of uncovered waste were generally dry due to exposure to sunlight and weather elements. The water samples collected from the landfill were grossly contaminated with leachate, while some samples collected from the nearby wells in the area showed irrigation water quality. The sub-soils at the site generally consisted of three distinct strata: (1) waste layer; (2) dense to very dense silty to very silty sand, and (3) fine to medium grained bands of sandstone. The other aspects of the investigation involved confirmation of gas emissions, presence of rodents, insects, and birds.

The site-specific problems identified as a result of the site investigation phase of the study are summarized below. These problems are not different from other disposal sites, except may be for the large disposal area and the shallow disposal depth encountered at the site.

Problem 1. Large area/shallow waste layer

Problem 2. Gas/odor

Problem 3. Insects/birds

Problem 4. Presence of uncontrolled disposal site in vital, valuable area

Problem 5. Appearance

Problem 6. Land use/construction limitations

Problem 7. Elevated/contaminated groundwater/leachate

Following the investigation, the University team developed and evaluated seven remediation alternatives, ranging from no-action to providing partial to comprehensive solutions. The alternatives were discussed by the special and technical committees, with recommendations to clean the site using a specific, step-by-step procedure, to allow reclaiming the land for beneficial purposes because of the value of clean land in this vital area. It is the pleasure of the team to learn that its recommended solution is currently being applied, fully or partially, in real life by the firm contracted to clean the site. Following this phase, the team prepared a comprehensive report that was used as a background document that was subsequently given to potential contractors and consultants whom were invited by the Special Committee to present their ideas. The various firms presented their alternatives, and





the committee identified few firms who presented alternative matching the solution proposed by the team.

Based on a request from the Special and Technical Committees, the team also investigated the current waste disposal site and waste practices in Sharjah and recommended remediation and upgrade plans, in addition to an integrated waste management system for Sharjah, which included the use of transfer stations, upgraded composting plant, and material recovery facility.





## Collaboration and Capacity Building in Seismology - Methodology for Assessing Earthquakes Impact on Health, Environment, and Infrastructures in UAE

Dr. Samer Barakat <sup>(1)</sup>, Dr. Abdallah Shanableh <sup>(1)</sup>,  
Dr. Maher Omar <sup>(1)</sup>, Prof. Abdallah I. Husein Malkawi <sup>(2)</sup>

<sup>(1)</sup> Research & Studies Center, University of Sharjah and Department of Civil  
Engineering, College of Engineering, University of Sharjah

<sup>(2)</sup> Jordan University of Science and Technology  
Irbid, Jordan

### ABSTRACT

The University of Sharjah held during the period 22-25 February 2004 an International Forum titled "Seismology and Earthquakes in the Arabian Gulf Region". The scientists and other delegates of the Forum agreed that earthquakes pose a risk to the Arabian Gulf region. While the vulnerability to earthquake risk is lower within the Arabian Peninsula and the UAE compared with the surrounding regions, the risk is still worthy of careful consideration. Earthquakes pose risks such as damage to homes, buildings and infrastructure as well as landslides, tsunamis and scheiche. These hazards must be assessed without delay in order to mitigate the consequences of earthquake damage including the loss of life. Some of the Forum recommendations are of high interest to UOS as research organizations worth mentioning below:

1) A National Committee representing all concerned Ministries, authorities and research organizations on Earthquake Study and Hazard Assessment should be formed. The Committee should collect all available information and summarize them into a preliminary seismic zonation and design criteria (building code) to be recommended for new construction. These criteria can be revised as more information is gathered and analysis is performed.

2) The Committee should solicit a preliminary evaluation of existing buildings and infrastructure and their susceptibility to earthquake damage.

Therefore, as an initial effort, UOS aims to establish a core group of faculty for research on earthquake engineering and seismology. Due to the above and the multidisciplinary nature of the problem as well as the important spectrum of challenging



earthquake-related problems and their environmental health impacts, the UOS seeks cooperation with areas-related research groups in the UAE, Gulf and International educational and research institutions. Based on their records, Jordan University of Science and Technology (JUST) expressed interest in developing collaboration in earthquake engineering research area with UOS. This collaboration project is proposed to strengthen the research cooperation with JUST and to benefit from the expertise in both UOS and JUST. This collaborative research aims at: 1) sharing the knowledge and reducing the cost, 2) efficient use of resources and productivity, and 3) scientifically address the national needs in UAE in terms of developing methodology for assessing earthquake impacts on health, environment and infrastructures.

One main interest in this project is to assess stochastically earthquake hazard and risk in the UAE including the estimation of the amplitudes of the ground motion parameters (like horizontal peak ground acceleration, velocity, displacement, spectral acceleration, spectral velocity, etc.) and to forecast the maximum event magnitude recurrence during the time of exposure at diverse specific levels of confidence by employing the necessary physics, mathematical and statistical concepts and techniques. Consequently; develop an isoseismic map then make seismic zoning to for the UAE. Then, the response of selected UAE key structures to earthquake loading will be investigated. This includes the study of the architectural plans, soil conditions, foundations, structural geometry, material properties and different static and dynamic loading conditions. Upon the above an earthquake monitoring station network can be proposed; that to make it possible and easier to improve earthquake data base of the UAE to allow future revising of this or like study referring to a better background for the sake of engendering a more accurate results and codes that may be reflected on the safety and economy.

The ultimate aim of this project is to develop a comprehensive risk ranking system (comparative risk system) for assessing the risk posed to human health and the environment from earthquakes in the UAE. The system is based on translating the risk assessment model used in the public health area into an equivalent model used to assess and compare risk posed to human health and the environment. The risk-based framework can be used to generate hazard maps associated with the risk categories. These maps are best integrated within a geographic information database, such as GIS.



المجموعات البحثية  
**Research Groups**





## الأنشطة والإنجازات لمجموعة القرآن والسنة

أ.د. مصطفى مسلم - منسق المجموعة

مركز البحوث والدراسات، جامعة الشرقية  
مستضافة من: كلية الشريعة والدراسات الإسلامية  
جامعة الشرقية

### الخلاصة

إن مجموعة بحوث الكتاب والسنة هي إحدى المجموعات المنبثقة عن مركز البحوث والدراسات بجامعة الشرقية.  
من أهداف المجموعة: أولاً: اعتماد المشاريع التي تقوم بخدمة كتاب الله تعالى مما يقربه إلى الأمة. ثانياً: العمل على قيام الباحثين في السنة النبوية بإظهار السنة بالمظهر اللائق. ثالثاً: رصد كل ما يصدر عن أعداء الإسلام للرد عن الشبه بصورة علمية دقيقة.

لتحقيق الأهداف السابقة سعت المجموعة بتنفيذ البنود التالية:

- فتح موقع على شبكة الإنترنت.
- إصدار نشره تعريفية بالمجموعة وأنشطتها.
- تقديم مشاريع بحثية علمية تمس الحاجة إليها في الوقت الراهن.
- نشر كتب وأبحاث لأعضاء هيئة التدريس تتسم بالأصالة والابتكار.
- المشاركة في الندوات والمؤتمرات الدولية التي تتعلق بتخصصات المجموعة والتعاون مع المؤسسات العلمية ذات العلاقة، والتنسيق معها في تحكيم البحوث ونشرها..... الخ
- التعاون مع المراكز المماثلة.
- المشاريع التي تمت الموافقة عليها من مركز البحوث والدراسات وتقوم المجموعة على تنفيذها، هي:
- التفسير الموضوعي لسور القرآن الكريم.
- الاتجاه الحدائي وموقفه من النص القرآني.
- الاتجاه الحدائي وموقفه من السنة النبوية.
- ثلاثيات الحميدي في مسنده.
- الرواة الذين ترجم لهم النسائي في الضعفاء والمتروكين وأخرج لهم في سننه.
- تخريج الحديث ودراسة أسانيده.
- أبحاث ودراسات مقترحة لتقديمها كمشاريع مستقبلية:
- دراسة تجريبية للدلالات العلمية في الكتاب والسنة.
- لا تقوم الساعة حتى....
- التفسير النبوي للقرآن الكريم.

# Activities and Achievements of the Graphics, Image Processing and Multimedia Databases Research Group

**Dr. Mohsen Madi- Group Coordinator**

Research and Studies Center, University of Sharjah

Hosted by: College of Arts and Sciences, University of Sharjah

## ABSTRACT

The long-term research objectives of the GIM group include development of a variety of 3D graphics, imaging processing, and multimedia tools to invent efficient techniques for modeling, indexing and recognition of 2D and 3D objects and phenomena such indexing and recognition of geometrical 3D computer generated objects, modeling and identification of humans from facial profiles, classification and extraction of visual abnormalities from medical visual scans, and visualization and manipulation of compressed and encrypted data. Other objectives include development of software applications for PDA's and hand-held devices.





## Activities and Acheivements of the Arabic Computational Linguistics Research Group

**Dr. Ahmed Guessoum - Group Coordinator**  
Research and Studies Center, University of Sharjah  
Hosted by: College of Arts and Sciences, University of Sharjah

### ABSTRACT

The Arabic Computational Linguistics research group was created with the aim of starting the nucleus of a center for Arabic natural language engineering. The work of this group is intended to trigger the development of an array of infrastructure computational tools, algorithms, scripts, codes, and corpora that would contribute to the computerization of the Arabic language. It very much seeks to establish the nucleus of a factory for Arabic computational linguistics tools, which should have a positive impact on the development of Sharjah, the UAE, and the Arab World at large in this area.

The group's short term objectives are (1) the design of computational systems that are robust enough to be of practical value; (2) the development of English and Arabic morphological analyzers and generators, parsers, and other computational tools that would facilitate monolingual Arabic computational linguistic research and English-Arabic bilingual research; (3) the development of open source software for the Arabic language and for computer-assisted language learning. The areas of research priority for the group are as follows:

1. Arabic Computational Linguistics (ACL) basic toolboxes.
2. Arabic Machine Translation (AMT)
3. Computer-Aided Language Learning tools for Arabic
4. Linguistic Research

More practically, the group aims to develop the following modules:

- Monolingual and bi-lingual dictionaries (Arabic dictionary, English dictionary, English-to-Arabic and Arabic-to-English Dictionary)
- Lexical and morphological analysers for Arabic and for English
- Parsers and generators for Arabic and English
- English-to-Arabic and Arabic-to-English transfer modules.
- Various Computer-Aided Learning tools to teach different aspects of Arabic morphology, grammar, etc.

In order to keep the group research focused, we have decided that building an English-to-Arabic Machine Translation (AMT) system



would be an excellent R&D target. A MT system requires many linguistic modules such as lexicons (dictionaries), lexical and morphological analysers, parsers, modules to transfer between English and Arabic, generators, computed –aided learning programs, etc. As such, we have started developing either some tools that help us in developing some of these modules or some of the modules themselves. So far we have achieved the following:

- Work almost finished on the development of an environment for building dictionaries. A tool which will be very useful to lexicographers.
- Signing of a Memorandum of Understanding with the international Linguistic Data Consortium. This allows us to acquire many very valuable corpora for Arabic, English, bilingual English-Arabic, speech corpora, etc.
- Refinement of a parser of English developed under the supervision of one of the group members.
- Refinement of a parser of Arabic developed under the supervision of one of the group members.
- Development of a tool that can be used for teaching Arabic morphology to school students.
- Work has already started on automatic building of an English-to-Arabic transfer module from corpora
- Work has already started on the development of algorithms for Arabic text summarisation
- Work has already started on English-Arabic text alignment

These ideas will be presented in the conference as well as some of the tools that have been developed.





## Activities and Acheivements of the Management Research Group

**Dr. Naceur Jabnoun - Group Coordinator**

Research and Studies Center, University of Sharjah

Hosted by: College of Business and Management, University of Sharjah

### ABSTRACT

The MRT research team will build a knowledge reservoir of different aspects of managing local and regional manufacturing and service organizations. The purpose is to develop a broader and deeper understanding of the business environment and organizations in the region. MRT will conduct a comprehensive diagnosis of management practices in the UAE (Gulf). Practices in each area of management will be identified and their relationship to performance will be determined. The research will also investigate corporate culture and ethics, and leadership styles in UAE (Gulf) organizations. This will serve both research and teaching interests of the team members in particular and faculty in general. It will enable faculty to localize part of the content of materials taught in the classroom, contributing to better learning outcomes by bringing real life examples of familiar local and regional companies to the classroom setting. In turn, the students will transfer their knowledge into the local and regional organizations, improving management practices in the UAE (Gulf).



## Activities and Achievements of the Intelligent Systems and Infrastructure Research Group

**Professor Maamar Bettayeb - Group Coordinator**

Research and Studies Center, University of Sharjah

Hosted by: College of Engineering, University of Sharjah

### ABSTRACT

Due to the complexity and Multi-disciplinary nature of modern technological systems and processes, it is important to have a research group with strong background and expertise in several areas of science and engineering. The design and development of new technological intelligent systems require extensive research in the areas of modeling, simulation, analysis, optimization and software/hardware development and prototyping. The overall objective of the group is to serve the community through advancing science and technology in the areas of modeling, simulation, system analysis, optimizing, and system development. These interests relate to every aspect of development of modern societies and as such, the activities of the group will significantly contribute to serve the society. It is also one of the main objectives of the research group to establish a comprehensive Database of tools, techniques, algorithms and methodologies to solve potential and complex problems in the research areas of the group, relevant to the UAE and the region. The group will develop research and activities with beneficial outcomes to the university, community and to the region, including:

- Solution to common and similar problems in modeling, simulation, design and optimization for various applications in Electrical, computer and civil engineering, and in computer science.
- Exchange of experience and expertise
- Optimization of resources of university of Sharjah
- Transfer of Know-How inside the group and outside the group
- Put mixed academia and industry expertise together to form a group capable of developing solutions to challenging industrial technical problems
- Promote common educational values, skills, techniques and models for teaching and learning

Three departments (four programs) from two colleges(Engineering and Arts & Sciences) are involved and will benefit from the research activities of the group. The activities of the group will give strong incentive for the promotion of quality



research and a sense of collaboration at the various departments and colleges of the university.

Finally, this group is expected to contribute to enhance the image of the university as a quality educational and research institution as well as close ties with outside institutions and industries.

The group will focus on three major areas of theoretical and practical research: Modeling, simulation, analysis and design of complex systems and processes. The group will use and develop techniques and tools for the modeling and simulation of continuous and discrete dynamic systems as well as Discrete-event systems. For signals and system analysis, modern tools, such as chaos theory, wavelets, time frequency representations, high order spectra and singular value decomposition are the main areas of research.

Optimization and control: The group members will use their expertise and design new algorithms and techniques for the optimization and control of complex dynamic systems and processes. Emphasis will be on new promising optimization techniques including  $H_{\infty}$  optimization, soft computing methods such as artificial intelligence and expert systems, Genetic algorithms, Neural networks, Fuzzy logic and Hybrid.

System development and prototyping: The group aims at designing a methodology for system development and prototyping. This includes the implementation in efficient software of the algorithms and techniques mentioned earlier as well the Digital Signal processing and micro controller implementation for the systems and processes in question. This may lead to new software modules and software/hardware products for specific applications. Since its formation, the ISI Research Group has established the following activities:

1. Formation of the group management structure
2. Begin to establish a research laboratory with the necessary equipment and software
3. Establish a regular seminar by group members and invited speakers
4. Establish international links with several research groups, laboratories and universities
5. Start identifying common research areas and corresponding subgroups
6. Start submitting research proposals for funding
7. Look for cooperation with local industries and institutions
8. Contribute to the research activities of graduate students at UOS
9. Initiate contact for hosting international workshops.

Details on the above activities and achievements of the group will be presented at the forum.



## Activities and Acheivements of the Molecular Studies Research Group

**Dr. Paul Towner - Group Coordinator**

Research and Studies Center, University of Sharjah  
Hosted by: College of Health Sciences, University of Sharjah

### ABSTRACT

This group of three faculty members was formed in May 2004 but has only recently started the process of establishing new research activities. This has been achieved by employing two technicians on a temporary basis to establish routine and reliable protocols that are used in molecular genetics to support the on going projects that had previously attracted funded. Unlike many other spheres of research endeavour our research requires 'hands-on' and time consuming experimentation. Furthermore, many of the techniques are associated with high cost consumables materials. Our first objective has been to establish methods of DNA and RNA purification following simple protocols based on inexpensive materials. This initial phase is underway and has proven that our in-house methods are considerably cheaper and perform better than having to rely on expensive proprietary kits. The DNA and RNA from a range of samples has thus been isolated and used in genetic detection methods based on the polymerase chain reaction, PCR.

The basis for much of our work is to routinely analyse blood plasma and other samples for the presence of viruses. Traditionally this centered on being able to detect proteins that had arisen from the virus by using antibody interactions, but this is time consuming and is not of high sensitivity and has basically been replaced by PCR in most laboratories. Samples that are positive by PCR are further analysed by cloning and sequencing to confirm the type of virus present and to determine its serotype and thereby infer which human population group it came from. These techniques are equally applicable to any other genetic-based detection system such as those used to determine types of insects in pest control centres. One of our projects aims to not only identify an individual mosquito but to also detect whether the insect is carrying traces of plasmodium, the malaria parasite. With increased success we hope to expand our group to encompass other projects that are currently underway within the college but have not yet been amenable to molecular genetic methods. This would include the study of osteoporosis in the region and discover whether it is a genetic anomaly or based purely on lifestyle.



## Activities and Acheivements of the Energy and Environment Research Group

**Dr. Abdalla A. Alnajjar - Group Coordinator**

Research and Studies Center,  
University of Sharjah

### ABSTRACT

The sustainable energy and environment research group support two main complementary research themes:

- (1) Sustainable energy.
- (2) Sustainable environment.

Both themes are closely linked. Energy is needed to derive every activity and increasing the use of renewable energy can greatly benefit the quality of the environment. Combining the use of efficient energy sources, and environmental systems can provide ultimate solutions to many energy, environmental problems and thus can contribute towards sustainable development. The group's main interest is to serve the local community through various activities. In this regard, the group members have already developed strong collaboration with key community organizations. Such as the electricity and water authority, the environment and protected areas Authority, the Sharjah municipality, and other local, national and international organization who participated in or co-sponsored the research gatherings organized by the group members in the areas of renewable energy and environment. The Research group's main objective is to serve the local and regional communities through advancing and disseminating knowledge, solving problems, assisting in community development, and developing applications with potential economic viability in selected fields related to energy and environment.

The group's activity involves building up important infrastructure in the critical fields of sustainable energy and environment and establishing a cutting-edge Research program in the identified areas of research interests. The sustainable energy research interset of the group is focused on advancing science and technology issues related to solar energy, solar thermal, low-energy architecture biomass and bio-gas, and sustainable use of energy, and energy efficient materials, energy policy, energy economics, and related community education.

The sustainable environment theme covers a wide range of issues rekated to environmental qualiyt and population, environmental

systems, environmental management, hardware and software design, impact assessment and risk analysis, environmental economics and related community education.



**Book of  
Abstracts**

**The First Annual Scientific Research Forum  
at The University of Sharjah (14-15 May 2005)**

بحوث أعضاء هيئة التدريس  
**Research Papers of Faculty Members**





## تحقيق (كتاب الخراج) لأبي يوسف للقاضي، يعقوب بن إبراهيم

د. عثمان جمعة ضميرية

قسم الشريعة - كلية الشريعة والدراسات الإسلامية  
جامعة الشرقية

### الخلاصة

- كتاب الخراج للإمام المجتهد أبي يوسف القاضي صاحب الإمام أبي حنيفة يتميز بجملة من الميزات والخصائص قلما تجتمع في كتاب واحد، وهذه أهمها وأبرزها:
- ١- الكتاب وثيقة تاريخية على تدوين العلوم الإسلامية ونشأتها في القرن الهجري الثاني. وهذا له أثره في دراسة تطور الفكر الإسلامي ونهضته.
  - ٢- يجمع الكتاب بين منهج مدرستي أهل الرأي وأهل الحديث المعروفتين، ويؤانق بينهما، وهذا يؤكد أهمية الجمع بين الحديث الصحيح والرأي السليم، أو النظر والأثر.
  - ٣- وهو أول كتاب في السياسة الشرعية والدولية، حيث يرسم معالم النظام المالي والاقتصادي والجنائي والدولي للدولة الإسلامية في أوج قوتها وعزها، مما يلهم العاملين- اليوم- أفكاراً في هذه الجوانب، ويمثل منهجاً متكاملاً للإصلاح الديني والسياسي والمالي والاجتماعي في عصره.
  - ٤- وهذا يحلّ أبا يوسف -رحمه الله- المقام الأسمى، فيجعله رائد الإصلاح في القرن الثاني الهجري، وقد سبق بأفكاره الإصلاحية -التي استمدّها من الشريعة واستوحاها من نصوصها ومقاصدها- حيث كان سباقاً إلى أهم الإصلاحات والأفكار الإصلاحية التي ظهرت في عصرنا هذا و تنامت الدعوة إليها أخيراً.
  - ٥- كما أنه أول كتاب في الموازنة والمقارنة في الدراسات الشرعية المعروفة عند علمائنا بـ ((الخلاف العالي)) ويعرف اليوم بـ ((الفقه المقارن)).
- ورغم أهمية الكتاب؛ فإن العناية بإخراجه وتحقيقه وتوثيقه، لم تبلغ ما ينبغي في هذا، فكانت الحاجة لهذا العمل قائمة رغم الطبعات المتكررة التي لم تعتمد على الأصول الخطية الكافية، ولم تقدم الدراسة الكاشفة لأهميته ومكانته، دون أن تكون هذه الإشارة انتقاصاً لجهود طيبة بذلها بعضهم في هذا المجال. ولذلك اتجهت النية منذ سنوات إلى جمع النسخ الخطية المنقرضة للكتاب، وتخريج أحاديثه ونصوصه، والتعليق عليها، وفهرسته مع العناية بالضبط والإخراج.



## يسألونك عن الإرهاب..؟ نظرات لغوية وشرعية وقانونية سياسية مقارنة

د. عثمان جمعة ضميرية

قسم الشريعة - كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

تتأى الحديث عن الإرهاب في عصرنا الحاضر، في أعقاب حوادث معيّنة ولأسباب متعدّدة، فأصبح تهمة يرمى بها الأعداء على الإسلام والمسلمين في كلّ اتجاه. فجاء هذا الكتاب لبيّح في أصل هذه التهمة وسببها، وغموض معناها في سياسة المطّفين، ويفرّق بينها وبين نظرية الرّدع، ثم أقام الأدلة على الإرهابيين الحقيقيين، وأخذهم باعتبارهم، وضبطهم بالجُرم المشهود، وهنّك الأستار التي يتخفون وراءها، فعنّت التهمة كذبًا وسرّابًا يدعو إلى إسقاط هذه الكلمة ((الإرهاب)) من القاموس الفقهيّ والإعلاميّ والقانونيّ، كما يدعو إلى الاستفادة من الأحداث وأخذ الدروس منها والعظات. ويتضمن الكتاب مقدمة منهجية، ومدخلًا إلى البحث عن الإرهاب، ثم ستة مباحث:

المبحث الأول: الرهبة والإرهاب في اللغة وفي النصوص الشرعية.

المبحث الثاني: بين الإرهاب ونظرية الردع.

المبحث الثالث: غموض معنى الإرهاب وسياسة المطّفين.

المبحث الرابع: إرهابيون حتى العظم.

المبحث الخامس: الجذور التاريخية للإرهاب اليهودي الصليبي.

المبحث السادس: الكذب والسراب في حديث الإرهاب.

الخاتمة: وفيها أهم ما أفنّاه من دروس وعبر من الأحداث الأخيرة و من الحديث عن الإرهاب.

ونهج البحث منهجيًا وصفيًا، واستعان بالمنهج النقدي والمنهج الاستنباطي،

ويكتمل ذلك ويتوازن مع المنهج الاستقرائي، و عند الحاجة يسلك منهجيًا مقارنًا.

وجاء في تقارير المحكّمين فقرات في توصيف البحث بخلصة جامعة، ومنها:

(اطلعت على الكتاب فألفيته كتابًا نافعًا ممتعًا، يعالج قضية من قضايا المسلمين المعاصرة،

شغل بها الناس، وكانت من أكثر القضايا تناولًا في وسائل الإعلام. وقد أجاد الباحث في

مناقشة الموضوع بمنهجية علمية رصينة، وبندل جهدًا طينيًا تمثل في تلك المصادر

المتنوعة، التي استطاع أن يوظفها للتعبير عمّا يريد بيانه في الموضوع). ومن الواجب

التتويه بالعون و الدعم الذي لقيه البحث في مراحل إعداده وتقويمه. و هو ينتظر دعماً

آخر للنشر، ولكن هذه المناسبة والملقى سببًا لتهيئة الأسباب لذلك. والله موفق.



## النظرية السياسية الإسلامية

د. عثمان جمعة ضميرية

قسم الشريعة - كلية الشريعة والدراسات الإسلامية  
جامعة الشارقة

### الخلاصة

بلغ الاهتمامُ بعلم السياسة الغاية عند القدامى، كما اهتمَّ به العلماء في العصر الحديث، ونهجوا في دراسته مناهج مختلفة. وكان لعلماء المسلمين دور كبير في ذلك، فتركوا لنا تراثاً ضخماً في الفقه السياسي ونُظْم الحكم والإدارة و العلاقات الدولية، وكلُّ هذا مما هدف البحثُ إلى إعطاء صورة عامة مجملته عنه، على غرار ما يبحثه علمُ السياسة الحديث، ليكون ذلك أدعى للمقارنة والموازنة.

اشتمل البحث على مدخل عام انطوى على: أهمية تحديد المصطلحات العلمية في البحث وتحليل مفردات العنوان بطريقة منهجية. ويلي ذلك أربعة فصول وخاتمة: الفصل الأول: مصادر النظرية السياسية، ويتضمن مبحثين:

المبحث الأول: المصادر الأساسية.

المبحث الثاني: المصادر الفرعية.

الفصل الثاني: نظام الدولة والحكم في الإسلام، وفيه خمسة مباحث.

المبحث الأول: نشأة الدولة الإسلامية.

المبحث الثاني: مبادئ نظام الحكم والدولة.

المبحث الثالث: الخلافة.

المبحث الرابع: السلطات العامة في الدولة.

المبحث الخامس: وظائف الدولة.

الفصل الثالث: العلاقات الدوليَّة، وفيه ثلاثة مباحث:

المبحث الأول: قواعد العلاقات الدوليَّة.

المبحث الثاني: المجتمعات الدوليَّة (دار الإسلام ودار الحرب).

المبحث الثالث: طبيعة العلاقة بين دار الإسلام ودار الحرب.

الفصل الرابع: خصائص النظرية السياسية الإسلامية.

وجاء في تقارير المحكِّمين فقرات تصف البحث بـخلاصة جامعة: ((ويعتبر البحث من الأبحاث العلمية الأكاديمية العالية، تميَّز بسلامة التعبير، ودقة الصياغة وحُسْنها، مع جودة الوثائق والالتزام بالأمانة العلميَّة، ووضوح الفكرة، وسلامة المنهج، والدخول إلى الدراسة بموضوعية)).

((والباحث ممَّن مارس الكتابة، وأكثر من التأليف العلمي الرصين المُحكَّم، وعرَّف مكامن الانتقاد فتجَبَّها، وأعطى البحث حقَّه من المراجعة والتصحيح، وحسَّن توظيف المصادر وتصنيفها، ومعرفة الغث من السمين)).



## الجامعة والمجتمع: دراسة اجتماعية للمنطقة الشرقية بإمارة الشارقة

د. رابع بودبابة<sup>(١)</sup>، د. عبد الغني محابية<sup>(٢)</sup>  
<sup>(١)</sup> قسم علم الاجتماع، <sup>(٢)</sup> قسم العلوم الأساسية  
 كلية الآداب والعلوم، جامعة الشارقة

### الخلاصة

يتطرق هذا البحث لدراسة التغير الاجتماعي الذي يشهده المجتمع المحلي الإماراتي، ويبرز بصفة خاصة الدور الحيوي الذي تلعبه المؤسسات المجتمعية في تجسيد التغير الذي يعتبر إحدى خصائص المجتمع المعاصر. وفي هذا الإطار سيركز البحث على دراسة العوامل المتصلة بتأثير جامعة الشارقة كمؤسسة تعليمية وعلمية على سكان المناطق الشرقية لإمارة الشارقة من خلال الطلاب الدارسين فيها

ذلك أنه و إلى غاية افتتاح الجامعة سنة ١٩٩٧، كانت هذه المناطق تعرف بأنها نائية وبعيدة إلى حد ما عن مراكز الإشعاع العلمي الجامعي، حيث كانت قبلتهم الوحيدة هي جامعة الإمارات بمدينة العين البعيدة نسبياً عن مقر سكانهم. وعليه فقد ابتهج سكان تلك المناطق بميلاد جامعة الشارقة التي إضافة إلى قربها الجغرافي فهي تقدم للمتسبين إليها من طلاب وطالبات المنطقة خدمات كثيرة زادت في تشجيعهم و حماسهم إلى الالتحاق بها.

إن التسهيلات المقدمة وخاصة فيما يتصل بتوفير وسائل النقل اليومي من وإلى الجامعة، فضلاً عن توفير المنح الدراسية زاد من شدة الإقبال على الجامعة وخاصة بالنسبة للبلدات الصغيرة حيث لا تكاد توجد الأسرة الواحدة في المنطقة إلا و بها طالب أو طالبة على الأقل تتابع الدراسة فيها. ثم أن هذه المؤسسة (جامعة الشارقة) التي على الرغم من حداثة عهدها، تحظى بسمعة أكاديمية طيبة جعلها توصف بالمنارة العلمية التي استطاعت خلال هذه الفترة الزمنية القصيرة منذ تأسيسها استقطاب طلاب العلم من جميع أصقاع العالم.

إن لعملية التنقل الطلابي اليومي بين الجامعة من جهة و المناطق السكنية للمتمين إليها من جهة ثانية، يجعل من هؤلاء الطلاب عناصر بشرية فاعلة باستطاعتها أن تسهم في العمل على نشر إنجازات العلم والمعرفة في تلك المناطق التي غالباً ما يطغى عليها أسلوب المعيشة البسيط. في هذا السياق يسعى البحث، و بالاعتماد على التحليل المنهجي لنتائج الدراسة الميدانية إلى رصد الدلالات البارزة في التغير الاجتماعي للمنطقة و معالجة الآثار المترتبة عن ذلك و بالذات على الصعيدين الأسري و المجتمع المحلي.



## The effect of Hot Weather Concreting on Cracking Tendency of Tensile Specimens

**Prof. Mufid Samarai**

Department of Civil Engineering, College of Engineering  
University of Sharjah

### ABSTRACT

The effect of casting under hot weather conditions on crack width and crack spacing of tensile specimens was investigated. Concentric and eccentric tensile specimens were utilized and end slip and crack spacing were measured during the test.

Tests were performed in the materials laboratories of UOS on five concrete mixes with different w/c ratios of 0.45-0.60. The test were performed, simulating moderate and high temperature conditions, at ambient temperatures of 20, 40, and 50 C and relative humidities, of either 25 or 50%.

Results of tests showed that hot weather concreting increases width of cracks in tensile specimens when cast at low w/c ratio and slump mixes in a percentage of about 20-40 %, while it reduced width of cracks in tensile specimens in a percentage of about 30-40 % when cast from high w/c ratio and slump mixes. No effect on crack spacing was noticed.

Keywords: Bond, Crack spacing, crack width, hot weather.

# Effect of Shrinkage Reducing Admixtures on the Losses of Prestressing Force

Dr. Salah Altoubat, Dr. Samer Baraka  
Civil Engineering Department, College of Engineering  
University of Sharjah

## ABSTRACT

Shrinkage of concrete is a major cause of the time dependent loss in the prestressing force in pretensioned concrete beams. The paper presents results of an ongoing project on the effect of shrinkage reducing admixtures (SRA) on the behavior of pre-stressed concrete beams. 16 beams were pretensioned and divided into four groups (four beams per group). The nominal dimension of the beam is 4m x 0.25m x 0.2m. The SRA was added at dosage rates of 0, 1 and 2 percent. One set of beams incorporated synthetic fibers in addition to the SRA. High strength concrete was used with a target compressive strength of 50 MPa. The water to cement ratio was targeted at 0.37. Grade 270, Seven-wire (15.2 mm) prestressing strands were used and each strand was pretensioned by applying a force of 135 kN. Two strands were incorporated in each beam. The beams were tested in three-points bending using a 100 kN hydraulic actuator, and the load-deflection curves were measured. The tests performed so far were at ages of 3 days, 48 days, and 148 days after the release of the prestressing force. The parameters measured during the monotonic testing were beam deflections, flexural strength and ultimate strength of the beams. The load levels corresponding to the beam's flexural strength were determined using both visual observation and interpretation of the deflection data. In addition, compressive strength of the concrete, free shrinkage, and camber profile were measured.

The results utilized the flexural cracking load to estimate the theoretical losses. The results showed that the addition of SRA reduced considerably the amount of the time-dependent losses in the prestressing force. The SRA is most effective when added at 2 %, though there was some reduction in the losses when the SRA added at 1 % particularly in the short term. For the beams with SRA of 2 %, the amount of losses was considerably reduced relative to that of the control beam (8 % versus 23 % after 48 days, and 12 % versus 28 % at 148 days).





## Wireless channel Estimation and Equalization

Dr. Qassim Nasir

Electrical & Electronics Engineering Department, College of Engineering,  
University of Sharjah

### ABSTRACT

For many wireless communication systems, estimation of the fading channel with high accuracy is a key factor in the receiver design. The most commonly used is the LMS algorithm. Some variations of the LMS algorithm have been developed to compensate for its deficiency in fading channel estimation. In this work a degree one least square fading memory prediction (PLMS) is used to improve the LMS algorithm in estimation and equalization. Also the same improvement could be achieved if a predictive a frequency domain wireless channel estimator or equalizer. The work is going on the implementation prediction in OFDM type of channel estimation. Estimators are compared by the mean square tracking error (MSTE) when different wireless channel speed of variation are used e.g. vehicular and pedestrian mobile channels.



## Digital Phase Locked Loops and Chaos Control

**Dr. Qassim Nasir**

Electrical & Electronics Engineering Department, College of Engineering  
University of Sharjah

### ABSTRACT

Phase Locked Loops (PLLs) have been widely used in communication, instrumentation, and control applications such as clock and recovery circuits for wireless and cable TV systems. Digital Phase locked Loops (DPLLs) were introduced to minimize some of the problems associated with the analogue loops such as sensitivity to DC drift and the need for periodic adjustment. DPLL has many structures such as Zero Crossing Digital Phase Locked Loop (ZCDPLL), Digital Tanlock Loop (TLL) and Delayed Tan locked Loop (DTLL). In this work, the global dynamics of all loops are studied to determine their stability and chaos behaviour using tools such as bifurcation and Lyapunov constant. A number of methods have been proposed for feedback control of chaos. Time-delayed feedback stabilization introduced by Pyragas which consists of a continuous linear feedback applied at each computation time step to stabilize Unstable Periodic Orbits (UPO) is used. These techniques are used to broaden the tracking range of the loop. The work is also including the effect of the noise on the chaos controlled loop.





## Power -Aware Routing Algorithms in Ad Hoc Networks

Dr. Qassim Nasir <sup>(1)</sup>, Dr. Saad Harous <sup>(2)</sup>, Mr. Muhamad Dubai <sup>(2)</sup>

<sup>(1)</sup> Electrical & Electronics Engineering Department, College of Engineering

<sup>(2)</sup> Computer Science Department, College of Arts & Sciences

University of Sharjah

### ABSTRACT

Mobile ad hoc (MANET) network is a collection of wireless mobile nodes dynamically forming a temporary network without the use of any existing network infrastructure or centralized administration. To accomplish forwarding a packet to its destination, a routing protocol is used to discover routes between these nodes. This work presents a new method for reducing the energy lost during packets routing. The popular routing Dynamic Source Routing (DSR) is used as the basis for this work. Load balancing which takes path energy as criteria for load splitting is being proposed in this work. The results will be validated using ns-2 simulator under different wireless radio propagation models and different traffic scenarios. Primary simulation results shows that the proposed multi-path DSR offers a significant advantages over conventional DSR routing algorithm. The total energy left in the network and the number of nodes left working at the end of the simulation will be used to compare the network performance.

## Arabic Vowels and chaos properties

**Dr. Qassim Nasir**

Electrical & Electronics Engineering Department, College of Engineering  
University of Sharjah

### ABSTRACT

The deterministic dynamics in Arabic speech is to be determined. The Arabic vowels are recorded and a variety of tools are to be used to find the existence of chaos. Primary results show no deterministic properties found. In this work an effort is to distinguish noise-driven periodic orbits from chaos existed in Arabic vowels. The correlation dimension, Lyapunov spectrum and other techniques are to be implemented and then applying them for finding the chaotic properties. The results of work could be used to enhance Arabic voice recognition.





## Performance Evaluation and Tuning of Computer Systems

Dr. Sayed A. Banawan, Prof. Maamar Bettayeb

Department of Electrical & Electronics and Computer Engineering,  
College of Engineering, University of Sharjah

### ABSTRACT

Traditionally, evaluating and tuning the performance of computer systems and computer networks has been based on queuing models. Queuing models tend to be mathematically intractable unless certain assumptions are made. Such assumptions include "Poisson" arrival processes and exponentially distributed service times. Thus, the random variables that affect system performance are made "memoryless", hence the state of the system can be completely captured by the "length" of the queue. These assumptions lead to "separable" queuing networks that can be efficiently solved. Unfortunately, measurements of real systems and networks suggest that these assumptions rarely hold. This lead to the dilemma of either simplifying the model "unrealistically" to be able to solve it efficiently or maintain the accuracy of the model and cope with its complexity..

Recently, an alternative approach to evaluating and tuning the performance of computer systems has been investigated. It uses techniques from the well-established field of feedback control systems and applies them to modeling computer systems. In this research, we follow this approach to identify optimal load balancing policies in multi-computer systems. First, we select critical variables that affect system performance to define the system state. Then, we treat possible actions by a load balancing policy as control input. Identification of the "transfer function" of the system can be obtained by exciting the system with certain input and observing its output. The identified model is then used to develop the controller to tune computer systems based on desired performance measures. In future research, the authors of this work plan to apply this methodology to aggregate or cluster of servers such as web servers and compute servers.



## Speaker Recognition Under the Neutral and Stressful Talking Conditions

Dr. Ismail Shahin

Computer Engineering Department, College of Engineering, University of Sharjah

### ABSTRACT

Speaker recognition is the process of automatically recognizing who is speaking on the basis of individuality information in speech waves. Speaker recognition systems come in two flavors: speaker identification systems and speaker authentication (verification) systems. The objective of speaker identification systems is to determine the identity of an individual from a sample of his/her voice. The applications of speaker identification may be required in criminal investigations to determine the suspected persons produced the voice recorded at the scene of the crime, it may also be required in civil cases or for the media. These cases include calls to radio stations, local or other government authorities, insurance companies, or recorded conversations, and many other applications.

The goal of speaker authentication systems is to decide whether a speaker corresponds to a particular known voice or to some other unknown voice. The applications of speaker authentication systems involve the use of voice as a key to confirm the identity claim of a speaker. Such services include banking transactions using a telephone network, database access services, security control for confidential information areas, remote access to computers, tracking speakers in a conversation or broadcast, and many other areas.

Speaker recognition systems are divided into two categories: "open set" and "closed set". In the "open set" category, a reference model for an unknown speaker may not exist; whereas, in the "closed set" category, a reference model for an unknown speaker should be available in the library of the database.

Speaker recognition systems typically operate in one of two cases: text-dependent case or text-independent case. In the text-dependent case, utterances of the same text are used for both training and testing (recognition). In the text-independent case, training and testing involve utterances from different texts.

Many approaches have been proposed in the area of speaker recognition including Dynamic Time Warping (DTW), Gaussian Mixture Models (GMMs), Artificial Neural Networks (ANNs), and



Hidden Markov Models (HMMs). Most of the publications in the area of speaker recognition focus on speech under the neutral talking condition and few publications focus on speech under stressful talking conditions. The neutral talking condition can be defined as the talking condition in which speech is produced assuming that the speaker is in a “quiet room” with no task obligations. Stressful talking conditions can be defined as talking conditions that cause a speaker to vary his/her production of speech from the neutral talking condition.

Our goals in the current and future research are:

1. Enhancing speech recognition performance under each of the neutral and stressful talking conditions by proposing and implementing various models and methods.
2. Enhancing speaker recognition performance for each of speaker identification systems and speaker authentication systems under each of the neutral and stressful talking conditions by proposing and implementing different models and methods.

Establishing Arabic speech database to test systems in the areas of speech recognition and speaker recognition under each of the neutral and stressful talking conditions.



## Research Development and Achievements: The “Health Sciences” Experience

**Prof. Ahmed Mandil<sup>(1)</sup>, Dr. Manal Awad<sup>(2)</sup>**

<sup>(1)</sup> Dean of College of Health Sciences

<sup>(2)</sup> Department of Nursing, College of Health Science  
University of Sharjah

### ABSTRACT

The College of Health Sciences (CHS) has a comprehensive consortium of health-related faculty and researchers. Such faculty collaborate with health services providers and other stake-holders, both locally and internationally, enabling them to pursue a very wide range of research activities. In the CHS, research mainly focuses on basic, applied and behavioral sciences. In the basic sciences, researchers are involved in individual and collaborative research in molecular biological studies aimed at the detection of viral, bacterial and parasitic infections in the UAE. In applied and behavioral sciences domains, researchers conduct both quantitative and qualitative studies which focus on important issues that are relevant to Arab populations in general, and to the UAE population in particular. These include research on tobacco control, delivery of health services as well as, research that deals with patients-based outcomes such as satisfaction and quality of life.

Research grants, secured by CHS faculty, have dramatically increased over the last few years. This academic year alone the University Research Committee approved funding of five projects for CHS faculty, in various fields, for more than AED 150,000. In addition, taking into consideration previously funded research by the University Research Center (URC), the total amount of URC funded research, since the establishment of the CHS has reached approximately AED 500,000. Furthermore, two research proposals are externally funded by Sheikh Hamdan Bin Rashed Award for Medical Sciences for a total of AED 125,000; and two CHS faculty are involved in international collaboration with other researchers in Canadian universities.

To support and enhance research at the CHS, two research committees were developed, namely: the Research Development Committee (RDC) and the CHS Institutional Review Board (IRB). The RDC organized several workshops throughout the academic year,



which deal with issues important for successful research conduct, such as research grant writing, methods of design, data analysis and management, and scientific writing. The IRB was initiated to review/ approve, methodologically as well as ethically, sound research proposals. This board's working procedures are consistent with internationally recognized principles that govern research on human subjects, especially WHO-CIOMS guidelines.

In conclusion, there is growing interest in research at the CHS in all disciplines and, with the development of supporting committees, it is anticipated that there will be a steady increase in funded research for the CHS faculty, by URC and other external agencies. Such research is intended to contribute to scientific knowledge, in general, but more specifically to timely health-related issues that are relevant to the UAE population.





## The clinical outcome of TT virus (TTV) infection and TTV-Hepatitis C virus (HCV) co-infection in severity of liver disease in $\beta$ -thalassemia patients

Prof. Moslih I Al Moslih <sup>(1)</sup>, Mahmoud Talib Al Ali <sup>(2)</sup>, Yu-Wen Hu <sup>(3)</sup>

<sup>(1)</sup> Department of Medical Laboratory Technology, College of Health Science,  
University of Sharjah

<sup>(2)</sup> Thalassemia and Genetic Center, El wasil Hospital, Dubai

<sup>(3)</sup> Faculty of Medicine, University of Ottawa, Canada

### ABSTRACT

The newly discovered TT virus (TTV) was initially reported to be associated with post transfusion hepatitis of non-A to non-E origin. However, to date, the link between TTV infection and liver disease remains controversial mainly due to sequence heterogeneity that results in discrepancies in detection of TTV by PCR, and not enough relevant clinical information available. In this study, the clinical significance of TTV infection and TTV-HCV co-infection on severity of liver disease was evaluated in 200 transfusion dependent thalassemia patients using the most efficient detection systems available as well as multiple clinical markers. The results indicate that AST (aspartate transferase), ALT (alanine aminotransferase), and ferritin levels were significantly higher ( $p < 0.01$  for ALT and AST,  $p < 0.001$  for ferritin) in patients with TTV infection compared with patients who were TTV negative. ALT, and ferritin levels were elevated significantly more ( $p < 0.01$  and  $= 0.02$ , respectively) in patients with TTV-HCV co-infection, than in patients with TTV infection alone. Histopathological examination shows that over 90% of the patients with TTV-HCV co-infection and 25% of patients with TTV infection alone had hepatitis with varied grade inflammation and fibrosis. Although no specific genotype or group of TTV was determined to be responsible for the clinical outcome, more mixed genotypes was found in the individuals with ALT elevation. The data suggests that a high frequency of exposure to TTV through blood transfusion is independently associated with liver dysfunction and injury although HCV infection plays a major role in the severity of virus induced liver disease in thalassemia patients.



## Clinical Audit of Type-2 Diabetes Mellitus in Primary Health Care In Sharjah

Prof. Moslih I Al Moslih<sup>(1)</sup>, Nizar Farjou<sup>(2)</sup>

<sup>(1)</sup> Department of Medical Laboratory Technology, College of Health Science, University of Sharjah

<sup>(2)</sup> Director, Primary Health Care, Sharjah Medical District, Ministry of Health, Sharjah, UAE

### ABSTRACT

Diabetes Mellitus (DM) is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. Type 2 diabetes, the most prevalent form of the disease, is often asymptomatic in its early stages and can remain undiagnosed for many years. The chronic hyperglycemia of diabetes is associated with long-term dysfunction, damage and failure of various organs, especially the eyes, kidneys, nerves, heart, and blood vessel. Individuals with undiagnosed type 2 diabetes are also at significantly higher risk for stroke, coronary heart disease, and peripheral vascular disease than the non diabetic population. In UAE DM-2 is becoming the disease of the century. In 1996, the prevalence rate was 6% and in 2002 the prevalence rate was 20%. Therefore the

The aim of this investigation was to explore the frequency rate of uncontrolled diabetes mellitus among Diabetic patients in primary health clinic, sharjah Medical District, Sharjah with some emphasis on some the possible risk factors. 333 individual with DM-2 were involved in this study, includes males (88 and 245 females.). The results Show that 90.7% of the DM-2 (302/333) have FBS level above 5.6 mmol/l. The patterns of the FBS level was as follow; pattern 1, 27% (90/333) above 11.1 mmol/L, pattern 2, 47% (157/333) with FBS level between 7.1-11 mmol/l, in pattern 3, 17% (55/333) FBS level was between 5.6-7 mmol/L and in pattern 4 only 9% (31/333) have FBS level less than 5.6 mmol/L. The prevalence of Hb A1c was estimated in 217 DM-2 patients and was found that 67.2% (213/317) have HbA1c above 7%, of these 27.7 % (59/88) are males and 72.3% (154/ 245)are females. 92.5% of uncontrolled DM-2 patients are over 40 years of age. Other results show that for hypertension, cholesterol and triglycerides are, 54.7%(182/333), 23.4% (78/333) and 37.8% (126/333)respectively. The uncontrolled DM- for hypertension, cholesterol and triglyceride are 86.3%(157/182), 57.7(45/78) and 60.3% (76/126) respectively. From these results one can conclude that public education, improve health

awareness and change of lifestyle are important for controlling type-2 diabetes. Also regular monitoring of HbA1c, LDL, HDL, triglyceride and microalbuminuria at least every six months is recommended.

**Book of  
Abstracts**



**The First Annual Scientific Research Forum  
at The University of Sharjah (14-15 May 2005)**



## Frequency Rate and Phylogenetic of Camel TT virus and Their Relationship to the Human TTV Genotypes in United Arab Emirates

Prof. Moslih I Al Moslih<sup>(1)</sup>, Heather Perkins<sup>(2)</sup>, Yu-Wen Hu<sup>(3)</sup>

<sup>(1)</sup> Department of Medical Laboratory Technology, College of Health Science, University of Sharjah

<sup>(2)</sup> Canadian Blood Services, Ottawa, Canada

<sup>(3)</sup> Faculty of Medicine, University of Ottawa, Canada

### ABSTRACT

TT virus (TTV) is a recently discovered DNA virus from a Japanese patient with post transfusion hepatitis of unknown etiology. The most closely related known virus is chicken anemia virus (CAV), a member of the family Circoviridae. However, because of significant sequence divergence between TTV and animal circoviruses, it has been proposed that TTV belongs to a new virus family, provisionally designated Circinoviridae. Increasing lines of evidence indicate that non-human primates are infected with TTVs. It has been reported that TTV might be associated with non-A-E hepatitis. To determine the rate of infection and genotypic characteristics of TTV in different specimens of Camels in united Arab Emirate (UAE) by using PCR with cloning and DNA sequencing system, a total of 52 specimens, 34 sera, 14 raw milk and 8 pasteurized milk. The results obtained showed that the rate of infection in sera, raw milk and pasteurized milk were, 38.2% (13/34), 35.7% (5/14) and 100% (8/8) respectively. Sequence analysis of the untranslated region (UTR) using 23 clones generated from the PCR products of Camel samples, three sera, three raw milk and two pasteurized milk showed that 47.8% of TTV clones were classified into genotype 11, 43.5% into group 5 and 8.77% into genotype 16. Phylogenetic analysis of representative sequences revealed that similar to human genotypes 11, 16 and group 5. In conclusion these results indicate that camels are naturally infected with similar to human TTV genotypes which suggest a possible source of human infection in UAE.

المبتلى السنوى الأول للبحث العلمى فى جامعة الشارقة  
١٥-١٤ مايو ٢٠٠٥ م  
١٤٢٦ هـ الموافق ١٤-١٥ مايو ٢٠٠٥ م  
٧-٦ ربيع الثاني



## **Molecular basis of efficient detection for all known genotypes of TT virus (TTV) and TTV like viruses (TTLVs) in blood transfusion dependent patients with thalassemia and healthy individuals**

**Prof. Moslih I Al Moslih<sup>(1)</sup>, Yu-Wen Hu<sup>(2)</sup>, Mahmoud Talib Al Ali<sup>(3)</sup>**

<sup>(1)</sup>Department of Medical Laboratory Technology, College of Health Science,  
University of Sharjah

<sup>(2)</sup>Faculty of Medicine, University of Ottawa, Canada

<sup>(3)</sup>Thalassemia and Genetic Center, El wasil Hospital, Dubai

### **ABSTRACT**

After TT virus (TTV) was discovered, several TTV-like viruses (TTLVs) including TTV-like mini virus (TLMV), SEN virus (SENV), and PM virus (PMV) were subsequently identified. Initially, some of the viruses were reported to be associated with hepatitis of non A-G origin. However, to date the link between these viral infections and liver disease remains uncertain. This uncertainty is partially due to the viruses having high sequence heterogeneity that causes discrepancies in their detection by PCR when using different sets of primers. To establish a standardized detection system, multiple sets of primers were validated by testing large numbers (542) of thalassemia patients and healthy individuals for the viruses. The gene sequences of over 400 cloned PCR products, amplified by the different primers, were analyzed with reference genotype sequences available in GenBank. The results indicate that 22 of 23 known genotypes of TTV, including SENV and PMV could be detected by two sets of primers (i.e. NG and TT primers). An additional set of primers, specific for genotype 21, is needed to detect all known genotypes of TTV and TTLVs except for the majority of TLMVs. Two sets of TLMV-specific primers and the NG primers are needed for detection of all three known groups and a new group of TLMV. Thus five sets of primers are required for efficient detection of all known genotypes and groups of TTV and TTLVs. Data suggests that an efficient detection system is essential for a proper assessment for the pathogenesis and epidemiology of the viruses.



## The Effect of Career Information on Secondary School Students Perceptions of Medical Diagnostic Imaging as A Career

Ms. Pauline Al Barwani

Department of Medical Diagnostic Imaging, College of Health Sciences,  
University of Sharjah

### ABSTRACT

Limited enrolment in the Medical Diagnostic Imaging (MDI) BSc. Programme prompted this study of secondary school student perceptions of MDI as a career.

Using a cross-sectional design, 500 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> grade students, in the Sharjah Education Zone, United Arab Emirates, were surveyed using pretest and posttest self administered questionnaires to examine the effect of career information on student perceptions. Additionally, a small number of secondary school career counsellors provided an insight into methods used in career counselling and their perceptions of health care professions as a career in general. Both groups provided data regarding the quantity and type of MDI career information currently available for students.

The results indicated that most students perceived MDI as a career that involved helping people live healthy lives and working with technologically advanced equipment but felt it did not provide the opportunity for extended responsibility and role advancement. Female students viewed an MDI career more favourably than males and there was only a weak relationship between aspired career and parent occupation. Student perceptions of MDI for those who had had an MDI role model were less positive than those without a role model. Student perceptions of MDI were initially negative, however, following the treatment (purposely developed MDI career information video and brochure), perceptions became strongly positive. Both students and career counsellors indicated that there was a lack of available MDI related career information. The findings will be used to support the inclusion of brochure, video and visit by professional to the secondary schools as part of the future recruitment strategy, not only for MDI but also the other health care College of Health Sciences programmes.



## Postpartum Depression: a qualitative study of the experience of a group of Arab Canadian women

**Dr. Sana Hawamdeh**

Department of Nursing, College of Health Science, University of Sharjah

### ABSTRACT

**Background:** Research has pointed out that the influence of culture is often omitted in studies of psychiatric disorders. The Arab experience of depression should not be assumed to be the same as that experienced by the other groups.

**Aim:** The aim of the study was to describe experience of postnatal depression in Arab women, investigate the factors perceived by women as contributing to their postpartum depression and identify the help-seeking behaviour of Arab women with postnatal depression.

**Method:** 35 women were interviewed at a regional hospital in Toronto 2003. The interview was semi-structured, guided by a brief interview schedule comprising non-directive open-ended questions. Interview data were analysed after each interview following Colaizzi's (1978) phenomenological methodology.

**Results:** Themes that emerged describing participants included trapped in the situation, ambivalent towards the baby, uncaring husband, and controlling and powerful in-laws and regaining control.

**Conclusion:** The findings shared some similarities as well as differences with those found in Western studies. Findings suggest that cultural sensitive care should be developed to help Arab women.



## Quality of life among adult Bahraini clients on Hemodialysis

Dr. Mouza Suwaileh

Nursing Department, College of Health Sciences, University of Sharjah

### ABSTRACT

In the literature, the terms "quality of life" and "life satisfaction" have been used interchangeably. Moreover, no consistent definitions of these terms were found. Szalai & Andrews (1980) stated that the best approach to measurement of quality of life (QOL) is to combine both subjective and objective dimensions. The QOL of clients with End Stage Renal Disease (ESRD) on different treatment modalities has been studied by several researchers. Studies comparing the QOL and health status of Continuous Ambulatory Peritoneal Dialysis (CAPD) and hemodialysis clients showed no significant differences between the two groups in the overall QOL or satisfaction with health and functioning, socioeconomic, psychological and spiritual aspects and family life. The purpose of this study was to compare the present and past QOL and explore the dimensions of QOL of Bahraini clients on hemodialysis. Data were collected from 60 adult Bahraini clients on hemodialysis. Subjects were interviewed using (a) Cantril's Ladder, (b) one open-ended question, and (c) Demographic data Questionnaire.

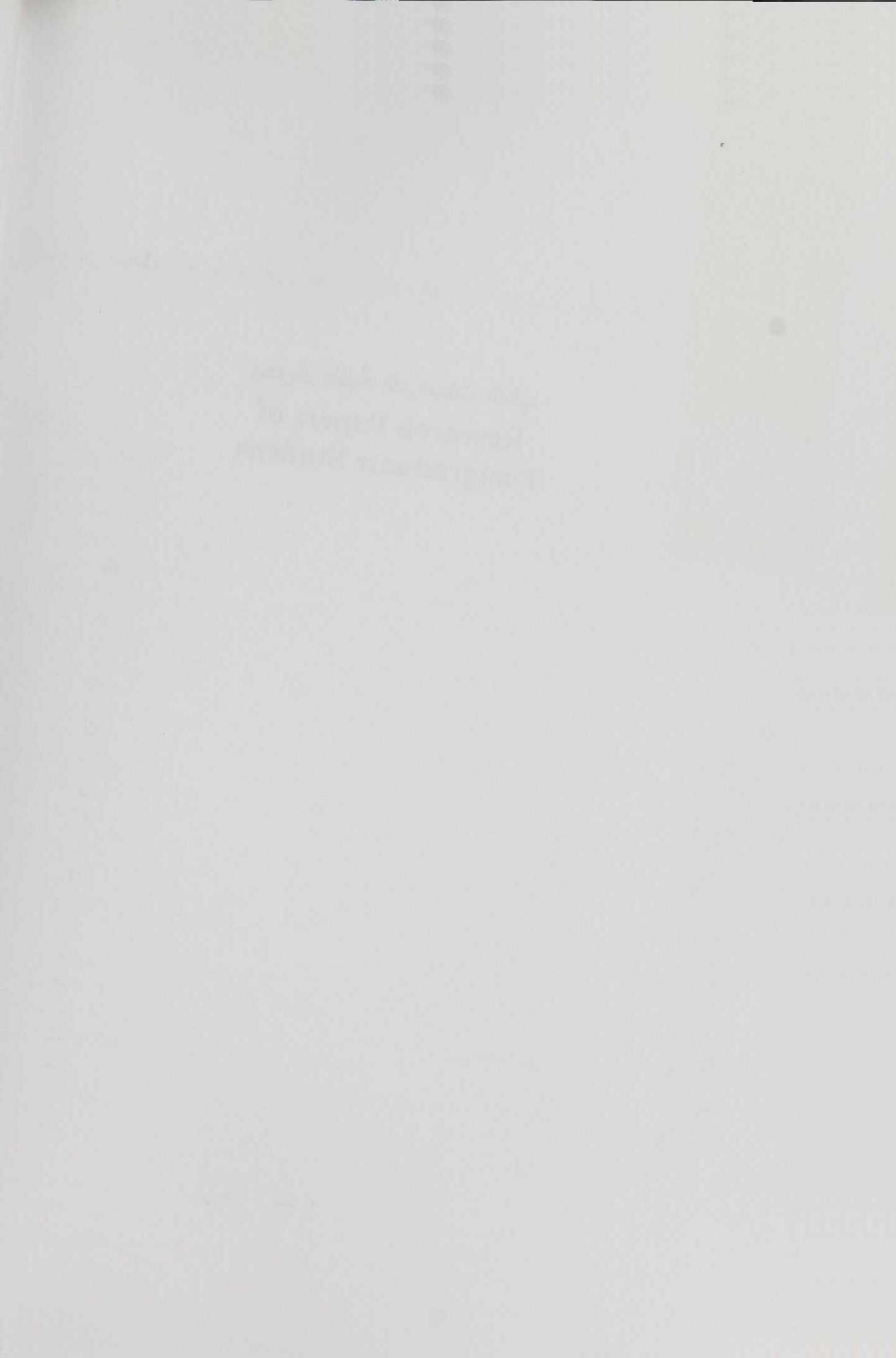
Paired-t-test with two-tailed level of significance showed that there was a significant difference between subjects' ratings before hemodialysis was first started and ratings of present QOL ( $t = 5.48, d = 59, p < .001$ ). subjects' retrospective ratings of their QOL before hemodialysis were significantly greater than their ratings of present quality of life. Content analysis showed that the identified critical domains of QOL were: (1) physical health domain, (2) psychological health domain, (3) family concerns domain, (4) social concerns domain, and (5) financial concerns domain.

Based on the above results, further studies should incorporate appropriate qualitative methods to explore the holistic meaning of QOL. Subsequently, data obtained related to the perception of QOL might be analyzed separately for each gender. Nurse practitioners should recognize the importance of and facilitate optimum physical functioning for hemodialysis clients. Findings of the study may assist health care providers in planning and implementing strategies that improve QOL of chronically-ill clients.





بحوث طلبة الدراسات العليا  
**Research Papers of  
Postgraduate Students**



## مصادر الحكم القضائي في الشريعة والقانون: دراسة مقارنة

محمد عبد الرحمن محمد الشماع  
برنامج الماجستير الفقه الإسلامي وأصوله، جامعة الشارقة

### الخلاصة

الحكم القضائي هو القرار النهائي الذي يصدره القاضي للفصل بين المتخاصمين، وتنتهي به الدعوى، ويخرج كل من طرفي الخصومة بمراكز شرعية جديدة، تختلف عن تلك التي كانوا عليها قبل صدور الحكم. ويمتاز بخاصية القوة والإزام للخصوم، واستحقاق التنفيذ والحصانة من الإبطال أو التغيير.

والحكم القضائي لا ينتج تلك الثمرة المهمة، إلا بشروط ذكرها الفقهاء، وهي: أن تسبقه دعوى، وأن يصدر من صاحب ولاية مستمدة من الدولة، وأن تتوفر في القاضي شروطه، وأن يكون هذا الحكم صادرا وفق إجراء معين بصيغة تدل على الإلزام، واضحا في تحديد المحكوم والمحكوم له، وأخيرا وهو أهمها: أن يكون موافقا للحكم الشرعي. وهذا الشرط يعتمد على شرعية المصادر التي بني عليها الحكم واستند إليها.

لقد كان الكتاب والسنة والاجتهاد، مصدر الحكم القضائي في صدر الإسلام، ثم أصبح المذهب الفقهي الذي يتبعه القاضي، أو يعين على أساسه، أو يشترطه عليه الإمام أو قاضي القضاة. ولكن في عصرنا الحاضر، صار القانون الوضعي مصدر الأحكام القضائية، حيث إن معظم الدول في عالمنا الإسلامي تحتكم في قضاياها ومشاكلها إلى تشريعات وقوانين وضعية، بعضها مستمد من الشريعة الإسلامية الغراء، وبعضها الآخر مستمد من تشريعات أخرى، وتعداها مصدرا أساسيا لأهم ثمره في نظام القضاء ألا وهي الحكم القضائي. فانطلاقا مما جدّ في عالمنا الحاضر، من إسناد الأحكام القضائية إلى تشريعات وقوانين حديثة، لابد أولا، من بيان حقيقة الأصول التي تبني عليها الأحكام الشرعية بشكل عام، ومن ثم الأحكام القضائية بشكل خاص، التي تعد فرعا من تلك الأحكام الشرعية.

ثم لا بد من بيان مشروعية هذه القوانين والتشريعات، ومدى صلاحيتها لأن تكون مصدرا للحكم القضائي، ومعرفة ما يجب على القاضي العمل به منها، وما يجب تركه وعدم العمل به. وبيان موقف القاضي عند تعارض الحكم الشرعي ونص القانون؟ وطرح الحلول والتطبيقات العملية التي يمكن للقاضي أن يسلكها تجاه هذه المشكلة؟. وأخيرا هناك عدد من الآثار تترتب على صحة أو بطلان هذه الأحكام القضائية، منها ما يؤثر على شرعية الحكم القضائي وحجيته وإلزامه، ومنها ما يؤثر على صحة ولاية القاضي نفسه، وبالتالي صحة أحكامه.



## Competitive & Cooperativ Purchasing Orientations: The Case Of Sharjah International Airport

Ibrahim Ali Abdulla Ahmed

Executive MBA Program, University of Sharjah

### ABSTRACT

This case study was designed to accomplish twofold objectives: 1) to examine the role of Sharjah International Airport's (SIA) Purchasing Department (PD) in meeting the material needs of its internal customers; 2) to assess the attitude of PD's internal customers and suppliers toward partnership sourcing. The study was conducted as a case study of Sharjah International Airport's PD and its internal customers. Data were obtained through a combination of methods including a survey of internal customers and suppliers, interviews with senior management of the Airport, personal observations of the researcher and review of official publications and reports.

The findings indicated a positive assessment of PD's overall performance in meeting the needs of its internal customers representing different departments of the Airport. However, most internal customers expressed their concern with the quality and on-time availability of materials and occasionally communicated their quality and delivery related problems to the PD. Despite PD's commitment to meeting the needs of its internal customers, it has not been able to seek satisfactory solutions to these and other problems such as rapid processing of urgent purchasing requests. This may be attributed to PD's limited involvement in the planning of material needs of its customers and to the competitive bidding system. The short term-orientation of competitive bidding has apparently not allowed the users of materials to develop long-term thinking or consider alternative purchasing strategies to secure stable supply of vital materials. The study explored the attitudes of both buyers and suppliers of materials toward partnership sourcing as an alternative purchasing strategy to acquire certain selected items. The results indicated a somewhat limited support for partnership sourcing. A little over one-third of the internal customers said they will definitely support partnership, while most of the remaining customers were unsure about their support. A relatively larger number of suppliers felt more strongly about the idea of partnership and expressed their interest in establishing partnership with the Airport.



The data and results suggested the following recommendations:

- The users of materials need to develop internal purchasing committees to develop strategies to conduct regular reviews of their material needs and make long-term plans to acquire the needed materials.
- The Airport should consider adding a staff with technical knowledge to the PD to represent it on internal purchasing committees.
- The PD should further discuss the idea of partnership sourcing with senior management of the Airport and seek their approval and support to experiment with it on a limited basis.
- The Airport should arrange to offer periodic learning opportunities to its staff to expose them to new and recent developments in the field of purchasing and supply management including partnership sourcing.
- The PD should develop closer links with its suppliers, periodically monitor their performance and develop a profile of preferred suppliers.
- The PD should regularly pursue strategic planning of materials, especially of items that are aging or becoming obsolete in order to acquire timely replacements. PD should involve suppliers in these planning meetings to exchange views on matters of common concern and build mutual trust.

While on the whole PD's internal customers are satisfied with its performance, PD should continue to strive for higher standards of customer satisfaction

# **The Effect of Changes in Earnings per Share on Stock prices Immediately After the Announcement Date**

**Ibrahim Hussain Mubarak**

Executive MBA Program, University of Sharjah

## **ABSTRACT**

This research examined the effect of changes in earnings per share on stock prices after the announcements date. The researcher used secondary data for 100 companies during the years 2000 - 2002.

The researcher used simple regression analysis to relate changes in earnings per share to stock prices. The results indicate no significant effect for changes in EPS on stock prices or changes in stock prices after the announcements date. This indicates that the effect of EPS announcements is incorporated in stock prices on the same day of the announcement, which supports the efficient market theory.

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**The First Annual Scientific Research Forum  
at The University of Sharjah (14-15 May 2005)**



## An Analysis of Customers' Complaints at Emirates Telecommunication Corporation, Etisalat

Ahlam Abdul Rahman Mohd Abdulla  
Executive MBA Program, University of Sharjah

### ABSTRACT

This research reports on the results of analyzing customers' complaints and related procedures at Etisalat. The researcher used a sample of customer complaints handled in the year 2002 from West Coast Region.

The research addressed the question of time differences in handling complaints based on service type, customer gender, and customer nationality. The researcher used t-tests and one-way ANOVA in her analyses. The results indicate no significant time differences in handling customer complaints based on service type, gender, or nationality of customers.

المبتلى السنوى الأول للبحث العلمى فى جامعة الشارقة  
٦-٧ ربيع الثانى ١٤٢٦ هـ الموافق ١٥-١٥ مايو ٢٠٠٥ م





## Customer Satisfaction With The Services Of The Building Permission Unit At Sharjah Municipality

Ahmad Hussain Al Amiri

Executive MBA Program, University of Sharjah

### ABSTRACT

This research examined engineers' satisfaction with the services of the building permission unit at Shmjah Municipality. The researcher used a focus group to identify important satisfaction attributes, a questionnaire to collect the data and follow-up interviews to discuss the results.

The researcher distributed the questionnaire packets to 60 engineers working for 30 selected consulting offices, which had dealings with the building permission unit during the year 2001. He received 50 usable responses (29 from civil engineers and 21 from architectural engineers). This represents a good response rate of 83.3 per cent. These responses represented 27 consulting offices.

The researcher calculated aggregate customer satisfaction indexes for civil and architectural engineers and individual customer satisfaction indexes for the purpose of testing the researcher hypotheses. He used parametric tests (e.g., t-statistic) and Kruskal-Wallis non-parametric tests (e.g. Chi-square statistic).

The results indicate no significant statistical differences ( $t = 0.112, P > 0.911$ ) in satisfaction levels between civil engineers and architectural engineers. The results also indicate no significant statistical differences ( $t = 0.108, P > 0.915$ ) in satisfaction levels based on the number of projects submitted by a consulting office to the building permission unit. In addition, the results indicate no significant statistical differences ( $t = 0.726, p > 0.520$ ) in satisfaction levels based on the number of engineers working for a consulting office (size of office). However, satisfaction indexes were not high enough. They were about 60 per cent



## An Assessment of Service Quality at Sharjah Public Library

Ahmed Ibrahim Al Amri

Executive MBA Program, University of Sharjah

### ABSTRACT

This research examined service quality at Sharjah library from its users' perspective using a form of SERVQUAL that was modified for library use. The research assessed service quality expectations and perceptions of 159 current library users. Descriptive statistics were used to tabulate obtained results and gap analysis was used, as a diagnostic tool, to identify quality dimensions and their items that require actions for possible service improvements.

The results showed several significant quality gaps indicating that the library was not meeting its users' expectations. Some of these quality gaps were statistically significant based on users' gender and educational levels. These results have significant implications for the library acquisition policies, staff hiring and training programs, and future library research in UAE.

المبتلى السنوي الأول للبحث العلمي في جامعة الشارقة  
٦-٧ ربيع الثاني ١٤٢٦ هـ الموافق ١٤-١٥ مايو ٢٠٠٥ م



## An Evaluation of Current Sharjah Energy Efficiency Policy

Ahmed Mohammed Al mulla

Executive MBA Program, University of Sharjah

### ABSTRACT

This research evaluates the current Sharjah energy efficiency policy and develops recommendations for a comprehensive energy policy that can help control energy consumption.

The researcher carried out a literature review to identify best practices of energy efficiency worldwide and used them as benchmarks for the Sharjah energy efficiency policy. To evaluate the existing energy efficiency policy in the Emirate, the researcher carried out a content analysis of legislation and government documents concerning energy efficiency and conducted several interviews with Sharjah Municipality, Directorate of Planning and Survey, Sharjah Electricity and Water Authority, building engineering consultants and major appliance retailers.

The findings indicate the absence of a comprehensive energy efficiency policy and lack of awareness of the importance of energy efficiency among building consultants, appliance retailers, and consumers in general. The findings also highlight the absence of a comprehensive education and awareness programs for energy efficiency among consumers and builders. Furthermore, the findings indicate the lack of incentive schemes for building energy efficient buildings and buying energy efficient electrical appliances. The study concluded with recommendations for a comprehensive energy efficiency policy.



## Significance of ISO Certification in Determining Service Quality in UAE Private Hospitals

Ahmed Mubarak Abbad Al-Abdouly  
Executive MBA Program, University of Sharjah

### ABSTRACT

Service quality remains a challenge for all health care providers. Many hospitals implemented ISO 9000 in order to improve their service quality.

This paper developed a modified version of SERVQUAL for measuring service quality in the UAE private and semi-private hospitals. The developed instrument was tested for reliability and predictive validity. This paper compared service quality between four ISO certified hospitals and four non-ISO certified hospitals. Also, this paper investigates the impact of nationality, gender, and age on service quality.

Keywords: SERVQUAL, Service Quality, ISO 9000, hospitals, tangibles, reliability, responsiveness, assurance, empathy.

# **An Examination Of Work Stress And Job Satisfaction Among Governmental Employees In The Emirate Of Sharjah**

**Omaima Abdul Aziz Al Qassimi**  
Executive MBA Program, University of Sharjah

## **ABSTRACT**

Work stress and job satisfaction are important elements of any organizational work environment. This research report addresses the relationship between work stress and job satisfaction among governmental employees in the Emirate of Sharjah. In addition, other work-related variables (e.g., position and tenure), personal-related variables (e.g., gender, marital status, and nationality), and a general environmental variable (i.e., life stress) are incorporated in a regression model as control variables.

The researcher obtained a list of 60 federal and local government units located in the Emirate of Sharjah and selected randomly nine of them as the sample sites. She distributed 700 questionnaires to the employees of these nine governmental units through the heads of public relations and human resources departments. She received 396 usable responses (a 56.57% response rate). She analyzed collected data using correlation and regression analyses.

The results indicate that undesirable work stress provides the most significant negative effects on employees' job satisfaction. The results also indicate the significance of employee's tenure, position and nationality on job satisfaction. Employees who have been with a governmental unit for a longer period are more satisfied with their jobs than those who have been with the unit for a shorter period. Employees who are occupying non-managerial positions are less satisfied than those who are in managerial positions and non-local employees are more satisfied than local employees in non-managerial positions. However, gender, marital status and life stress reported no significant effects on job satisfaction.





## Analysis Of Online Banking In Uae

Enas Mohsen Al Safar

Executive MBA Program, University of Sharjah

### ABSTRACT

Banking is one of the fastest growing sectors in the DAB. This study provides information on how banks deal with a new technology and the user acceptance of such technology.

Many banks world wide have started provision of online services in addition to traditional banking. However, the review shows that the growth was not as anticipated by the banking management. Moreover, most people still practice traditional-banking along with online banking. There are reports of people who had started online-banking and rejected it later altogether.

The purpose of this research is to construct a valid measurement of the acceptance, retention and development of online-banking among the DAB population. In addition to these, the study explores the profiles of online-banking customers as well as traditional-banking customers in order to assess their perspectives and expectations of online-banking. The research model is based upon the Technology Acceptance Model and GVV survey. The collection of primary data was conducted through questionnaires and interviews. Two types of respondents were surveyed: customers of traditional-banking and customers of online banking. Online-banking employees were considered as an expert group. A comparison of the research findings with the GVV survey findings was conducted.

The results show significant positive relationships between the acceptance of online-banking technology and the customer's level of education, income, computer use, availability of Internet connection, use of Internet, use of finance software, and purchasing through the Internet. At the same time, results don't show any significant relationship between the acceptance of online-banking technology and the customer's time period of using the Internet. The results, also, indicate that the scale of online-banking is growing. The response to online-banking, in general, was positive. A main problem is customers who will still do not find any need to go for online-banking or who are happy with the status quo. The immediate task of bank is to communicate "usefulness" and "ease of use" of online-banking to their customers.

## A Comparative Study of GCC Securities Regulations Based on IOSCO's principles

Thoraya Mahmoud KhairAllah Al hajji  
Executive MBA Program, University of Sharjah

### ABSTRACT

There is a general recognition that bigger and more integrated financial markets contribute to effective pooling of risk, lower the costs of capital and improve the prospects for the economic growth. The purpose of this research is to examine the possibilities for the formation of an integrated financial market in the GCC through a comparative study of the regulation of securities markets in the different GCC countries. The research highlights the similarities in the economic settings among the different markets, and the differences that might present obstacles to the formation of an integrated financial market. The research also evaluates the quality of securities regulation in GCC countries.

The results of the analysis show some similarities and few differences among the markets. However, the researcher made some recommendations dealing with the markets and the regulations. First, regulators need to be given more power to fulfill their duties. Second, current rules and policies relating to the regulators need to be developed, articulated and be inclusive. Third, the Issuer's rules and regulations with regards to their relationship with their auditors need to be made clearer in some markets. Finally, although the listing requirements of certain markets are clear, other countries need to specify required information for the companies seeking registration.





## Perceived Benefits Of District Cooling Systems In Uae To Develop A Marketing Plan

Jamal Mohammed Al Jarwan

Executive MBA Program, University of Sharjah

### ABSTRACT

The advent of District Cooling System (DCS) in the west is leading a re-evaluation of existing airconditioning technology and business practices. The DCS has the potential to provide environment-friendly and cost-effective service to the clientele anywhere in the world, including the UAE. Yet, despite this potential, no empirical research has documented the relative effectiveness of the DCS versus the traditional air-conditioning system in the UAE context. In this study, an attempt is made to fill this void in the literature by presenting an initial investigation into the potential benefits of the DCS perceived by the prospects (building owners managers and realestate developers) in the UAE market. The findings reveal, *inter alia*, that the users of the traditional air-conditioning technology are of course interested in a cheaper, reliable and environment-friendly system. Although the DCS does not enjoy the kind of awareness enjoyed by the traditional air-conditioning system, a well-thought-out marketing strategy could of course produce rich dividends for the company seeking to proliferate the DCS in the UAE. Therefore, an attempt is also made in this study to suggest a strategic marketing plan for Tabreed, the company trying to market the DCS in the UAE. The strategic marketing plan is anchored in the marketing mix principles and the quest for a respectable market share through effective marketing mix strategies and a focus on customer acquisition. This study, it is hoped, would guide managers of Tabreed in their marketing endeavors in the following years.

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## An Examination of Performance & Job Satisfaction Among National Employees of Sharjah Municipality

Hassan Abdulla Ali Al-Balgoni  
Executive MBA Program, University of Sharjah



### ABSTRACT

This research report examined the relationship between job performance and job satisfaction among national employees of Sharjah Municipality. The researcher used a questionnaire that was based on the Job Satisfaction Survey to collect his data and follow-up interviews to discuss the results.

The researcher distributed questionnaire packets to 214 national employees of Sharjah Municipality and received back 106 completed questionnaires, representing a 49.5 % response rate. He used correlation, reliability analysis, factor analysis and multiple regression technique to analyze collected data.

The results indicate no significant relationship between job performance and satisfaction. The results also indicate that none of the moderating variables (length of experience, job rank, gender, and marital status) has a significant positive effect on the relationship between job performance and satisfaction.



## Leadership Behaviors Supporting the Implementation of ISO 9000: 2000

Hassan Abdullah Al- Ghasyah  
Executive MBA Program, University of Sharjah

### ABSTRACT

Little is known about the roles played by leadership behaviors in the implementation process of ISO 9000:2000. The report attempts to identify the leadership behaviors that are supporting the implementation of ISO 9000:2000. A questionnaire based on the Multifactor Leadership Questionnaire (MLQ) was developed and sent to quality experts. Factor analysis resulted in five dimensions, Intellectual Stimulation, Charisma, Empowerment and Contingent Reward, Avoidance, and Active Management-by-Exception. Four of these dimensions were found to be supporting the implementation process. Only A voidance was found to be impeding the implementation of ISO 9000:2000.

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# Services Quality In Governmental Engineering Departments

**Haleema Mohammad Al Hammadi**  
Executive MBA Program, University of Sharjah

## ABSTRACT

The government in the United Arab Emirates is not immune from pressures driving successful organizations towards top service quality that delight their customers.

This paper developed a modified version of SERVQUAL for measuring service quality in the U AE engineering departments. The developed instrument was tested for reliability and predictive validity. This paper examined service quality in the three sections of the Governmental Engineering Department (GED). It also investigated the impact of position and having a project coordinator on the perceived service quality of GED.

Keywords: SERVQUAL - Service Quality - Government Service Quality - Construction Service Quality.

Book of  
Abstracts



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at The University of Sharjah (14-15 May 2005)



## Managers' Perceptions of Sharjah Economic Excellence Award

Kalid Bin Butti Bin Obaid

Executive MBA Program, University of Sharjah

### ABSTRACT

The Sharjah Chamber of Commerce and Industry (SCCI) introduced the Sharjah Economic Excellence Award (SEEA) in 2001, which is being granted to its firm members in recognition of their industrial, commercial and professional role in promoting the local economy. Even though there is no monetary value attached to the reward, the award carries certain privileges such as priority in processing the transactions with governmental offices and free participation in the foreign exhibitions arranged by the chamber for the same year of winning.

The purpose of this study is to assess business managers' perceptions of Sharjah Economic Excellence Award. This study will help SCCI to improve the terms and conditions of its award in order to create a competitive market for the companies' products and services.

Seven hypotheses were tested. Top-level managers were surveyed. SPSS were used to analyze the data. The results of the study indicate no significant differences in managers' perceptions regarding the SEEA by sectors. However, there was a significant difference in managers' perceptions regarding the procedures involved in obtaining the ISO certificate. This result may relate to the fact that some companies have already obtained ISO certification while others have not.

The results also indicate that establishing the award in Sharjah has motivate companies to improve their performance. In addition, the results indicate that perceptions of local managers differ from those of expatriate managers regarding the award.

# Visitor Perception Of Service Quality in Shargah Museums

**Khuloud Abdalla Ahmed Al Marzouqi**  
Executive MBA Program, University of Sharjah

## ABSTRACT

This research examined visitors' perception of Service Quality (SQ) in the Sharjah Science Museum and the Discovery Center. The researcher distributed a total of three hundred questionnaires. Two hundred and fifty questionnaires were completed and were used in this research. The respond rate therefore is about 89%. The data collected from the survey were used to test the research hypotheses. To test the four hypotheses the researcher used the parametric (one-way ANOVA) and nonparametric tests (chi-square tests) to establish statistical significant of the differences in five dimensions of SQ, which are: (tangibility, reliability, responsiveness, assurance, and empathy). The research revealed four main results, which were extracted from testing the research hypotheses. The result indicates that there is no significant difference in perception of SQ among people based on gender and social status. The result also shows that there is significant difference in perception of SQ among people based on museum visitors' classification, and educational level.





## TQM Practices & Corporate Culture in UAE Manufacturing Firms

**Khalifa Ahmed Sedrani**

Executive MBA Program, University of Sharjah

### ABSTRACT

Many quality experts have asserted that the development of quality culture is a prerequisite for TQM implementation. This paper investigates TQM practices, corporate culture, and performance in UAE manufacturing firms. Questionnaires addressing TQM practices and culture have been distributed to general managers, functional managers, operation managers and quality managers in UAE manufacturing firms. Factor analysis resulted in four TQM dimensions and five corporate culture dimensions. The relationship between TQM practices and performance has been determined. Also, the relationship between the dimensions of TQM practices and the dimensions of Corporate Culture has been investigated.

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## Performance Dimensions & Employees Job Satisfaction at DEWA

Rashid Meadhad Al Mehairi

Executive MBA Program, University of Sharjah

### ABSTRACT

There are different views on the relationship between job satisfaction and performance. The early work of Brayfield and Crockett (1955) and Vroom (1964) indicated no relationship between job satisfaction and performance. Herzberg et al (1957) hold the view that satisfaction leads to performance. However, Lawler and Porter (1967) advocate a contrary view that performance leads to satisfaction. This research report addresses this controversy about the relationship between performance and employees' job satisfaction at Dubai Electricity and Water Authority and the moderating effect of some other variables such as gender, age, tenure, marital status, position and nationality on the relationship.

The researcher used a sample of senior and middle level employees working at the main office of the Dubai Electricity and Water Authority. He distributed 401 surveys and received a total of 125 usable questionnaires (a 31% response rate). He analyzed the collected data using correlation and regression analyses.

The correlation analysis results indicate that used performance dimensions are reasonable. The results of the simple regression analysis indicate the existence of a significant positive relationship between performance and job satisfaction. However, when the researcher incorporated the other variables (gender, age, tenure, marital status, position and nationality) in the regression model, the effect of performance on satisfaction became insignificant. In addition, none of these other variables had significant effects on satisfaction per se.



## Performance Indicators In The Beauty Salon Industry In The Emirate Of Dubai

Raja'a Ahmed Bu Hussain

Executive MBA Program, University of Sharjah

### ABSTRACT

This research reports on the results of studying performance evaluation indicators in beauty salons in the city of Dubai. The researcher used interviews and survey instruments to collect the needed data. She distributed 200 questionnaires in sealed envelopes to employees and managers/owners of 40 selected beauty salons and asked them to respond by a specific date. The researcher received 50 questionnaires, of which 5 were unusable. She used the remaining 45 responses in the data analysis.

The researcher formulated 21 potential performance indicators for beauty salons based on her literature reviews and interviews with salon owners and managers. She used a principal component analysis (a factor analysis technique) and non-parametric tests (e.g., Mann-Whitney U test and Friedman Chi-square test) to analyze the data and test the research hypotheses regarding preferences for performance evaluation indicators, their actual use, and their composition.

The research revealed four main results. The first indicates that there were no significant differences between beauty salons' managers/owners and employees' preferences for performance indicators. The second result indicates significant differences between actually used performance indicators and preferred indicators by managers/owners and the employees. The third result indicates that actually used performance indicators constitute a poor-type of a scorecard with only two significant factors (financial and internal processes). In addition, the results indicate that preferred performance indicators constitute a better form of a scorecard with three significant factors (financial, internal processes and customers).



# **An Analysis of Entrepreneurial risk, support and role conflict among UAE women Entrepreneurs**

**Raghda Hamad Omran Taryam**

Executive MBA Program, University of Sharjah

## **ABSTRACT**

This research report examined entrepreneurial risk, support, and role conflict among UAE women entrepreneurs. Two hundred and fifty national women entrepreneurs were selected and the research instrument was distributed to them. In total 104 completed responses were received a (42 % response rate).

The researcher used ANOVA technique and multiple comparison tests to analyze collected data. The results indicate that women entrepreneurs have similar perceptions of the effect of their business life on other aspects of their life. However, they differ in their views regarding the effect on personal life based on marital status. Similarly, women entrepreneurs have similar perceptions for the types of risk they take when entering the business world. However, their perception of family risk is different with reference to educational level and involvement in business.

The results also indicate that women involved in their businesses on a full-time basis view the motivating role of being independent differently from women involved in their businesses on a part-time basis. In addition women entrepreneurs perceive support factors differently depending on the number of children, marital status, educational level, and the extent of involvement in business.





## Antecedents of placing Students on Academic probation at the University of Sharjah

Rana Afou Kabbani

Executive MBA Program, University of Sharjah

### ABSTRACT

This research addressed some possible antecedents of placing students on academic probation at the University of Sharjah. The researcher initially attributed the problem to a number of factors including teaching environment, examinations, advising, financial, and social factors. To collect data a questionnaire, containing several measures for the above variables, was constructed and distributed to 420 students, 210 of whom are on academic probation and 210 in good academic standing. Collected data were analyzed using reliability analysis, correlation analysis, and regression analysis. The findings showed significant correlation between academic advising and faculty characteristics. In addition there were significant effects for high school percentage, gender, and examinations on placing a student on probation.

The researcher concluded the study with a number of recommendations to improve the academic progress of students on academic probation.

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## Activity Based Costing and Organizational Change in the UAE Setting

Zamzam Ibrahim Zamzam

Executive MBA Program, University of Sharjah

### ABSTRACT

Activity-based costing (ABC) and Activity-based management (ABM) are probably two of the recent management accounting tools that have caught the imagination of management. ABC is a method of measuring the cost and performance of activities and cost objects. It assigns cost to activities based on their use of resources and assigns cost to cost objects based on their use of activities.

The research adopts an institutional framework as illustrated in Burns and Scapens (2000) to understand the extent of change in management accounts section in Etisalat West Coast Region as a way of evaluating the roles of other institutional practices, apart from management accounting to assess the organizational impact of new management systems. In addition to the influences of such macro institutions, the research also explores the interplay between these influences and managerial action through the analysis of organizational routines.

An analysis of internal documents and correspondences was undertaken to identify the issues to be explored in interviews. Initially interviews were conducted with key management personnel in the West Coast Region, Head Office and the consultant.

The implementation of ABC seems to highlight a major gap between the realm of institution and action. This could probably be attributed to two major reasons, first, the separations of design and implementation of the ABC system with the former being mainly carried out by consultants and latter by staff from the company, and second the lack of top management commitment to the project



## Market Orientation in the UAE Public sector: The case of Tafawoq Projects at Dubai Dept of Economic Development

Saeed Rashid Al Suwaidi

Executive MBA Program, University of Sharjah

### ABSTRACT

The literature on the market orientation of public sector organizations in countries such as the United Arab Emirates (UAE) is scant. This study aims to identify the role of market orientation in a local government by providing empirical evidence on the Dubai Department of Economic Development (DED). As such, this study focuses on selected projects in DED, known as "Tafawoq" projects, which reflect the marketing tools in the department. These projects encompass four different surveys namely, (a) the Employee Satisfaction Survey, (b) the Customer Satisfaction Survey, (c) the Suggestion Scheme and, (d) the Compliant Scheme

The researcher collected data from the concerned DED units from 2000 to 2003. The collected data was subsequently analyzed by using SPSS package. Five guiding research hypotheses were formulated. The results depict the following relationships among the selected projects: (a) High relationship between the Employee Satisfaction Index and Employees' Suggestions, (b) high relationship between the Customer Satisfaction Index and Customers' Suggestions, (c) high relationship between the Employee Satisfaction Index and Employees' Complaints, (d) acceptable relationship between the Employee Satisfaction Index and the Customer Satisfaction Index and, (e) acceptable relationship between the Employee Satisfaction Index and Customers' Complaints

Based on the conclusions drawn from the findings, the researcher was able to formulate recommendations on the likely course of action so as to enhance the market orientation of DED in the future. Finally, the researcher argued that the successful market orientation of DED could serve as a role model for other departments in Government of Dubai.

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## Evaluation of Service Agent System: A Case Study of the Emirate of Sharjah

Sultan Abdulla Ahmed Al Marzouqi  
Executive MBA Program, University of Sharjah

### ABSTRACT

This research examined the perceptions of service agents and investors about the service agent system. To evaluate the service agent system in Sharjah, the researcher distributed a total of three hundred questionnaires out of which one hundred questionnaires were completed and were used in this research. The response rate therefore is about 33.3%. The data collected from the survey were used to test the research hypotheses. To test the six hypotheses the researcher used the parametric (tests) to establish the statistical significance of the differences in service agent system.

The research revealed six main results, which were extracted from testing the research hypotheses. The first result indicates that there is no significant difference in perception of service agent system between service agents and investors based on the terms of the contract in general. The second result indicates that there is a significant difference in perception of service agent system between service agents and investors with regard to the responsibilities indicated in the contract. The third result indicates that there is no significant difference in perception between Arab and non-Arab investors toward the service agent system. The fourth result indicates that there is no significant difference in perception of service agents toward the service agent system based on age. The fifth result indicates that there is no significant difference in perception of service agents toward the service agent system based on social status. The sixth and final result of this research indicates that the service agent system has motivated both Arab resident investors and the non-Arab investors to invest in the Emirate of Sharjah.



## Tourists Perceptions Of Uae As A Tourism Destination

Shahid Zubair Mohamed

Executive MBA Program, University of Sharjah

### ABSTRACT

Tourism is the world's largest earner of foreign currency. In the DAB, tourism is not seen as such although it has significant capacity to play a vital role in the DAB economy. The DAB offers both domestic and foreign tourists desert, beaches, wildlife, wilderness experiences and indigenous cultural attractions comparable with the best in the world. Yet, it attracts only a modest number of tourists compared with several tourist destinations in the world (World Trade Organization 2000, annual report).

This research examines the visitors' attitudes towards different attractions of tourism in the DAB. The researcher surveyed a convenient sample of 120 tourists from different countries. Collected data were analyzed using descriptive statistics and non-parametric tests. The results indicate no significant differences in perceptions of Asians versus Western tourists regarding the DAB as a tourism destination. However the results provide interesting insights into the perceived significance of some attractions, which will help in the efforts to promote tourism in the DAB.

The study recommended expanding regional tourism through festivals, conferences, cultural and trade exhibitions, sports and other events in the DAB.

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## Management Perception of Leadership Styles at Governmental Units in Sharjah

Tarifa Salim Ajaif

Executive MBA Program, University of Sharjah

### ABSTRACT

Rapid changes in the external environment, as well as changes in technology and increased global competition, have created evolutionary changes in management. This research is an attempt to understand the Transformational leadership style that exists in Sharjah's government organizations as these organizations have been continuously trying to improve the quality of their products and services. The researcher focused on Transformational Leadership, because it's the recent leadership type with a sharp focus on all resources. Managers and leaders who believe in change must go Transformational because it helps them to predict the needs of the market and plan to succeed.

In order to understand Sharjah's government organization's Transformational Leadership style, the researcher selected four important characteristics of Transformational Leadership, which are vision and mission, empowerment and information sharing, adopting quality measures, and responding to the community needs. Three hundred questionnaires were distributed and 109 were received and analyzed using different SPSS applications such as the T -test and Multiple Comparisons of ONE WAY ANOVA. Three hypotheses were addressed and tested. The following results were obtained:

1. Perceptions of nationals about the type of leadership in Sharjah's government organizations are not different from those of expatriates.



## Leadership Styles and Service Quality in UAE Hospitals

Aisha Juma Hussan Al Rassasi  
Executive MBA Program, University of Sharjah

### ABSTRACT

Achieving high service quality is highly dependent on organizational leadership. This report attempt to identify the relationship between leadership styles and service quality in UAE hospitals. Two instruments were used. The first instrument is a modified version of SERVQUAL. It was distributed to patients for measuring perceived service quality in the UAE hospitals. The second instrument is based on the Multifactor Leadership Questionnaire for transformational and transactional leadership. It was distributed to employees. The instrument were tested for reliability.

ANOVA was then used to investigate the impact of demographic variables on service quality and leadership. Finally pearson correlation was used to investigates the relationship between the dimensions of service quality and the dimensions of transactional and transformational leadership. The results indicate that patient were satisfied with service quality. Gender and nationality were not significant in determining service quality. Age group 2 (from 25-40) was least satisfied group with service quality. On the other hand, The hospital employees generally have low rating of their leaders in term of there dimension of transformational leadership and transactional leadership dimension of contingent reward. Nationals are more satisfied than expatriates. The three dimensions of transformational are positively associated With all dimensions of service quality.

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## An Application of the Technology Acceptance Model to Computerised Traffic Tests

Arif Mohamed Sultan Al-Shamsi

Executive MBA Program, University of Sharjah

### ABSTRACT

This report tested the application of the technology acceptance model (in its original form and in an extended form) using the case of the computerized traffic test administered in the Emirate of Sharjah. The researcher collected his data, using a questionnaire, from a sample of 397 applicants who took the computerized traffic test between November 1, 2003 and March 31, 2004. Collected data were analyzed using descriptive statistics, reliability analysis, correlation analysis, and regression analyses.

The results indicate significant correlation between perceived usefulness and perceived ease of use (the two main variables of the TAM). In addition, the results showed significant positive effects for perceived usefulness, perceived ease of use, attitude, and computer skills on the applicant's choice of the computerized traffic test.

However, there were no significant effects for the level of satisfaction with the system or enjoyment of the system on the applicant's choice of the computerized traffic test.



## An Evaluation of Marketing Strategy of Sharjah's Airport International free Zone

Abdalla Hassan Ahmed Al Banna

Executive MBA Program, University of Sharjah

### ABSTRACT

This study focuses on Sharjah Airport International Free Trade Zone (SAIF Zone) as the central and most consequential contextual aspect of the Emirate of Sharjah's quest for transition into one of the nerve-centers of business activities in United Arab Emirates (UAE). Interestingly, the SAIF Zone is operating in a competitive business environment in the country. This kind of environment raises questions about the effectiveness of the marketing strategy being pursued by the SAIF Zone. Using a framework that incorporates notions from marketing theory, this study examines and analyzes the effectiveness of the marketing infrastructure and strategies designed by the SAIF Zone from the perspectives of its managers and client organizations. The survey exercise conducted for the purpose of this study suggests that the success of the SAIF Zone competing for a decent share of the market will increasingly depend on how well its managers understand and integrate client companies' perceptions, attitudes, and actions toward the zone. In order to contribute to that understanding, this study reports the perceptions of the client organizations toward the marketing strategies of the SAIF Zone. The study also reports the perceptions of the managers of the SAIF Zone toward the facilities and marketing strategies put in place to attract foreign investment. Finally, the study makes some useful recommendations for the SAIF Zone to attain its avowed objectives.

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## Acceptance of Information Technology in the Emirates Purchasing Directorate

Abdulrahman Saeed Al Mualla

Executive MBA Program, University of Sharjah

### ABSTRACT

This research is about the resistance of Emirates Purchasing Directorate's staff to the automation process in their work. The resistance to the change process in EPD was surprising the management because of the pre-change preparations, planning, and discussions that took place before the change was introduced.

The purpose of this research is to determine the form and level of EPD staff resistance to automation technology and to identify and evaluate the factors responsible for the resistance with a view at developing an appropriate strategy for introducing automation process in the profession. The research model is based on the Technology Acceptance Model (TAM). The collection of primary data was conducted through questionnaire to the EPD staff. Statistical Package for Social Science (SPSS) was the main tool used for analyzing the collected data for study. Survey responses were tabulated and regression analysis was deployed.

The results show significant positive relationships between the acceptance of technology and the usefulness perceived by the employee, ease of use of the automation system, involvement of the staff in changing process, support from the management and the system provider, information and training, relationship with the system provider and the functionality of the system.





## Analysing Of Service Quality At The Uae Islamic Banks

Abdulla Ali Hassan Al Amiri

Executive MBA Program, University of Sharjah

### ABSTRACT

Service quality is a significant issue facing the banking industry. The objective of this project is to investigate and to compare service quality between Dubai Islamic Bank and Abu Dhabi Islamic Bank. This is intended to help the UAE Islamic Banks assess and improve their service quality in order to create a perception of uniqueness in the mind of customers and gain an advantage in the marketplace. This project develops a modified SERVQUAL for analyzing service quality in the UAE Islamic Banks. The instrument includes thirty six items that belong to the five dimensions of SERVQUAL. The developed instrument was tested for reliability and validity. The results of this study indicate that the UAE Islamic Banks' customers are satisfied with overall service quality. The relationship between overall service quality and the SERVQUAL dimensions in the UAE Islamic Banks was positive and statistically significant. The results also indicate that there was no difference between level of overall service quality in the Dubai Islamic Banks and Abu Dhabi Islamic Banks; Empathy and Tangible were the most important dimensions; there was no significant difference in the level of service quality in the UAE Islamic Banks based on customer's gender, customer's nationality, and customer's age and customer's education, and finally, customer's number of years with the bank were significant in determining the level of service quality.

# Customer's Satisfaction With Bill Payment Procedures At The Emirates Telecommunications Crporation "Etisalat"

Abdulla Ali Obaid Al Zaabi  
Executive MBA Program, University of Sharjah

## ABSTRACT

This research reports on the results of conducting a survey questionnaire to assess customers' satisfaction with Etisalat's bill payment and related procedures. Because of time and cost constrains, the researcher selected a sample of Etisalat customers from one of Etisalat's six regional areas (i.e., West Coast Region). The operations of the West Coast Region cover three emirates: Sharjah, Ajman, and Umm Al-Quwain.

The researcher distributed 500 questionnaires (in the form of hard copies and e mail copies) to individual customers and business customers. He received 220 completed questionnaires, representing a 44 per cent response rate. The researcher calculated customer satisfaction indexes for the two groups of customers (individuals and businesses). He also analyzed collected data and calculated customer satisfaction indexes using descriptive statistics and non parametric tests (e.g., chi-square test).

The results indicate that levels of satisfaction differ between individual customers and business customers. In addition, these levels of satisfaction differ among business firms based on their levels of profits. However, levels of satisfaction were not different based on business type, individual gender or age categories.





## Work-Family Conflict among Married Employees in UAE

Afaf Ibrahim Al Marri

Executive MBA Program, University of Sharjah

### ABSTRACT

This research examined the relationship between work-family conflict and its sources and outcomes among married employees in UAE. Data were collected from a sample of 236 subjects using a questionnaire. Descriptive statistics were used to tabulate obtained results and alpha model was used to assess data reliability. Regression analysis was used to test the hypothesized effects of work-related and family-related sources of conflict on the magnitude of work-family conflict among married employees. It also examined the effects of work-family conflict on job satisfaction, family satisfaction, and career satisfaction as possible outcomes of the conflict.

The results showed significant relationship between work-family conflict and three variables (gender, parents residence, and satisfaction with organizational support). The results also showed significant negative effect of work-to-family conflict on career satisfaction, while family-to-work conflict had significant negative effects on family and job satisfaction.

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## A Proposed Framework for Issuing Building Permits at Sharjah Municipality

Ali Al Rasheed

Executive MBA Program, University of Sharjah

### ABSTRACT

Information technology, paperless organizations, e-government, efficiency, effectiveness, quality consciousness are buzz words that are used for ensuring the best service to customers of any organization. The purpose of this project is to investigate and evaluate the current procedures used in issuing building permits at the Technical Department of Sharjah Municipality. The building permission process has been studied thoroughly. Scope for enhancements and modifications were suggested.

The new framework is proposed to be a web-enabled solution. The proposed solution is very easy to use, with fewer requirements for submissions of applications for a building permit. It provides faster turn around times for transactions using state of the art technology.

I concluded that the current system covered almost all areas but still lacked to cover vital issues. The suggested framework promises faster response by the nature of its character itself, as being based on the Internet model. Ease of use is an additional characteristic. Consultants are eager to welcome the changes in the building permit process.



## Real Estate Market Analysis of Residential Properties in the City of Sharjah

Alia Mohamed Al Ejla

Executive MBA Program, University of Sharjah

### ABSTRACT

This report examines some of the factors affecting rental prices and sale prices of residential real estate properties in the City of Sharjah. The rental prices analysis covered a short period of time (the first few months of the year 2002). However, the sale prices analysis covered a longer period of time (1983-2000).

Based on literature review, personal interviews with some real estate experts and field survey of a sample of selected properties in two sectors of the City of Sharjah (Al Shargan and Almajaz), the researcher identified several factors that affect rental prices and sale prices of real estate properties. The researcher specified two hedonic models to study rental prices and sale prices of residential real estates. She used regression analysis to estimate the coefficients of each model that explain rental prices or sale prices.

For the rental prices, the results indicate that the most important factors affecting the rental price are the availability of central air-conditioning and the availability of parking spaces in the building. Moreover the number of floors in the building is more important than the size of the apartment.

For land sale prices, the results indicate that the land area and the date of the transactions are the main determinants of sale prices. Location, however, was not a significant factor.

For buildings sale prices, the results indicate that the building area (number of floors weighed by the area) is the main determinant of sale prices of building. Location was significant for buildings constructed between 1997 and 2000 only. Moreover the results indicate that the effect of Government regulations on the properties sale price was significant for buildings constructed between 1997 and 2000.



# Performance Determinants Of Home -Based Businesses In Dubai

**Ohood Khalfan Al Romi**

Executive MBA Program, University of Sharjah

## ABSTRACT

This research investigated factors influencing the performance of homebased businesses (HBB) in Dubai. Data were collected from a sample of 54 subjects using a questionnaire. Descriptive and frequency statistics were used to tabulate obtained results and Hest of equality of two sample means was used to asses data reliability. Regression analysis was used to test the hypothesized relationships between HBB performance and a set of selected variables found relative in the literature reviewed.

The results showed significant relationship between home based performance (in terms of annual sales in AED) and only one variable, which is the weekly work hours, spent by the HBB owner in running his/her business.





## Training Effectiveness Inunited Arab Emirates Organizations

Essa Abdullatif Al Serkal

Executive MBA Program, University of Sharjah

### ABSTRACT

Training effectiveness in government and private sector's organizations were investigated, mainly in the oil industry and services, government department, public administration, transportation and communication, and finance, banking and insurance organizations in United Arab Emirates. Numerous methods of theoretically appropriate individual development were examined, with a primary emphasis on levels of achievement, maturity, and disposition facilitative of training effectiveness.

Literature concerning appropriate structures, characteristics, and goals for individual training programs, environments, and methodologies were studied and related to training effectiveness theory. Individual training's sense of autonomy, acceptance of

responsibility, self- directness in all life roles and ongoing need to comprehend and come to the terms with the full narrative of their own personal development history were, when taken together, understood as constituting the necessary core of training effectiveness.

Examination of these factors incorporated two survey questionnaires, one for respective Executive and Managers, and one for the respective Staff and Developers. Questionnaires were administered to the identified group of government and private sectors. Integrated findings and interpretations supported the critical importance of understanding and attending to training experience for improving training effectiveness. Recommendations emphasized restructuring of training effectiveness, training purposes and needs, and the relationship between them.

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## An Evaluation of Solid Waste Management Practices in Sharjah

Eisa Obaid Al Suwaid

Executive MBA Program, University of Sharjah

### ABSTRACT

Disposal of municipal solid waste (MSW) has become a mounting challenge for the Emirate of Sharjah. This research examines existing solid waste management practices of Sharjah and compares them with prevailing experiences and guidelines in different countries.

The comparison focused on three main components: regulatory framework, administrative tools, and waste management programs. The results indicate shortages in all of the three areas. The researcher presented some recommendations to improve current waste management practices in Sharjah.



## A GIS Based framework for Health Management at Sharjah Municipality

Farida Abdelkarim Al Yaffai

Executive MBA Program, University of Sharjah

### ABSTRACT

This case study demonstrated the use of a geographic information system (GIS) as a support tool for decision making for Public Health management at Sharjah Municipality. The researcher studied and evaluated the current Health System at Sharjah Municipality, identified the weaknesses, and proposed a GIS-based framework by using an existing GIS and integrated it with the Health System to improve the productivity and efficacy of the inspectors and assist the Public Health Section at the operational, planning and managerial levels.

Abu Shagara and Bu Daniq areas were selected for the pilot study to examine the integration between the Health System and GIS and to test the new concepts and ideas at a small scale. After demonstrating the advantages of the proposed, solution, the researcher concluded that using GIS would open new opportunities for the health management and inspectors at Sharjah Municipality. Moreover, the successful implementation of GIS will motivate other departments in the municipality and other directorates in Sharjah Emirate to implement similar GIS based applications.

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العدد الثاني  
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# ISO 9000 Certification: The Case Of Etisalat

Maryam Ebrahim Al Awadi

Executive MBA Program, University of Sharjah

## ABSTRACT

The number of companies receiving ISO 9000 certification has increased dramatically in the last decade. These companies adopt ISO certification for various internal and external needs. This report examines the certification process at Etisalat and delineates the reasons behind it, its expected benefits, the barriers it faced and its impact on existing customer satisfaction Programs.

This report also investigates the commitment of top management to the certification process. Interviews with consultants and top managers were used to develop the questionnaire of this study, which was sent to 100 employees via email. 92 employees responded making a response rate of 92%.





## Culture & Decision-Making Styles in UAE Organizations

Mariam Saif Al Shamsi

Executive MBA Program, University of Sharjah

### ABSTRACT

This report examined the relationships between culture and decision making styles of UAE managers and professionals. The researcher used a questionnaire consisting of three part. The first part is related to demographical information of respondents such as age, gender, marital status, management level, nationality, education, and sector of work. The second part had twenty-five questions related to culture. The Hofstede (1980) instrument was used. The third part had twenty questions related to decision styles. The Rowe's (1987) Decision styles and Hofstede's (1980) framework were used. four dimensions namely: power distance, uncertainty avoidance, individualism-collectivism, masculinity versus femininity. Discussion styles were four namely: directive style, analytical style and behavioural style, was used to measure decision-making styles.

The research instrument was distributed to 400 managers, professionals and 50 completed responses were received.

The researcher used ANOVA technique, one sample Hest and general linear model to analyze collected data. The results showed that Nationality was significant in determining uncertainty avoidance, collectivism, masculinity, and femininity. However, nationality was insignificant in determining decision-making styles. People in the public sector were found to be more into collectivism than their counterparts in the private sector.

Age was significant in determining decision styles. However, gender was insignificant in determining directive style, conceptual style, and behavioral style. It was significant in determining analytical styles where males scored higher than females.

Job category was significant in determining decision styles. Heads of departments were more directive than others while managing directors had the highest scores in the other three styles.

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# Employees' Personality Traits and Customers' Perceptions of Service Quality

Mansour Mubarak Al Nuaimi  
Executive MBA Program, University of Sharjah

## ABSTRACT

This research examined the relationship between customers' perceptions of service quality and personality traits of the employees offering the services at a sample of banks and aviation companies in the Emirates of Ajman and Sharjah. Data were collected from a sample of 176 subjects (71 employees and 105 customers) using questionnaires. Descriptive statistics were used to tabulate obtained results and an alpha model was used to assess data reliability. Regression analysis was used to test the hypothesized relationship between personality traits and service quality.

The results showed significant relationship between overall customers' perceptions of service quality and three dimensions of personality (extraversion, openness, and neuroticism). However, there was no significant relationship between personality traits and any of the service quality dimensions. In addition, demographic variables (e.g., gender, nationality, etc) had no effect on perceived overall quality.





## An Examination Of The Severty Of Traffic Accidents In The Emirate Of Sharjah

Mansour Mohamed Naser Yousif  
Executive MBA Program, University of Sharjah

### ABSTRACT

Traffic accidents are a major cause of death and serious disability problems in many cities and countries. The Emirate of Sharjah is not an exception. There were 109 death cases and another 232 serious injury cases in the Emirate during the year 2001. Prior research has focused attention on the economics of traffic accidents (e.g., measuring costs of traffic accidents) and the ability of particular variables (e.g., size of vehicle, non-use of seat belts, etc) to predict traffic accidents. Little attention has been devoted to the severity levels of traffic accidents and their predictors. This research examined the effects of a set of personal characteristics (i.e., driver's nationality, type of insurance, driver's gender, time of accident, driver's age, length of driving experience, and number of previous traffic offences) on the severity levels of traffic accidents.

The researcher randomly selected 200 traffic accidents from the recorded accidents for the year 2001 in the Emirate of Sharjah. He also collected information from the Traffic Department's records regarding the drivers involved in the accidents and analyzed the collected data using regression analysis.

The results indicate that "driver's nationality" provides the most significant effect on the severity level of traffic accidents where the likelihood of having a national involved in a severe accident (i.e., death or severe injury) is more than non-nationals. The results also indicate the significance of the accident time, type of insurance coverage, driver's gender and age.

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## An Examination Of Performance Indicators In The Uae Hotel Industry

**Hala Mohammed Abdullah Younes**  
Executive MBA Program, University of Sharjah

### ABSTRACT

This research examined performance indicators in the hotel industry in the Emirates of Dubai and Sharjah. It used a set of performance indicators that belong to three main frameworks identified in the management and accounting literatures as underpinnings of performance evaluation systems: the financial framework, the results and determinants framework, and the balanced scorecard framework.

The researcher used a questionnaire to elicit hotel managers' preferences for performance indicators and the actual indicators used by the hotel industry in Dubai and Sharjah. The researcher sent the questionnaire to 100 managers of 50 hotels with ratings of four and five-stars. She received 38 completed responses (a rate of 38%) but used only 31 responses in the analysis. She analyzed the data using the principal component analysis (a factor analysis technique), Mann-Whitney U test and Friedman  $\chi^2$  test.

The results generally indicate that managers' preferences for performance indicators are not statistically different from those indicators used by the hotels. In addition, the composition of the performance indicators used represents a hotel-type of a scorecard.



## Ion And Employees Retention In Uae's Banking Sector

Wassim Raouf Ghalayini

Executive MBA Program, University of Sharjah

### ABSTRACT

Employee turnover affects significantly the performance of any organization mainly because employee turnover is very costly. Employee turnover costs can be direct and indirect and are normally associated with employees' separation, replacement and training. There are many potential causes for employee turnover, and research has shown that the intention of employees to leave the job can be due to external factors or work related factors or demographic factors or a combination of all. Job satisfaction is one of the important work related factors that influences the intention of the employees to stay or leave their jobs. This research is trying to discuss the subject of employee turnover in the banking sector in the DAE. A survey of some DAE banks showed that there is a problem of employee turnover in banks.

A set of hypotheses was developed and two questionnaires were administered to a sample of fifty employees and five managers working in five local and international banks in the DAB. The data collected was analyzed using different statistical techniques and a multiple regression model was developed. The model indicated that there is a significant relationship between the overall satisfaction of the employees and some work related variables such as leadership and planning, teamwork and cooperation and benefits. The research did not indicate that there is a relationship between the age and the gender of the employees and their intention to leave the job.

Some recommendations were suggested that would help banks to increase employee retention, which will reduce turnover costs and help the banks to achieve their objectives

# Budget Allocation at Children and Youth Centers in Sharjah

**Wesal Ali Khamis Al Hammadi**  
Executive MBA Program, University of Sharjah

## ABSTRACT

This research examined budget allocation at children and youth centers in Sharjah. The researcher obtained actual budget data for eighteen centers through the financial section of the general management office of children and youth centers. She used correlation, simple, and multiple regression techniques to analyze the data.

Results of the simple regression indicate that each of the four examined variables (number of children, number of employees, number of staff, and location of a center) has a significant effect on allocated budget. However, the results of the multiple regression analysis indicate that the number of teachers and the location of a center are the two significant variables for budget allocation.

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The First Annual Scientific Research Forum  
at The University of Sharjah (14-15 May 2005)



## Quality Of A Computerized Traffic Test: Users' Perspective

Waleed Hassan AL Saad

Executive MBA Program, University of Sharjah

### ABSTRACT

This report examines some quality aspects of a newly suggested computerized traffic test for Sharjah Police Department.

An instrument adopted from SERVQUAL (Parasuraman et al., 1988) was used to collect data from a sample of 450 applicants. Factor analysis was used to determine the dimensions of the instrument. This resulted into three dimensions, namely Friendliness, Assurance, and Speed. Data were also used to test the significance of demographic variables (Gender, age, level of education, and computer experience) in determining the quality of the computerized test.

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## Customer Satisfaction In The Retailsector: The Case Of Sharjah Co-Operative Society

Waleed Rashid Deemas

Executive MBA Program, University of Sharjah

### ABSTRACT

This research aims to evaluate customer satisfaction of the services provided by Sharjah Co-operative Society (SCS) - a Sharjah-based retail organization. Specifically, the researcher is guided by four objectives namely, (A) to examine customer satisfaction levels across each of the four marketing mix elements (i.e. product, price, promotion and, place), (B) to assess the extent of customer satisfaction based on customer status (i.e. shareholders, non-shareholders with discount cards and, non-shareholders without discount cards), (C) to evaluate the degree of customer satisfaction based on customer nationality (i.e. UAB nationals, Arabs and, non-Arabs) and, (D) to asses the extent of customer satisfaction according to customer gender (i.e. male or female).

The researcher obtained 213 completed questionnaires out of 300 with a response rate of 71 %. The questionnaire consisted of two sections: the first one with background questions (i.e. nationality, status, gender, frequency and location of shopping) and the second, containing 21 customer satisfaction attributes. Direct interviewing method was used to complete the questionnaires. SPSS and Minitab computations provided cross-tabulations and testing of 12 null hypotheses.

Customer satisfaction levels across each of the four marketing mix elements (i.e., product, price, promotion and, place) shows that both product and place-related attributes are the most important contributors to the overall customer satisfaction for the entire population of SCS customers. Conversely, this research is able to infer-that price and promotion\_-related attributes are not substantial contributors to the overall customer satisfaction of the entire population of SCS population. It has been confirmed that the contributions to overall customer satisfaction for each of the three categories of customers, namely shareholders, non-shareholders with discount cards, and non-shareholders without discount cards are the same (i.e., no significant differences). Moreover, this research shows that UAE nationals and Arabs are the most predominant in their contributions to overall satisfaction, whilst non-Arabs are the lowest.



Finally, this research argues that there is no significant difference between the overall customer satisfaction levels of male and female SCS customers.

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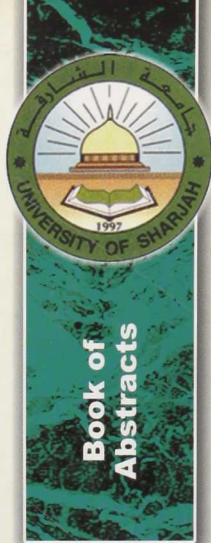




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