

# RESEARCH NEWSLETTER

*January, 2010*

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## FOREWORD

This first issue of the University Research Newsletter for the Academic Year 2009-2010 provides up-to-date information about the research and other scholarly activities undertaken by the University faculty members for the half-year period from July 2009 until December 2009. A healthy research program has the advantage of attracting the best faculty and students. The scope of research support has been expanded in response to global technological challenges and in order to support and sustain diverse faculty research interests. Our goals are to promote creativity; to address critical, scientific, technological and managerial issues; encourage research in areas of national significance; and to improve the quality of graduate education. This *Research Newsletter*, published by the Deanship of Scientific Research on a semi-annual basis, provides an overview of our faculty's research output, as well as the funding which the University provides its faculty to pursue research and scholarship. In particular, the *Research Newsletter* reports on faculty publications, conference presentations, funded projects, and many other features.

The Deanship of Scientific Research is making its best efforts in promoting the new research grants among the faculty members so that the faculty members can actively participate in the research, which is not only beneficial to their own professional career but also to the development of the society at large.

Our sincere appreciation is due to Mr. R. Jayaraman for compiling this edition of the *Research Newsletter*.

**Dr. Mohammad S. Al-Homoud**  
**Dean of Scientific Research**

## 2. ABSTRACTS OF SOME OF THE RESEARCH PROJECTS

### 1. Project No. IN100001

Principal Investigator: Dr. Ahmed Z. Al-Garni (AE)  
Co-Investigator #1: Dr. Aymen H. Kassem (AE)

**Title: Outdoors Economic Cooling System**

#### **Abstract**

This project proposes a plan for designing, building, testing, optimizing and economically evaluating of different outdoors evaporative air coolers. The plan is composed of comprehensive studies by computer simulation and experimental verification for different designs of evaporative cooling systems. The aim of these studies is to find the optimum evaporative cooling system which has low initial cost and Long operation life, economical edge over other techniques, simplicity and low cost maintainability. The authors submitted a related patent to the US patent office.

### 2. Project No. IN100002

Principal Investigator: Dr. Talat Ulussever (FIN)  
Co-Investigator: Dr. Reza F. Aghdam (FIN)

**Title: Analysis of Foreign-Owned Bank Entry in Saudi Arabia**

#### **Abstract**

This study is mainly intended to analyze the impacts of foreign-owned bank entry along with financial liberalization on competitiveness and soundness of domestic banking system as well as credit growth in association with financial sector development in Saudi Arabia and determine the factors that affect foreign-owned bank entry into Saudi Arabia. The analyses in this project will cover the investigation of the benchmarking banking performance and econometric evidence on the impact of foreign bank entry and presence on domestic banking system competitiveness and performance in order to identify underlying factors of influence on the Saudi banking performance. The findings of this study will shed some lights and contribute to the literature on financial liberalization, foreign bank entry and financial development in Saudi Arabia as well as other GCC countries and should be of interest to researchers, practitioners, and policy makers as well as government officers.

### 3. Project No. IN100003

Principal Investigator: Dr. Basheer Chanbasha  
Co-Investigator #1: Dr. Khalid Al-Hooshani  
Co-Investigator #2: Dr. Abdulaziz Al-Saadi

**Title: Development of Application of Electro mediated Extraction (EME) followed by High-performance Liquid Chromatography Ultraviolet Detection for the Determination of Poenoxy Herbicides in Water**

#### **Abstract**

The objective of this project is to develop a novel analytical technique for the extraction and preconcentration of phenoxy herbicides from water samples. The proposed methodology

electromediated extraction (EME) technique is based on applying a direct electrical current across a thin layer of toluene solution which serves as an artificial supported liquid membrane (SLM). The analytes (phenoxy herbicides) will be extracted by stirring of (approximately 25 ml) of sample solution at around 450 rpm. Phenoxy herbicides analyte will migrate through the supported polypropylene membrane into a (150- $\mu$ l) 0.5-M phosphate buffer. The transport resulting in the electrokinetic migration of the analytes from the donor compartment to the acceptor compartment will be due to the electrical potential difference sustain over the membrane. After extraction, samples will be injected into a high performance liquid chromatography (HPLC) and would be detected by an ultraviolet (UV) spectrophotometric detector and Raman spectroscopy. Optimum conditions for extraction and analyses will be investigated.

**4. Project No. IN100004**

**Principal Investigator: Dr. Reza F. Agdam**

**Co-Investigator #1: Dr. Talat Ulussever**

**Co-Investigator #2: Dr. Musen Al-Hejji**

**Title: Impacts of Electricity Reforms on Macro-economic Growths: An Application of the Ad Hoc Panel Data Modeling**

**Abstract:**

This study aims to develop an ad hoc econometric model with a view to analyze the impacts of electricity industry reforms of the 1990s on macroeconomic growth in a selection of countries, using a panel dataset. During the 1990s, many countries started to reform their electricity industry. These reforms have significantly changed institutional facet of the industry in many countries. The principle rationale behind these reforms – world over – has been that such reforms will improve the productivity of the industry and ultimately will enhance social well-being of people. It is of great importance for every country to consider electricity industry reform on the basis of some rigorous empirical studies that can support this rationale. Impacts of electricity industry reforms are mainly captured by employing Computable General Equilibrium (CGE) Models, on the basis of various counterfactuals, under country-specific datasets. CGE models are complicated tools and are extensively time and data intensive. Ad hoc econometric models hold some advantages that might shed lights on, and contribute to the literature. Having its own limitations, econometric models are free from prior counterfactuals and rather allow for hypothesis-testing by developing appropriate behavioral equations for variables within a suitable panel dataset. Apart from potential methodological lessons, findings of this study will be significantly useful from policy making point of view, world over. The findings should be of interest to researchers, practitioners, policy makers, regulators and planners alike

**5. Project No. IN100005**

**Principal Investigator: Dr. Abdallah M. El-Amin**

**Co-Investigator #1: Dr. Marwan Al-Quran**

**Title: Relationships among Organizational Justice, Trust and Organizational Citizenship Behavior: A Study of Employees in Manufacturing Private and State-Owned Enterprises in Saudi Arabia**

**Abstract:**

This research intends to examine the relationships among organizational justice, trust and organizational citizenship behavior (OCB) of employees in private and state-owned manufacturing enterprises in Saudi Arabia. We hypothesize different dimensions of organizational justice are related to trust in organization and trust in supervisor, which will in turn affect employees' organization citizenship behavior. Some of these relationships are hypothesized to be different in state-owned enterprises and private undertakings owing to the differences in management practices and employment relationships between them. To test hypotheses, two samples of data will be collected from both private and state-owned enterprises in Saudi Arabia. Five enterprises from each sector will be selected and contacted. To make samples more comparable, the researchers will target factory workers, specifically, production-line workers, clerks, technicians, foremen, and production supervisors in both sectors. The data will be collected from both employees and their immediate supervisors (supervisor – subordinate dyads). Responses about organizational justice, trust in organization, and trust in supervisor will be obtained from subordinates. The immediate supervisors will be asked to evaluate the level of organizational citizenship behavior of their subordinates. To measure these constructs, different scales will be adopted from the existing literature. The researchers will use LISREL program to test the relationships among the different research constructs. The results will be discussed in the light of the existing literature review and the Saudi Arabian work context. The discussion will result in some theoretical implications that contribute to the existing body of the literature, as well as, some practical implications that contribute to the better understanding of these relationships by the management of organizations. Limitations of the present study and future research directions will also be highlighted.

**6. Project No. IN100006**

**Principal Investigator: Dr. Boubaker Smii**

**Title: Summability of the Solution of the Generalized KPZ Equation**

**Abstract:**

There has recently been increasing interest in solving stochastic partial differential equations driven by Levy noise, see e.g, [2]. Graphical solutions of such SPDE's are less well known and were first investigated by [5] and where the authors gave a perturbative solution of the SPDE in terms of Generalized Feynman graphs and rules in the spirit of the Parisi-Wu method but without any control on the summability of the series, this was critic in Mathematics point of view. It is there fore natural to ask for a method which makes us able to solve this summability problem. Our main object in this project is to study a generalized Kardar-Parisi-Zhang (KPZ) equations, a graphical solution is then given. We discuss the convergence of the obtained solutions, this can be done by the well known Watson's theorem on Borel summability.

**7. Project No. IN100007**

**Principal Investigator: Dr. Nasser-eddine Tatar**

**Title: Second Order Fractional Evolution Differential Equations**

**Abstract:**

Of concern is an abstract second order evolution differential problem involving derivatives of non-integer order. This abstract and general problem includes as special cases many interesting classes of problems arising in many fields of sciences and engineering. We intend to develop further the already existing theory for integer order derivatives to non-integer order derivatives. This investigation will cover different types of nonlinearities and different types of initial conditions. In particular, we will introduce fractional non-local conditions which are the natural generalization of the usual non-local conditions involving the solution and/or its first order derivative. Reasonable sufficient conditions on the nonlinearities as well as on the initial data and the solutions will be sought in order to ensure the existence and uniqueness of mild and eventually classical solutions. The main tools and techniques we start with are the existing ones which are the theory of cosine families of operators, several fixed point theorems and fractional calculus.

**8. Project No. IN100008**

**Principal Investigator: Dr. Jawad Abuihlail**

**Title: Monads and Comonads in Varieties**

**Abstract:**

In this project we consider monads and comonads in arbitrary varieties and use them to develop a theory of algebras and coalgebras in the varieties under consideration. We also study the categories of modules and comodules of these algebras and coalgebras, respectively. In particular, we study monads and comonads in autonomous (entropic) varieties in which an internal tensor product can be constructed in such a way that it becomes left adjoint to the internal hom functor and so monads and comonads arise naturally. Applications will be given to categories of semi-modules over (commutative) semi-rings and to categories of near-bimodules over near-rings.

**9. Project No. IN100009**

**Principal Investigator: Dr. Soliman Al-Homidan**

**Consultant: Dr. Qamrul Hasan Ansari**

**Title: Generalized Invexity, Non-Smooth Vector Optimization and Vector Variational-like Inequalities**

**Abstract:**

The present project is in the continuation of our previous project entitled “Multi-objective Optimization and Vector Variational Inequalities” which has been completed successfully. The vector optimization problem (in short, VOP), also called multi-objective optimization problem, plays a vital role in multiple criteria decision making problems. The VOP with non-smooth objective function is called non-smooth vector optimization problem (in short, non-smooth VOP). There are several techniques and methods to prove the existence of an efficient or weak efficient solution of VOP or non-smooth VOP. The theory of vector variational inequalities is one of the very powerful tools to establish the existence of an efficient or weak efficient solution as well as to develop some algorithm to compute the approximate solutions of VOP and non-smooth VOP. This theory is a relatively young discipline. Apparently, one of the main bases for its development was the pioneer work of F. Giannessi in 1980 on the theorems of alternatives with applications to vector extremum problems. Later, this theory has been extensively studied by many researchers. In the recent

past, VOP and non-smooth VOP have been studied by using VVI and vector variational-like inequalities; See, for example, [1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 15, 16, 21, 23, 24, 25, 26, 28, 32, 33, 37, 39] and references therein. In this project, we shall first develop a theory of invexity involving Dini derivatives or Clark derivatives. Then we shall consider a generalized form of VVI, known as vector variational-like inequality (in short, VVLI) for the functions which are neither differentiable nor convex. The formulations of our vector variational / variational-like inequalities will contain the Dini derivative or Clark derivatives. By using the known Mean Value Theorem (in short, MVT) for Dini derivatives or Clark derivatives, we shall establish some relationships between non-smooth VOP and VVLI (both Minty type and Stampacchia type) involving Dini derivatives and Clark derivatives. We also intend to study MVT for some kind of subdifferential involves Dini derivatives. By using such MVT, we shall try to develop the whole theory of generalized vector variational-like inequalities (in short, GVVLI) involving such subdifferential. We shall study the relationship between non-smooth VOP and GVVLI. By using such relationships, we shall study the existence of solutions of GVVLI and non-smooth VOP.

**10. Project No. IN100010**

**Principal Investigator: Dr. Bernard Ee**

**Title: Models of Transcritical Flows Generated by Plateaus and Holes**

**Abstract:**

This project aims to develop a parametric map that comprises the coefficients of the forced extended KdV equation which allow steady hydraulic solutions. Upon obtaining such a parametric map, the next step is to classify the stability of these steady solutions according to the respective parametric maps. This will make the results more useful and relevant to studies which seek a hydraulic solution to transcritical flows in a contraction (which can be used to model flows in straits) whose width and depth perturbations resemble plateaus or holes. Flow of ocean water through narrow straits contributes substantially to the circulation of the ocean. Though the amount of water travelling through these straits is not large (compared with the volume of the ocean), they play a role in regulating the density distribution of the ocean. As flow through straits is not well resolved by climate models, it can be predicted by internal hydraulic theory, which is the theoretical basis of this project.

**11. Project No. IN100011**

**Principal Investigator: Dr. U.H. Asrar Sheikh**

**Co-Investigator #1: Dr. M.A. Haleem**

**Co-Investigator #2: Mr. Saqib Sohail**

**Consultant: Dr. Yu Dong Yao, USA**

**Title: TUA Access Protocols for FU-FB Over Frequency Selective Channels**

**Abstract:**

The main focus of this proposal is to build a tractable analytical framework suitable for analyzing and evaluating the performance of access methods for multimedia applications where voice, data, and image traffic are integrated in the form of packets and each of the finite number of users has a finite buffer size. The validity of the analytical framework under realistic propagation environments such as frequency selective fading (multipath) wireless

channel is to be tested using software simulations. The analytical frame work to be built is expected to be suitable for analyzing the performance during the transience and steady state of a random access channel (RACH) such as in the case of the uplink of a 3G wireless cellular system and WiFi. While the work done so far in this regard has been for a single channel, we propose to investigate the resource assignment aspect where a finite set of users with finite buffer size contend for a finite set of channels. Set of channel in this context refers to a set of orthogonal codes as in code division multiple access (CDMA) systems or a set of frequency channels as in time division multiple access (TDMA) systems. The problem of analyzing random access protocols for modest number of users and buffer sizes over ideal channels is a challenging problem. The Markovian state-space, Equilibrium Point Analysis (EPA), and other variations of these have been proposed but these are either too complex or have other limitations. Furthermore, each system setup requires that the analysis start from basic queuing principles rather than using the existing queuing theory results. Tagged User Analysis (TUA) is an approximate analysis method, which uses rich collection of queuing results but delivers reasonably accurate results. TUA makes the fundamental assumption of system equilibrium whereby the behaviours of all users are statistically identical. TUA has been successfully applied to the analyses of ALOHA, S-ALOHA, CDMA/CD, and PRMA for FUFB over ideal channels in the past and more recently, the TUA technique was extended to study of ALOHA, Slotted ALOHA and CSMA operating over fading channels. This proposal investigates four important problems related to TUA. These are – degree of approximation of TUA, transient behaviour of TUA, performance analysis of FU-FB systems in the presence of channel frequency selectivity and finally to apply TUA in the analysis of source management in multimedia communications.

**12. Project No. IN100012**

**Principal Investigator: Dr. Mohamed S. Mahdi**

**Title: The Use of International Electronic Banking Services in Saudi Arabia**

**Abstract:**

This study reports on empirical research that would be conducted in Saudi Arabia to examine the use of international electronic banking services in Commercial Banking sector of Saudi Arabia. Initial investigation reveals insufficiency of research in the field of management of information technology (IT) and change in developing economies, and that there is little information about the development and use of international electronic banking services in the Saudi banks. In general, banks operate in an information system context whereby financial institutions are critically dependent on information technology (IT) activity for their daily operations. However, selecting one industry sector such as Saudi banking industry, rather than different industries, offers some advantages to research since respondents in the same industry are working in similar surroundings and are more likely to have similar skills and backgrounds that may promote homogeneity of the data. Saudi banking industry in the eastern region has been identified as an industry that plays a crucial role in the economic development of the country as well as providing valuable electronic banking services to both indigenous people and huge number of expatriates residing and working in the eastern region of the kingdom. The project is outlined in accordance with KFUPM guidelines for internal research grants as follows: introduction, project objectives, literature review, research methodology, project execution, personnel requirements, monitoring and evaluation, utilization plan, proposed budget, list of references, and Resumes. This study will focus on investigating and presenting findings on the use of international electronic banking services in



Saudi commercial banks in the eastern region of the kingdom. The literature indicates how the continuity and availability of electronic banking services depends entirely upon the employment of technology. In investigating factors that impact on the employment of electronic banking services in Saudi banks, the project aims at examining the use of electronic banking services comprising ATMs, SWIFT, credit cards, telephone/mobile, interbranch online, and internet banking services in the Eastern Region of Saudi Arabia including Dhahran, Khobar, Dammam and Jubail. The design for the study will use mixed research methodology which included quantitative and qualitative techniques. Data will be collected by means of distributing questionnaires through employment of undergraduate(s) graduate research assistant(s) and conduct interviews (if possible) with banks' respondents including managers, staff and customers. The implication of this study will be vital in helping Saudi banking managers to evaluate the kinds/types of electronic banking services provided to customers by their banks, identify methods of improving the level and quality of services offered to their customers, and also implement the electronic banking services based upon a hierarchical ranking of their importance. In completion, it is hoped that the project enhances our theoretical understanding of the use of electronic banking technology in a developing country. Also enhances the contribution of King Fahd University of Petroleum & Minerals (KFUPM) to society by linking research activities with society's needs and more exposure of society needs to faculty members at KFUPM.

### 3. RESEARCH/BOOK-WRITING PROJECTS CURRENTLY SUPPORTED BY THE UNIVERSITY

College / Department -----	Principal Investigator / Co-Investigator(s) -----	Title of the Project and its Code -----
<b>College of Engineering Sciences</b>		
Aerospace Engineering	<b>Dr. Ahmad Z. Al-Garni (AE)</b> <b>Dr. Aymen H. Kassem (AE)</b>	Outdoors Economic Cooling System <b>(IN10001)</b>
Chemical Engineering	<b>Dr. Usamah Al-Mubaiyedh</b>	The Stability and Dynamics of Non-Isothermal Taylor-Coutte Flow: Influence of Viscous Heating, Buoyancy and Fluid Thermal Sensitivity <b>(CHE/TAYLOR-LOW/262)</b>
Chemical Engineering	<b>Dr. Nadhir Al-Baghli</b>	Photooxidation of MTBE in the Presence of Hydrogen Peroxide <b>(CHE/MTBE/275)</b>
Chemical Engineering	<b>Dr. Saleem ur Rahman (Che)</b> <b>Dr. Ahmad Yamani (EE)</b>	Development of Solid-Liquid Mass Transfer Probe Based on Limiting Diffusion Current: Application to Stirred Tanks <b>(CHE/MASS/302)</b>
Chemical Engineering	<b>Dr. Ramazan Kahraman</b> <b>Dr. Saleem ur Rahman</b> <b>Dr. Mesfer Al-Zahrani (CE)</b> <b>Dr. Salah Al-Dulaijan (CE)</b>	Corrosion Investigation of Stainless Steel and Stainless Steel Clad Reinforcing Bars <b>(CHE/STEEL/ 320)</b>
Chemical Engineering	<b>Dr. Habib Al-Ali</b> <b>Dr. Habib Zughbi</b> <b>(Consultant)</b>	Investigation of the Hydrodynamics of a Moving Bed Reactor. <b>(CHE/MOVING BED/328)</b>
Chemical Engineering	<b>Dr. Saleem ur Rahman (Che)</b> <b>Dr. O.S.B. Al-Amoudi (CE)</b> <b>Dr. Shamshad Ahmad (CE)</b>	An Exploratory Study on Corrosion Protection of Reinforcing Steel in Concrete Using Conducting Polymers <b>(CHE/POLYMER/329)</b>

<b>College / Department</b> -----	<b>Principal Investigator / Co-Investigator(s)</b> -----	<b>Title of the Project and its Code</b> -----
Chemical Engineering	<b>Dr. Javaid Z.M. Zaidi (Che)</b> <b>Dr. Ibnelwaleed Hussain (Che)</b> <b>Dr. Usamah Mubaiyedh (Che)</b>	Separation of Binary Organics Mixtures Using Novel Composite Polymeric Membranes by Pervaporation <b>(CHE/Binary/341)</b>
Chemical Engineering	<b>Dr. Ibnelwaleed Hussein,</b> <b>Dr. Basel F. Abu Sharkh,</b> <b>Dr. Muhammad Al-Arfaj,</b> <b>Dr. João B.P. Soares,</b> <b>Professor of Chemical Eng., University of Waterloo, Canada</b>	Synthesis; Solution, Melt, and Solid-State Properties; and Modeling of Metallocene Polyolefins with Controlled Long Chain Branching <b>(CHE/Metallocene/347)</b>
Chemical Engineering	<b>Dr. Muataz Ali Atieh</b>	Production of Carbon Nanotubes (CNTs) by Using Fluidized Bed Chemical Vapor Disposition (FB-CVD) for Nanotechnology Application <b>(CHE/VAPOR/449)</b>
Civil Engineering	<b>Dr. Ali Al-Gadhib</b>	Numerical Simulation of the Evolved Physico-Chemical Distress in Concrete Repairs and Concrete Structures (Sabbatical Leave) <b>(CE/CONCRETE/313)</b>
Civil Engineering	<b>Dr. M.H. Baluch</b> <b>Dr. Ali Al-Gadhib</b> <b>Dr. Ahmad S. Al-Gahtani</b> <b>Dr. M. Kalimur Rahman</b>	Engineering Guidelines for Application and Design of Prestressed Precast Hollow Core Concrete Slabs Strengthened with CFRP Sheets <b>(CE/Design/336)</b>
Civil Engineering	<b>Dr. Husain J. Al-Gahtani</b> <b>Dr. Faisal Fairag (Math)</b>	Application of Radial Basis Functions to Incompressible Solids and Fluids <b>(CE/IN080411)</b>

<b>College / Department</b> -----	<b>Principal Investigator / Co-Investigator(s)</b> -----	<b>Title of the Project and its Code</b> -----
Civil Engineering	<b>Dr. Nedal Ratrout</b>	A Proposed Procedure for Determining Time-of-Delay (TOD) Breakpoints Using Clustering Technique under Local Traffic Conditions <b>(CE/TRAFFIC/433)</b>
Civil Engineering	<b>Dr. Salah Al-Dulaijan Dr. Mohammad Maslehuddin Dr. Mohammad Al-Zahrani</b>	Performance Evaluation of Corrosion-Resistant Reinforcing Steel Bars-Service Life Prediction and Service Life Cost <b>(CE/STEEL/465)</b>
Civil Engineering	<b>Dr. Mohd. Maslehuddin Dr. Luai Al-Hadrami –ME Dr. Salah Al-Dulaijan-CE</b>	Evaluation of Mechanical Properties and Durability of Electric Arc Furnace Slag: Aggrégate Concrete <b>[CE/ARC/472]</b>
Electrical Engineering	<b>Dr. Mohammad Landolsi Dr. Wajih Abu-Al-Saud Engr. Ahmad Abul-Hussain</b>	Development of a Software-Defined Radio Platform for Communication System Design <b>(EE/Platform/332)</b>
Electrical Engineering	<b>Dr. Tarek Y. Al-Naffouri</b>	Broadcasting Data to Multiple User Groups: Information Theoretic Investigation of the wide Band Case <b>(EE/Data/373)</b>
Electrical Engineering	<b>Dr. Mohammad Abido Dr. Ibrahim El-Amin Dr. A.H. Abdur Rahim Dr. Ibrahim Habiballah</b>	Static Synchronous Compensator-based Stabilizer Design and Implementation <b>(EE/DESIGN/450)</b>
Electrical Engineering	<b>Dr. M.H. Shwehdi Dr. Mohammad Gondal Mr. Umar Jauhar (EE)</b>	Identifying the Causes of Low Voltage Cable Outages by Applying Explicit Measures and Laser Induced Breakdown Spectroscopy (LIBS) <b>(EE/VOLTAGE/427)</b>

Electrical Engineering	Dr. Yahya Al-Harthi	Opportunistic Distributed Algorithms for Medium Access (EE/Medium/463)
<b>College / Department</b> -----	<b>Principal Investigator / Co-Investigator(s)</b> -----	<b>Title of the Project and its Code</b> -----
Mechanical Engineering	Dr. Nesar Merah Dr. Zafarullah Khan and Dr. Abdulaziz Bazzoune	Natural and Accelerated Weathering Effect of Tensile and Impact Properties of CPVC Pipe Material (ME/Tensile/407)
Mechanical Engineering	Dr. Mohammad Hawwa	Ultrasonic Characterization of Inhomogeneous Cladded Plates (ME/Ultra/431)
Mechanical Engineering	Dr. Mohammad Antar Dr. Rached Ben Mansour Dr. Salem Al-Dini	Fluid Flow and Heat Transfer Characteristics in a Varying Speed Lid-Driven Cavity (ME/CAVITY/428)
Mechanical Engineering	Dr. S.A.M. Said Dr. M.A. Habib Dr. T.Y. Ayinde	Characterization of Natural Convection Heat Transfer in an Array of Discrete Heat Sources (ME/HEAT/438)
Mechanical Engineering	Dr. Mohammad Antar Dr. S.F. Ahmad	Experimental and Theoretical Investigations of Knock Tendency and Emissions of a Spark Ignition Engine Fueled with Gasoline Octane 91 and 95 (ME/SPARK/444)
Mechanical Engineering	Dr. S.A.M. Said Dr. M.A. Habib Dr. T.F. Ayinde	Experimental Investigation of Flow Mal-Distribution in Air Cooled Heat Exchangers (ME/Flow/447)
Mechanical Engineering	Dr. Abdesalam Al-Sarkhi Dr. Luai Al-Hadhrami	Study of Oil-Water Flows in a Horizontal Pipeline (ME/Oil-Water/448)
Mechanical Engineering	Dr. Mehmet Sunar Dr. Khalid Al-Dheyman	Analysis of Functionally Graded Thermopiezoelectro-Magnetic Materials (ME/MAGNET/451)
Mechanical Engineering	Dr. Ahmet Sahin Dr. Bekir Sami Yilbas	The Effect of Viscosity Variation in Thermodynamic Analysis of Fluid

Flow  
(ME/FLUID FLOW/462)

College / Department -----	Principal Investigator / Co-Investigator(s) -----	Title of the Project and its Code -----
Mechanical Engineering	<b>Dr. Yagoub Al-Nassar</b> <b>Dr. Mohammad Hawwa</b>	Wave scattering at a tapered free end of an elastic plate <b>(ME/wave/476)</b>
Mechanical Engineering	<b>Dr. Abdelsalam Al-Sarkhi</b> <b>Dr. Meamer El Nakla</b> <b>Dr. Wael Ahmed</b>	Effect of Drag Reducing Polymers in Multiphase Flow: Theoretical Approach <b>(ME/Drag/481)</b>
Hafr-al-Batin Community College	<b>Dr. Belloui Bouzid</b> <b>Dr. Mohammad Nazeh</b> <b>Dr. Khan Hamdullah</b>	Theoretical Modeling and Experimental Analysis of Novel and Efficient Eribum Fiber Laser (EDFL) and Eribum Doped Fiber Amplifier <b>(HAFR/FIBER/429)</b>
<b>College of Comp. Sci. &amp; Engg.</b>		
Information & Computer Science	<b>Dr. Mahmoud Elish</b>	A Measurement Framework for Aspect-Oriented Systems <b>(ICS/ASPECT/420)</b>
Information & Computer Science	<b>Dr. Wasfi Al-Khatib</b> <b>Dr. Sabri A. Mahmoud</b>	Toward Content-Based Indexing and Retrieval of Arabic Manuscript <b>(ICS/INDEX/325)</b>
Information & Computer Science	<b>Dr. Mohammad Al-Shayeb</b>	Classification of Aspect Oriented Refractoring Methods Based on Software Quality Attributes <b>(ICS/Aspect/446)</b>
Information & Computer Science	<b>Dr. M. Sarfraz</b> <b>Dr. Sabri A. Mahmoud</b>	Toward Content-Based Indexing and Retrieval of Arabic Manuscript <b>(ICS/Optical Test/337)</b>
Information & Computer Science	<b>Dr. Khaled Salah</b> <b>Dr. Mohammad Sqalli</b>	Intelligent Firewall DoS Attacks and Countermeasures

(ICS/Fire-Wall/361)

<b>College / Department</b> -----	<b>Principal Investigator / Co-Investigator(s)</b> -----	<b>Title of the Project and its Code</b> -----
Information & Computer Science	<b>Dr. Farag Azzedin</b>	I/O Request Handling in Web Servers: Issues and Solutions <b>(ICS/WEB/430)</b>
Information & Computer Science	<b>Dr. Farag Azzedin Dr. Sajjad Mahmoud</b>	Trust Model for Context-Aware Systems: An Aspect-oriented Approach <b>(ICS/Trust/483)</b>
Computer Engineering	<b>Dr. Muhammad El-Rabaa Dr. Abdelhafid Bouhraoua</b>	Developing a Network-on-Chip for Field Programmable Gate Arrays <b>(COE/GATE/367)</b>
Computer Engineering	<b>Dr. Aimen El-Maleh Dr. Ahmad Al-Yamani</b>	Transistor-Level Defect Tolerant Digital System Design at the Nanoscale <b>(COE/Nanoscale/387)</b>
Computer Engineering	<b>Dr. Mohamed F. Mudawar Dr. Abdelhafid Bouhraoua Dr. Abdul Rahim Nasser</b>	The Design and Simulation of a Multicore Vector Processor <b>(COE/IN080394)</b>
Computer Engineering	<b>Dr. Uthman Baroudi</b>	Distributed Self-Healing Algorithms for Wireless Sensor and Actor Networks <b>(COE/Sensor/437)</b>
Computer Engineering	<b>Dr. Tarek Sheltami</b>	Wireless Sensor Networks in the e-Society (Release Time Project) <b>(COE/Sensor/478)</b>
Systems Engineering	<b>Dr. Umar Al-Turki Dr. Shokri Z. Selim Dr. Abdulbasit Andijani</b>	On Stochastic Single Machine Early-Tardy Scheduling <b>SE/SCHEDULE/191</b>
Systems Engineering	<b>Dr. Malick Ndiaye</b>	Locating Facilities with Various Distance Functions

(SE/LOCATION/307)



<b>College / Department</b> -----	<b>Principal Investigator / Co-Investigator(s)</b> -----	<b>Title of the Project and its Code</b> -----
Systems Engineering	<b>Dr. Salih O. Duffuaa Dr. Mohammad Darwish Dr. Ahmed Haron</b>	Multi-Objective Mathematical Models for Process Targeting <b>(SE/MATH MODEL/321)</b>
Systems Engineering	<b>Dr. Muhammad Shafiq Dr. Fouad Al-Sunni</b>	Adaptive Tracking of Non-Minimum Phase Discrete-Time Plants Using Inverses of Signals <b>(SE/DISCRETE TIME/323)</b>
Systems Engineering	<b>Dr. Mohammad Ben Daya Dr. Salih Duffuaa Dr. Abdul Raouf</b>	Maintenance Engineering and Management (Book Editing Project) <b>(SE/Maint.Mgt/331)</b>
Systems Engineering	<b>Dr. Chawki Fedjki Dr. Salih Duffuaa</b>	Heuristics for QAP Using a Characterization of a B-Local Star Minimum <b>(IN080391)</b>
Systems Engineering	<b>Dr. Ammar Khoukhi Dr. Fouad Al-Sunni</b>	A Hybrid-Multi-Agent System for Intelligent Distributed Control of Collaborative Robots <b>(SE/HYBRID/441)</b>
Systems Engineering	<b>Dr. Magdi Mahmoud and</b>	Switched Time-Delay Systems [Bookwriting Project] <b>(SE/Stabilization/461)</b>
Systems Engineering	<b>Dr. Moustafa El-Shafei</b>	Modern Distributed Computer Control Systems <b>(SE/Control/474)</b>
<b>College of Industrial Management</b>	<b>Dr. Haider Madani</b>	An Industry-Experience Leave at the World Bank: Learning About the Role of Auditing in Enforcing Compliance to Effective Accounting Disclosure and Corporate Governance <b>(CIM/AUDIT/425)</b>
Accounting & MIS		

College / Department -----		Principal Investigator / Co-Investigator(s) -----	Title of the Project and its Code -----
Department Management Marketing	of &	<b>Dr. Alhassan Abdulmuhmin Mr. Irfran Ilyas (Mgt &amp; Mkt)</b>	Awareness, Adoption and Maturity Level of Customer Relationship Management (CRM) Practices in Saudi Companies <b>(CIM/Customer/338)</b>
Department Management Marketing	of &	<b>Dr. Mansour Murad (Management &amp; Marketing)</b>	An Empirical Study on the Factors Influencing Employer Decisions in Hiring and Retaining Individuals with Disabilities in the Arab World <b>(Mgt/Hiring/349)</b>
Department Management Marketing	of &	<b>Dr. Mourad Mansour Dr. Mustapha Achoui</b>	Gender and Job Satisfaction among Employees in Saudi Arabia <b>(MGT/Gender/381)</b>
Department Management Marketing	of &	<b>Dr. Roland Yeo Dr. Mohammad Youssef</b>	Knowledge Sharing Behavior in Organizational Contexts: The Case of Saudi Arabia <b>(CIM/KNOWLEDGE/443)</b>
Department Management Marketing	of &	<b>Dr. Mohammad Youssef Dr. Roland Yeo</b>	A Structural Equation Modeling Approach to Study the Factors that Influence Customers' Intention to Adopt Internet Banking in Saudi Arabia <b>(CIM/INTERNET/452)</b>
Department of Management & Marketing		<b>Dr. M. Sadiq Sohail</b>	Marketing Strategy, Related Factors and Performance of Firms in Saudi Arabia: An Examination of Their Relationships <b>(CIM/IN080409)</b>

<b>College / Department</b> -----	<b>Principal Investigator / Co-Investigator(s)</b> -----	<b>Title of the Project and its Code</b> -----
Department of Management & Marketing	<b>Dr. Razali Matt Zin Dr. Obaid M. Al-Shuraidah</b>	Ethical Orientations Among Saudi and Malaysian Undergraduate Students: A Comparative Study <b>(CIM/ETHICAL/412)</b>
Department of Management & Marketing	<b>Dr. M. Sadiq Sohail Dr. Obaid Al-Shuraidah</b>	The Influence of Product Modularity on Competitive Performance: An Empirical Investigation <b>(CIM/EMPIRICAL/440)</b>
Department of Management & Marketing	<b>Dr. Mohammad Youssef Dr. Mohammad Al-Bureay Dr. Mourad Mansour</b>	The Synergistic Impact of ISO 9000 and TQM on Product Quality, Inventory Turns and Time-Based Performance <b>(CIM/SYNERGY/466)</b>
Department of Management & Marketing	<b>Dr. Mohammad Asad Sadi</b>	Barriers Towards Business Entrepreneurship: A Focus on Saudi Arabia and Bahraini Businesswomen <b>(CIM/Entrepreneurship/469)</b>
Department of Management & Marketing	<b>Dr. Salem Alghamdi</b>	The impact of Globalization on Auto Car Business: Empirical Investigation on Saudi Consumers <b>(CIM/Autocar/482)</b>
Department of Management & Marketing	<b>Dr. Abdallah M. El-Amin and Dr. Marwan Al-Quran</b>	Relationships among Organizational Justice, Trust and Organizational Citizenship Behavior: A Study of Employees in Manufacturing Private and State-Owned Enterprises in Saudi Arabia <b>(MGT/TRUST/488)</b>
Department of Finance & Economics	<b>Dr. Mohammad Al-Sahlawi</b>	An Alternative Oil Pricing Currency to Impact OPEC's Economies and the US Geopolitical Power <b>(IM/OIL PRICING/424)</b>

<b>College / Department</b>	<b>Principal Investigator / Co-Investigator(s)</b>	<b>Title of the Project and its Code</b>
Department of Finance & Economics	<b>Dr. Reza F. Aghdam Dr. Talat Ulussever and Dr. Musen Al-Hejji</b>	Impacts of Electricity Reforms on Macro-economic Growths: An Application of the Ad Hoc Panel Data Modeling <b>(FIN/DATA/487)</b>
Chemistry	<b>Dr. Anvarhusain Isab Dr. Mohammad I.M. Wazeer (Chemistry)</b>	Synthesis of Gold(III)-Diamines complexes and their Interactions with Biological Molecules Studies by solid and solution NMR <b>(CY/GOLD/374)</b>
Chemistry	<b>Dr. Bassam El-Ali Dr. Jimoh Tijani (Chemistry)</b>	Rhodium-Catalyzed one Pot Hydroformylation-Cyclization Reactions of Allybenzene Derivatives <b>(CY/BENZENE/379)</b>
Chemistry	<b>Dr. Anvarhusain Isab Dr. Mohammad I.M. Wazeer (Chemistry)</b>	Redox and Ligand Exchange Reaction of Gold(III) Cyanide and Gold(III) Seleno-Cyanide with Various Biologically Important Ligands <b>(CY/LIGAND/421)</b>
Chemistry	<b>Dr. Sasa Antonijevic (Chem) Dr. Zain Yamani (Physics)</b>	Probing Dynamics of Nanotubes: Water Molecules by 2H Solid-State NMR Spectroscopy <b>(CY/Nanotubes/465)</b>
Chemistry	<b>Dr. Abdulaziz Al-Saadi (Chem) Dr. Nissar Ullah (Chem)</b>	Conformational Properties and Vibrational Assignments of 2- methoxyresorcinol and 4,6- Dihaloresorcinols: Experi- mental and ab initio study <b>[CY/AB-INITIO/471]</b>

Chemistry	<b>Dr. Abdulrahman Al-Arfaj</b> <b>Dr. M. Nahid Siddiqui</b>	Problem of Solving for Freshman Chemistry I <b>[CY/Problems/470]</b>
Chemistry	<b>Dr. Basheer Chanbasha,</b> <b>Dr. Khalid Al-Hooshani</b> <b>and</b> <b>Dr. Abdulaziz Al-Sadi</b>	Development of Application of Electro mediated Extraction (EME) followed by High-performance Liquid Chromatography Ultraviolet Detection for the Determination of Poenoxy Herbicides in Water <b>(CY/EXTRACTION/486)</b>
Earth Sciences	<b>Dr. Mohammad Makkawi</b>	Groundwater Resources and Environmental Management: Industrial Experience in Modeling Groundwater Aquifers <b>(ES/GROUND-WATER/290)</b>
Mathematical Sciences	<b>Dr. Abdeslem Lyaghfour</b> <b>(Math)</b>	On the Continuity of the Free Boundary in a Class of Elliptic Free Boundary Problems with Neumann Boundary Condition <b>(MS/Neumann/333)</b>
Mathematical Sciences	<b>Dr. Abdulrahman Alshuaibi</b> <b>(Math)</b>	Regularization and the Inverse Laplace Transform (Sabbatical leave proposal) (Host Institute: University of West Georgia, USA) <b>(MS/Laplace/354)</b>
Mathematical Sciences	<b>Dr. Said Berrimi (DCC)</b> <b>Dr. Salim Messaoudi</b>	Study of Decay in Some Thermoelastic Systems <b>(MS-DCC/Decay/360)</b>
Mathematics & Statistics	<b>Dr. Steven Binns</b>	Algorithmic Complexity and Effectivity Closed Classes <b>(MS/IN080410)</b>
Mathematics & Statistics	<b>Dr. Hassen Muttalak</b> <b>Dr. Farah Saleh</b> <b>Mr. Abu-Jiya</b>	Stein-Type Estimation Using Replicated Ranked Set Sampling <b>(MS/STEIN/413)</b>

<b>College / Department</b>	<b>Principal Investigator / Co-Investigator(s)</b>	<b>Title of the Project and its Code</b>
Mathematics & Statistics	<b>Dr. A. Mimouni</b>	Compact and Coprime Packedness and Star Operations <b>(MS/STAR/436)</b>
Mathematics & Statistics	<b>Dr. Ahmed Bouketir Dr. H. Bahlouli (Physics)</b>	Intrinsic Localized Vectorial Modes in BEC and Optical Waveguide Systems with Cubic- Quintic Nonlinearity <b>(MATH/WAVEGUIDE/439)</b>
Mathematics & Statistics	<b>Dr. Salim Messaoudi (Mathematics &amp; Statistics)</b>	General Boundary Stabilization in Thermo-Elasticity <b>(MS/BOUNDARY/445)</b>
Mathematics & Statistics	<b>Dr. Assane Lo</b>	Decay of Correlations for Certain Classical Unbounded Models <b>(MS/DECAY/442)</b>
Mathematics & Statistics	<b>Dr. Mihai Halic</b>	Semi-stable vector bundles over Fibred varieties <b>(MS/Vector/477)</b>
Mathematics & Statistics	<b>Dr. Mohammad Aslam Chaudhry</b>	Extension of Ramanujan's Interpolation Formula and Applications of His Master Theorem <b>(MS/Ramanujan/480)</b>
Mathematics & Statistics	<b>Dr. Boubaker Smii</b>	Summability of the Solution of the Generalized KPZ Equation <b>(MS/EQUATION/489)</b>
Mathematics & Statistics	<b>Dr. Nasser-eddine Tatar</b>	Second Order Fractional Evolution Differential Equations <b>(MS/ORDER/490)</b>
Mathematics & Statistics	<b>Dr. Jawad Abuihlail</b>	Monads and Comonads in Varieties <b>(MS/MONADS/491)</b>
Mathematics & Statistics	<b>Dr. Soliman Al-Homidan Dr. Qamrul Hasan Ansari (Consultant)</b>	Generalized Invexity, Non- Smooth Vector Optimization and Vector Variational-like Inequalities

(MS/Vector/492)

College / Department -----	Principal Investigator / Co-Investigator(s) -----	Title of the Project and its Code -----
Physics	<b>Dr. Nouar Tabet</b> <b>Dr. A. Mekki</b> <b>Dr. K. Mezghani (Mech Engg.)</b>	DC-Magnetron Sputtering Synthesis and Characterization of the Physical Properties of Zinc Oxide Thin Films <b>(PH/DC-MAGNETRON/299)</b>
Physics	<b>Dr. A.A. Naqvi (Phys)</b> <b>Dr.M.M. Nagadi (Phys)</b> <b>Dr. Omar Al-Amoudi (CE)</b> <b>Dr. M. Maslehuddin (RI)</b>	Measurement of Chloride Concentration in Silica Fume and Fly Ash Cement Concretes Using PGNAA Technique <b>(PH/FLY ASH/305)</b>
Physics	<b>Dr. A.K. Aksoy (Physics)</b> <b>Mr. Mohammad Raashid (Physics)</b>	Enhancement of Technical Capability of the 14 MeV FNAA Facility at KFUPM <b>(PH/FNAA Facility/357)</b>
Physics	<b>Dr. Khalil Ziq</b> <b>Mr. A. Ghannam</b> <b>Mr. A.F. Salem</b>	Magnetic Properties of ZnO-TM Semiconductor <b>(PH/Magnetic/364)</b>
Physics	<b>Dr. Abdullah Alsunaidi</b>	Dynamics and Morphology of Phase Separating Liquid-Crystal/Polymer Blends <b>(PH/Crystal/382)</b>
Physics	<b>Dr. Abdulaziz Aljalal</b> <b>Dr. Ibrahim Nasser</b> <b>Mr. Khateeb-ur-Rahman</b>	Manual Editing entitled General Physics: Multiple-Choice Questions: Waves, Thermodynamics, Electricity and Magnetism <b>(PH/Multiple Questions/384)</b>
Physics	<b>Dr. Mohammad Al-Kuhaili</b> <b>Dr. S.M.A. Durrani</b> <b>Dr. A.M. Al-Shukri</b>	Growth of Molybdenum Oxide Thin Films Using Pulsed Excimer Laser Deposition <b>(PH/FILM/434)</b>

<b>College / Department</b> -----	<b>Principal Investigator / Co-Investigator(s)</b> -----	<b>Title of the Project and its Code</b> -----
Physics	<b>Dr. Abdullah Al-Sunaidi Dr. Akhtar Naqvi Dr. M.I. Al-Jarallah Dr. Anvarhusain Isab</b>	Adsorption and Dissociation of Hydrogen Sulfide (H <sub>2</sub> S) on Functionalized ZnO Nanoparticles and Nanotubes : A Computational Study <b>(PH/NANO/435)</b>
Physics	<b>Dr. F.Z. Khiari (Phys) Mr. Khateeb-ur-Rahman, Mr. Rashid Mohammad, and Mr. Azad-ul-Islam</b>	Design and Test of a 14 MeV Neutrons Based Prompt Gamma Neutron Activation Analysis Set up to Determine H, C, N and O Elements Concentration in Bulk Samples with Low Atomic Number (Z) <b>(PH/Neutron/464)</b>
Islamic & Arabic Studies Department	<b>Dr. Abdul Karim Zahrani Dr. Moustafa El-Shafei Ahmed, Dr. Atef Al-Najjar, Dr. Essam Eid Abu- Gharbia, Dr. Saeed Ben Ali Al-Amri, Dr. Abdul-Majeed Al-Mubarak and Mr. Husni Al-Muhtaseb</b>	Automatic Voice Identification of Arabic Poetry Meters <b>(IAS/POETRY/426)</b>
<b>College of Environmental Design Architecture Department</b>	<b>Dr. Rabee Reffat (ARC) Dr. Emad El-Sebakhy (ICS)</b>	A Semantic Based Virtual Design Environment for Digital Designing in Architecture <b>(ARC/SEMANTIC/311)</b>
Architecture Department	<b>Dr. Rabee Reffat (ARC) Mr. Mir Sabeer Hamid Mr. Yaman Khaeruzzan (ICS)</b>	A Knowledge-Based Tool for Contextual-Based Assessment of Intelligent Buildings <b>(AR/Knowledge/405)</b>



<b>College / Department</b> -----	<b>Principal Investigator / Co-Investigator(s)</b> -----	<b>Title of the Project and its Code</b> -----
City & Regional Planning	<b>Dr. Adel Aldosary</b> <b>Mr. Khan Mohammad</b> <b>Nahiduzzaman</b> <b>Dr. Ali Al-Naser</b>	Socio-Cultural Analysis of Third Places Through GIS: A Case Study of Al-Khobar <b>(CRP/GIS/432)</b>
Construction Engineering & Management Dept.	<b>Dr. Ashraf El-Azzouni (CEM)</b> <b>Dr. Mohammad Abido (EE)</b>	Finance-Based Scheduling of Construction Projects Using Evolutionary and Heuristic Algorithms <b>(CEM/FINANCE/422)</b>
Construction Engineering & Management	<b>Dr. Ashraf El-Azouni (CEM)</b>	Simulation Approach for Scheduling Based on Fund Availability for Sustained Saudi Contracting Business <b>(CEM/Schedule/479)</b>
Architecture Department	<b>Dr. Hamoud Dehwah (ARE)</b> <b>Dr. Mohd. Maslehuddin (RI)</b> <b>Dr. Omar B. Al-Amoudi (CE)</b>	Optimization of Mix Design and Durability of Self-Compacted Concrete <b>(ARE/Concrete/343)</b>
College of Applied and Supporting Studies	<b>Dr. Shariefuddin Peerzada</b> <b>Dr. Abdulaziz Al-Assaf</b> <b>Dr. Koko Kaybi</b>	Imbalance Sequence in Digraphs <b>(CASS/Digraphs/475]</b>

**4. RESEARCH PROPOSALS SUBMITTED DURING  
THE SPRING SEMESTER 2009-2010 UNDER REVIEW**

Sr. No.	Project Code	Principal Investigator	Project Title
01	IP 091001	Dr. Bernard Ee	Models of Transcritical Flows Generated by Plateaus and Holes
02	IP 091002	Prof. Suliman Al-Homidan	Generalized Invexity, Non-Smooth Vector Optimization and Vector Variational-like Inequalities
03	IP 091003	Prof. Bourhan Tachtouch	Feasibility study of solar assisted air cooling using Stirling engine
04	IP 091004	Prof. Mohamed O. S. Mahdi	The use of international electronic banking services in Saudi Commercial Banks
05	IP 091005	Dr. Boubaker Smii	Summability of the solution of the generalized KPZ equation
06	IP 091006	Dr. Asrar U.H. Sheikh	TUA Access protocols for FU-FB over Frequency Selective Channels
07	IP 091007	Dr. Basheer Chanbasha	Development and Application of Electro mediated Extraction (EME) followed by High-performance Liquid Chromatography-Ultraviolet Detection for the Determination of Phenoxy herbicides in water
08	IP 091008	Dr. Marwan Al Quran	Consumer Buying Decision-Making Process: A Cross-Cultural Study
09	IP 091009	Dr. Abdallah M Elamin	Relationships among organizational justice, trust and organizational citizenship behavior: A study of employees in manufacturing private and state-owned enterprises in Saudi Arabia
10	IP 091010	Dr. Nasser- Eddine Tatar	Second order Fractional Evolution Differential Equations
11	IP 091011	Dr. Reza F. Agham	Impacts of Electricity Reforms on Macroeconomic Growths: An application of <i>ad hoc</i> Panel Data Modeling
12	IP 091012	Dr. Jawad Abuhlail	Monads and Comonads in Varieties
13	IP 091013	Dr. Fida Hassan	Fatigue, Creep, And Corrosion Properties Of New Generation Magnesium Nanocomposites

**5. JUNIOR FACULTY GRANTS PROPOSALS RECEIVED  
IN SPRING SEMESTER 2009-10 WHICH ARE UNDER REVIEW**

Project Code	Principal Investigator	PI Dept.	Consultant / Dept.	Project Title
JP 091001	Dr. Mohammed EI-Attar	ICS	-	Migrating Functional Requirements in Use Case Models to a More Format Representation
JP 091002	Dr. Mohsin Khalid Siddiqui	CEM	Mr. Mohammad Ali Khan	Developing Quantitative Measures of Quality for Network Based Schedules
JP 091003	Dr. Slim Belhaiza	MATH	-	Automatic Refinement of Equilibria in Game Theory
JP 091004	Dr. Enamul Hussain	PETE	Sidqi A. Abu-Khamsin	The Use of Memory Concept to Investigate Temperature Profile in hydrocarbon Formation during Thermal Operation in an EOR Scheme
JP 091005	Dr. Mohammed Arif Kamal	ARC	Dr. Adel S.Aldosary	A Study of Traditional Domestic Architecture of Saudi Arabia with Reference to its Climatic Responsiveness
JP 091006	Dr. Ahmad Almulhem	COE	-----	Digital Forensics Project
JP 091007	Dr. Mohammad Mozahar Hossain	CHE	Dr. Hugo I. de Lasa, Canada	Chemical-looping Combustion of gaseous, liquid and solid fuels– Parametric Model Analysis
JP 091008	Dr. Sami Zhioua	ICS	Dr. Farag Azzedin	Towards a New Approach to Analyze Anonymity Protocols
JP 091009	Dr. Guoping Jiang	GS	Dr. Ahmad Bendania Prof. T.Wing Lo, Hong Kong	Volunteer motives, Role Identity and Sustained Volunteerism in Saudi Arabia
JP 091010	Dr. Abdullah S. Sultan	PETE	Prof. Basel A. Abu Sharkh,	Molecular Simulation Study of Counterions Concentration on Properties of Viscoelastic Surfactants used in Oilfield Industry
JP 091011	Dr. John Skovan	ME	Dr. Zuhair Gasem,	Effects of Temperature and Proton Availability on Passivation Kinetics in Aluminum Powders and Aluminum's Suitability as a Portable Hydrogen Source
JP 091012	Dr. Mohammed Raziq Al-Imam	CHEM	Prof. Sheikh Asrof Ali	Molecular and Supramolecular Functional Nanostructures
JP 091013	Dr. Amjad Shiekh	CHE	-----	Ultrasound treatment to prevent mineral scaling on membrane
JP 091014	Muhammad Saidur Rahman	FINEC	-	Who Bears the public debt? Understanding aspects of government debt burden using a heterogeneous agent mode

**6. SABIC AND FAST TRACK PROPOSALS RECEIVED FOR  
FUNDING DURING 2009-2010 FOR FUNDING**

Project Code	Principal Investigator	PI Dept.	Co Investigator(s) / Dept.	Project Title
SF 091001	Dr. Salim Messaoudi	MATH	Dr. Aissa Guesmia, France	Timoshenko systems with non equal wave-speed propagation
SF 091002	Dr. Salim Messaoudi	MATH	Dr. Aissa Guesmia, France	Stabilization of wave equations by means of weak dampings.
SF 091003	Dr. Mohammad S. Sharawi	EE	Dr. Sharif Iqbal Sheikh	Design of Antenna Arrays for Long Term Evolution (LTE) Handsets
SF 091004	Dr. Amar Khoukhi	SE	Dr. Lahouari Cheded	Fault Diagnosis Using an Integrated Hybrid Soft Computing and Model-Based Approaches
SF 091005	Dr. Nasser- Eddine Tatar	MATH	Dr. Mohammed Kafini	On a viscoelastic problem on the whole space
SF 091006	Dr. Bekir S. Yilbas	ME	Dr. A.F.M. Arif Mr. Abdul Aleem Mr. Sohail Akhtar	Laser Gas Assisted Nitriding of Alumina Surfaces
SF 091007	Dr. Sadiq Sohail	MGT MKT	---	The effects of relationship marketing on customer loyalty: an emerging market study
SF 091008	Dr. Shuja S.Z	ME	Dr. B. S. Yilbas/ Mr. Abdul Aleem, Lecturer,	Three dimensional modeling of laser heating-consideration of moving heat source
SF 091009	Dr. Abdulhadi A. Al-Juhani,	CHE	-	Studying the Effect of nanoclays on the compatibility and properties of polypropylene/poly (Ethylene oxide) blends
SF 091010	Dr. Adel S. Al-Dosary	CRP	Dr. Murat Cetin (ARC) Dr. Filippo Beltrami (ARC)	Documentation & Analysis of Cartographical Information about Major urban settlements on Saudi Arabian Peninsula between 18 – 20 <sup>th</sup> centuries through Ottoman Archives in Turkey
SF 091011	Dr. Murat Cetin	ARC	Dr. Filippo Beltrami	Analysis of Shopping Behaviors & its spatial configuration through the comparison of contemporary shopping malls with traditional Suq Formations in Al-Khobar from the Perspective of Plannimetric Typology
SF 091012	Dr. Hassen Muttalak	MATH	Mr. Al-Sawi Esam	Group Sequential Testing under Ranked Set Sampling
SF 091013	Dr. Maan Kousa	EE	Mr. Ahmar Shafi Mr. Asif Syanee	Performance of IP Telephony (IPT) over KFUPM Wireless Networks: Further Investigations and Suggestions for Improvement
SF 091014	Dr. Abulkibash	CHEM	Dr. Munir Al-Absi (EE)	Designing of a Micro-Titrimetric Setup, and Investigating its Application for Titrimetric Reactions

SF 091015	Dr. Ashraf Galal Eid	FINEC	-	Testing the Ricardian Equivalence in Oil-Based Economies: “An Empirical Study on the Effect of Budget Balance Shocks on Private Investment, Private Saving, and Unemployment Rate in the GCC Countries”
SF 091016	Dr. M.I Jarallah	PHYS	Mr. Asad-ul Islam	Indoor Radon Levels and Radon Effective Dose Determination in Tabok City of Saudi Arabia
SF 091017	Dr. Shafique Khan	ME	-	Investigating Dislocation Structures during Nano-Indentation
SF 091018	Dr. Abdel-Nasser Kawde	CHEM	Dr. Nouri Hassan	Development of Electrochemical Sensors for the Investigation and Analytical Determination of Ciprofloxacin in Pure and Drug Formulation Forms and its Interaction with Nucleic Acids and Metals
SF 091019	Dr. Khalil Harrabi,	PHYS	Dr. J.S. Tsai (Consultant)	Nano-mechanical Resonator Coupled to a Flux Qubit
SF 091020	Dr. Mohammad Al-Suwaiyan,	CE	Dr. Muhammad Vohra Dr. Mohammed Essa	Remediation of Organic Hydrocarbons in Layered Groundwater Aquifers, Physical and Mathematical Model Development
SF 091021	Dr. A.R. Khan	MATH	Dr. M. A. Khamisi,	New Fixed Point Results For Multivalued Maps With Applications
SF 091022	Dr. Mohammad Yousuf	MATH	Dr. Fiazud Din Zaman Dr. Ashfaq H. Bokhari	Numerical and Analytic Solutions of Traveling Waves in Ferroelectric Smectic-C Liquid Crystals
SF 091023	Dr. Gabor Korvin	ES	-	Permeability Estimation from Deviations Between the Resistivity Logs
SF 091024	Dr. Ashraf S. H. Mahmoud	COE	-	Characterization for Downlink Cell Site Power for Multi-Rate CDMA Data Networks
SF 091025	Prof. Syed M. Zubair,	ME	Dr. Tahir Mustafa Dr. A.F.M. Arif Dr. M. Suleman Pashah, Mr. Inam Muhammad,	Performance Enhancement of Fins Used in Electronic Packaging
SF 091026	Dr. A.F.M. Arif	ME	Prof. Syed M. Zubair Dr. M. Suleman Pashah, Mr. Inam Muhammad	Characterization of Thermal and Structural Performance of Thermal Interface Materials
SF 091027	Dr. Tahir Mustafa	MATH	Dr. Hassan Azad	Group classification, optimal system and optimal symmetry reductions of a class of non-linear Poisson equations in 1-dimension
SF 091028	Dr. Tahir Mustafa	MATH	Dr. Hassan Azad	Group classification and optimal system for a class of non-linear Poisson equations on some surfaces

SF 091029	Dr. Azzedine Zerguine	EE	Dr. Salam Zummo	A Variable Step-Size Strategy over Adaptive Sensor Networks
SF 091030	Dr. Rajai Al-Assar	MATH	-	Transient Conduction From Tandem Cylinders
SF 091031	Dr. Sheikh Sharif Iqbal	EE	Dr. Mohammad S. Sharawi	Design and implementation of Aperture Stacked Microstrip Power Splitter for Microwave Communication Systems
SF 091032	Dr. John Skrovan	ME	Dr. Zuhair Gasem Mr. Abdul Aleem	Hydrogen Generation from Aluminum Corrosion: Acceleration and Mechanism
SF 091033	Dr. Anan M. Al-Karmi	PHYS	-	Assessment of Alanine's Potential to Measure Radiation Therapy Doses
SF 091034	Dr. Alaaeldin Amin,	COE	-	Multi-Operation Arithmetic Processors
SF 091035	Dr. Ashafaque H. Bokhari	MATH	Dr. F.D. Zaman Dr. F. Mahomed, Southafrica	Partial Noether operator and conservation laws via partial Lagrangians for certain classes of nonlinear equations
SF 091036	Dr. Samir Mekid	ME	-	Design of a Single Axis High Speed Ultra-Precision Platform for Micro-Machining of mesoscale components
SF 091037	Dr. Haider H. Madani	ACT MIS	Dr. Muhammad A. Razi Mr. M S. Islam	Enterprise adoption of audit software in Saudi Arabia
SF 091038	Dr. Ahmet Sahin	ME	Dr. Bekir S. Yilbas Dr. Tahir Ayar	Optimum Operating Conditions of Solar Driven Power Plants
SF 091039	Dr. Kurram Karim Qureshi	EE	-	Simulation of Broadband Fiber Rings Lasers
SF 091040	Dr. Hussain Al-Qahtani	ME	Dr. Mehmet Sunar	Design of Piezoelectric Vibration controller for rotating beams
SF 091041	Dr. Nasser Al-Aqeeli	ME	Dr. Zaki Ahmed/ Dr. Anwar Ul-Hamid	Corrosion Behavior and Mechanical Properties of Electrodeposited Nanostructured Ni and Ni-alloys coating
SF 091042	Dr. Aiman El-Maleh	COE	-	Design of Soft Error Tolerant Sequential Circuits
SF 091043	Dr. Amar Khoukhi,	SE	Dr. Mustafa M. El-Shafei Dr. Abdulazeez Abdulraheem (RI) Dr. Saifur Rahman (R)	Prediction Of Crude Oil Pvt Properties Using Evolutionary Neuro-Fuzzy Techniques
SF 091044	Dr. Jawad Abuihlail	MATH	-	On Exact Sequences of Semimodules over Semirings
SF 091045	Syed Fida Hassan , Assistant Professor, Mechanical Engineering	ME	Dr. Amro Al-Qutub/ Mr. Mirza M. A. Baig	Wear Study of New Generation Magnesium based Structural Nanocomposite Materials
SF 091046	Dr. Samer Arafat	ICS	-	Computerized Diagnosis of Heart Disease for Patients Admitted with Chest Pain

SF 091047	Dr. Abdeslam Mimouni	MATH	Dr. Najib Mahdou, Morocco	Transfer of Arithmetic-like Properties to Trivial Extensions
SF 091048	Dr. Muhammad Yousuf	MATH	Dr. Abdul Qayyum Masud Khaliq (Consultant)	High Order Time Stepping Schemes for Valuation of Complex Derivative Securities under Transaction Cost and Stochastic Volatility
SF 091049	Dr. Amine Nehari Talet	ACT MIS	Mr. Saleh H. Al-Wahaishi	The Impact of Culture on the adoption and use of information technology (IT) in developing countries: A case study of Saudi Arabia
SF 091050	Dr. Mahai Halic	MATH	-	Modular properties of nodal curves on K3 surfaces
SF 091051	Dr. Hafidz Omar	MATH	Dr. Anwarul Haque Joarder	A Bivariate Chi-Square Distribution and Some of Its Properties
SF091052	Dr Bahlouli	Physics	Dr M. S. Abdelmonem, Dr.I.M. Nasser, Dr. Alhaidari,	Two Dimensional J-Matrix Scattering Theory

**7. LIST OF RESEARCH GROUP PROPOSALS SUBMITTED FOR FUNDING  
DURING THE ACADEMIC TERM (2009/2010) – 091**

Project Code	Principal Investigator	PI Dept.	Consultant / Dept.	Project Title
TRG091001	Prof. Bekir S. Yilbas,	ME	Prof. Ahmet Z. Sahin, Dr. Tahir Ayar (SE), Dr. Salem Al-Dini,	Investigation into the Performance of Thermoelectric Generators in Relation to Solar Thermal Power Plants
TRG091002	Prof. Mehmet Sunar	ME	Prof. Bekir S. Yilbas, Dr. Hussain Al-Qahtani, Dr. Tahir Ayar (SE)	Modeling and Optimal Placement of THERMOPIEZOELECTRO-MAGNETIC SENSORS/ACTUATORS
CRG091001	Dr. Shamsad Ahmad,	CIVIL	Prof. Husain J. Qahtani, Dr. Mohammed Maslehuddin, Prof. Abul Kalam Azad	A Comprehensive Study of Self-Compacting Concrete (SCC) towards its Adoptability in Saudi Arabia
PRG091001	Prof. Mohamed Mansour	EE	Prof. M. M. Mansour, Prof. M. A. Abido, Prof. Ibrahim Mohamed	Wide Area Protection for Power System Stability Enhancement
PRG091002	Dr. Abu Hamed M. Abdur-Rahim	EE	Prof. Ibrahim M. El-Amin, Prof. Mohammad A. Abido	Study of the Impact of Dynamic Interaction of Wind Systems with Multimachine Power System
LRG091001	Prof. M.A. Gondal	Physics	Dr. Amjad Ashfaq Shaikh, Dr. Basheer Chandbasha, Dr. Khalid Hushani, Dr. Zain Yamani	Photo catalytic conversion of carbon dioxide to methanol using nano catalysts
CRG091002	Dr. A. H. Al-Gadhib	CIVIL	Prof. A. K. Azad, Prof. M. H. Baluch, Prof. M. K. Rahman, Prof. Saeid A. Alghamdi	Seismic Retrofit of Typical Masonry Wall Systems in the Kingdom.
CRG091003	Dr. O.S.B. Al-Amoudi	CIVIL	Dr. O.S.B. Al-Amoudi, Dr. H.J. Al-Gahtani, Dr. M. Maslehuddin, Mr. S. A. Imran Ali	Effect of Hot Weather and Curing Conditions on the Durability of Plain and Blended Cement Concretes.
CRG091004	Prof. A. A. Naqvi	Physics	Dr. Mohammed Maslehuddin, Prof. Baghabra Al-Amoudi	Measurement of Depth Profile of Chloride Ions in Concrete Utilizing Prompt Gamma-Ray Technique.
CRG091005	Dr. Shamsad Ahmad	CIVIL	Dr. Abul Kalam Azad, Dr. Mohammed Maslehuddin	Mechanical Properties and Durability of High Performance Concrete Developed using Local Materials
WRG091001	Dr. Mohammad H. Makkawi,	Earth Sciences	Dr. Bassam Tawabini. Consultant:: Dr. Steve Wilhelm,	Developing an Integrated Remediation System to Restore Contaminated Aquifers
WRG091002	Dr. Muhammad Abdallah Al-Zahrani	CIVIL	-----	Domestic Water Consumption Forecasting for Major Cities in Saudi Arabia Using Artificial Neural Networks (ANNs)



## **8. PUBLICATIONS IN REFEREED JOURNALS REPORTED AFTER JULY, 2009**

### **College of Engineering Sciences**

#### **Civil Engineering**

1. Energy, Exergy and Uncertainty Analyses of the Thermal Response Test for a Ground Heat Exchanger”, [Sharqawy, M.H.](#), [Mokheimer, E.M.](#), [Habib, M.A.](#), [Badr, H.M.](#), [Said, S.A.](#), and [Al-Shayea, N.A.](#), International Journal of Energy Research, Vol. 33, No. 6, 2009, pp. 582-592.
2. “Performance of Generic and Proprietary Corrosion Inhibitors in Chloride-contaminated Silica Fume Cement Concrete”, [Al-Mehthel, M.](#), [Al-Dulaijan, S.U.](#), [Al-Idi, S.H.](#), [Shameem, M.](#), [Ali, M.R.](#), and [Maslehuddin, M.](#), Construction and Building Materials, Vol., 23, 2009, pp. 1768-1774.
3. “Prompt Gamma Ray Analysis of Fly Ash Cement Concrete”, [Naqvi, A.A.](#), [Nagadi, M.M.](#), [Garwan, M.A.](#), [Al-Amoudi, O.S.B.](#), [Maslehuddin, M.M.](#), and [Khateeb-ur-Rehman](#), INCS News, Vol. VI, 23rd Issue, No. 3, July 2009, pp. 7-17.
4. “Review of the Fuzzy Logic Based Approach in Traffic Signal Control: Prospects in Saudi Arabia”, [Rahman, S.M.](#) and [Ratrouf, N.T.](#), Journal of Transportation Systems Engineering and Information Technology (JTSEIT), Vol. 9, No. 5, October 2009, pp. 58-70.
5. “First In Situ Determination of the Ground Thermal Conductivity for Borehole Heat Exchanger Applications in Saudi Arabia”, [Sharqawy, M.H.](#), [Said, S.A.](#), [Mokheimer, E.M.](#), [Habib, M.A.](#), [Badr, H.M.](#), and [Al-Shayea, N.A.](#), Renewable Energy, [Vol. 34, Issue 10](#), October 2009, pp. 2218-2223.
6. “Parameters for an Elasto-Plasto-Damage Model for the Stress-Strain Behavior of Dense Sand”, [Al-Shayea, N.A.](#) and [Mohib, K.R.](#), International Journal of Damage Mechanics, October 2009.
7. “Prompt Gamma Analysis of Fly Ash, Silica Fume and Superpozz Blended Cement Concrete Specimen”, [Naqvi, A.A.](#), [Garwan, M.A.](#), [Maslehuddin, M.](#), [Nagadi, M.M.](#), [Al-Amoudi, O.S.B.](#), [Khateeb-ur-Rehman](#), and [Raashid, M.](#), Applied Radiation and Isotopes Journal, Vol. 67, 2009, pp. 1707-1710.
8. “Non-Destructive Testing of Chlorine in Fly Ash Cement Concrete”, [Naqvi, A.A.](#), [Garwan, M.A.](#), [Maslehuddin, M.](#), [Nagadi, M.M.](#), [Al-Amoudi, O.S.B.](#), [Khateeb-ur-Rehman](#), and [Raashid, M.](#), Journal of Nuclear Inst. and Methods in Physics Research, A, Vol. 607, 2009, pp. 446-450.
9. “Use of Cement Kiln Dust in Blended Cement Concrete”, [Maslehuddin, M.](#), [Al-Amoudi, O.S.B.](#), [Rehman, M.K.](#), [Ali, M.R.](#), and [Barry, M.S.](#), accepted for publication in ICE Construction Materials Journal, 2009.

10. "Techniques for Inducing Accelerated Corrosion of Steel in Concrete", **Shamsad Ahmad**, accepted for publication in The Arabian Journal for Science and Engineering (K.S.A.) in the Theme Issue "Corrosion and Its Monitoring", 2009.
11. "Flexural Strength of Corroded Reinforced Concrete Beams", **Azad, A.K., Ahmad, S., and Al-Gohi, B.H.**, accepted for publication in Magazine of Concrete Research, 2009.
12. "Effect of Silica Fume Addition on the PGNAA Measurement of Chlorine in Concrete", **Naqvi, A.A., Nagadi, M.M., Garwan, M.A., Al-Amoudi, O.S.B., Raashid, M., and Khateeb-ur-Rehman**, accepted for publication in Journal of Applied Radiation and Isotopes, 2009.

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1. Reduction and oxidation kinetics of Co-Ni/Al<sub>2</sub>O<sub>3</sub> oxygen carrier involved in a chemical looping combustion process" **Hossain, M.M., de Lasa, H.I.**, Chemical Engineering Science, Vol. 65, 98-106 (2010)
2. "Assessment of Methanol Crossover of SPEEK/TPA/MCM 41and SPEEK/TPA-Y zeolite Composite Membranes for Fuel Cell Applications", **M. Bello, S. M. J. Zaidi\*, S. U. Rahman**, ECS Transactions, Volume 17, Issue 1, pp 477-483, 2009.
3. "Determination of Methanol Crossover through Proton Exchange Membranes: A Comparative Study of Various Electrochemical Methods, **M. Bello, S. U. Rahman, S. M. J. Zaidi\*** (2009), ECS Transactions, Volume 6, Issue 1, 270, 2009.

#### Electrical Engineering

1. "Adaptive Stabilizing UPFC Shunt Converter Control Using PSO", **A.H.M.A. Rahim** and **E.P. Nowicki**, Int. J. Power and Energy Conversion, Vol. 1, No. 4, 2009
2. "Optimal Power Flow using Differential Evolution Algorithm," **Abou EL Ela, M. A. Abido, and S. R. Spea**, Journal of Electrical Engineering, Vol. 91, No. 2, August 2009, pp. 69-78.
3. "Chromatic dispersion monitoring for a DPSK system using RF power spectrum," **Jian Zhao, Alan Pak Tao Lau, K. K. Qureshi, Zhaohui Li, Chao Lu and H. Y. Tam**, IEEE J. Light w. Techno., vol. 27, no. 24, pp. 5704-5709, Dec. 2009.
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6. "Spectral Efficiency of Maximum Ratio Combining (MRC) Over Slow Fading with Estimation Errors," **Fawaz S. Al-Qahtani, Salam Zummo, Arun K. Gurung and Zahir M. Hussain**, Elsevier Digital Signal Processing, Vol. 20, no. 1, pp. 85-96, December 2009.
7. "Spectral Efficiency Evaluation for Selection Combining Diversity (SCD) Scheme Over Slow Fading," **Fawaz S. Al-Qahtani, Salam Zummo, Arun K. Gurung and Zahir M. Hussain**, IET Communications, Vol. 3, no. 9, pp. 1443-1451, September 2009.
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10. "On Solving the Capacitor Placement Problem In Primary Feeders Using Genetic-Based Algorithm" **M. H. Shwehdi**, Journal of Engineering, Ref No. IJE/ACC/70A/2009-2010
11. "Application of novel reinforcement learning automata approach in power system regulation," **M. Kashki, Y. L. Abdel-Magid, and M. A. Abido**, Journal of Circuits, Systems, and Computers, Vol. 18, No. 8, December 2009, pp. 1609–1625.
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13. "Improved analysis of the single-electron transistor mixer" **M.T. Abuelma'atti**, , Analog Integrated Circuits and Signal Processing, Vol. 61, 2009, pp. 223-229
14. "Improved Large Signal Analysis of the Dual-Wavelength Linearization Technique of Optically Phase-Modulated Analog Microwave Signals." **M.T. Abuelma'atti**, ,

Journal of Infrared, Millimeter, and Terahertz Waves, Volume 30, 2009, pp. 1073-1082

15. "Full-vectorial analysis of high Indexcontrast coupled channel waveguides", **Md.Zahed M.Khan** and **Husain Ali Jamid**, Applied Optics, Vol. 48, No. 22 (July 2009), pp: 4468-4474.
16. "Layered Steered Space-Time Codes Using Multi-dimensional Sphere-Packing Modulation," **Mohammad El-Hajjar**, **Osamah Alamri**, **Jin Wang**, **Salam Zummo** and **Lajos Hanzo**, IEEE Trans. on Wireless Communications, Vol. 8, no. 7, pp. 3335 - 3340, July 2009.
17. "Enhanced Upper Bound for Erasure Recovery in SPC Product Codes", **Muqaibel**, ETRI Journal, Vol.31, no.5, Oct. 2009, pp.518-524. DOI:10.4218/etrij.09.0109.0131
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1. "Chaotic behavior of a curved carbon nanotube under harmonic excitation", **Mayoof, F. N. and Hawwa, M. A.**, Chaos, Solitons and Fractals, 42(3), pp. 1860-1867, November 2009.",
2. "Precision Design Aspects for Friction Actuation with Error Compensation", **S.Mekid**, Journal of Mechanical Science and Technology, , Vol.23, no11, 2009, pp 2873-2884.

3. "Nervous materials: a new approach of using advanced materials for better control, reliability and safety of structures", **S.Mekid and O.Kwon**, Science of Advanced Materials, Vol.1 No.3, 2009.
4. "Energy harvesting for wireless sensor nodes: investigation of architectures and sources of energy", **S.Mekid and Z.Zhu**, Int. J. Computer Aided Engineering and Technology, Vol. 1, No. 2, 2009.
5. "Beyond Intelligent Manufacturing: A New Generation of flexible intelligent NC Machines", **S.Mekid, P.Pruschek and J.Hernandez**, Mechanism and Machine Theory, Volume 44, Issue 2, February 2009, pp. 466-476.
6. "Flexural Characteristics of a Cantilever Plate Subjected to Heating at Fixed End", **I.T. Alzaharnah**, Journal of Mechanics, Vol. 25, No. 1, pp. 1-8, March 2009.
7. "Prediction of Risers' Tubes Temperature in Water Tube Boilers", **H. E. Emara-Shabaik, M. A. Habib and I.T. Alzaharnah**, Applied Mathematical Modeling, 33 (2009) 1323–1336.
8. "Performance of a Modified Direct Expansion A/C Unit", **Mokheimer, E.M.A. and Said S.A.M.**, The International Journal of Energy Research Online, October 2009.
9. "Entropy Generation due to Mixed Convection Between parallel Plates under Isothermal Boundary Conditions", **Mokheimer, E. M. A. and Ali, H. Al-Salim**, The International Journal of Exergy, Vol. 6, N(9), (2009), P. 671-697
10. "Fluid Flow and Heat Transfer Characteristics in Sharp Edge Wavy Channels with Horizontal Pitch" **Haitham M.S. Bahaidarah**, The Emirates Journal for Engineering Research (EJER) 14 (1), 53-63 (2009).
11. "Ignition of turbulent swirling n-heptane spray flames using single and multiple sparks", **T. Marchione, S.F. Ahmed, E. Mastorakos**, Combustion and Flame ,156 (2009) 166-180 .
12. "Statistics of relative and absolute velocities of turbulent non-premixed edge flames following spark ignition", **C. Kittler, B. Böhm , S.F. Ahmed , R. Gordon, I. Boxx , W. Meier , E. Mastorakos, A. Dreizler**, Proceedings of the Combustion Institute , 32 (2009) 2957-2964 .
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16. "Corrosion studies on the Plasma Sprayed Nanostructured Titanium dioxide coatings", **Zaki Ahmad and M. Ahsan**, Anti-Corrosion Methods and Materials, Vol 56, No.4, 2009, P187-95.
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  20. "Fatigue Failure of Extrusion Dies: Effect of Process Parameters and Design Features on Die Life" **S. S. Akhtar, A. F. M. Arif**, ASM Journal of Failure Analysis & Prevention, Published online November 2009.
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#### College of Sciences



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#### Aerospace Engineering

1. “New Fuzzy-Based Anti-Swing Controller for Helicopter Slung-Load System Near Hover”, **Omar, H.M.**, The 8<sup>th</sup> IEEE International Symposium on Computational Intelligence in Robotics and Automation (CIR 2009), Daejeon, South Korea, 15-18 December, 2009.
2. “New Algorithms for Wind Turbine Performance Prediction and Optimal Design” Paraschivoiu, I., **Saeed, F.**, Desorby, V., International Symposium on Transport Phenomena, ISTP-20, Victoria, BC, Canada, 7-10 July, 2009.
3. “Designing Integrated Guidance Law for Aerodynamic Missiles by a Hybrid Multi-Objective Evolutionary Algorithm and Tabu Search”, **Omar H.M.**, and

Abido, M. The 8<sup>th</sup> IEEE International Symposium on Computational Intelligence in Robotics and Automation (CIR2009), Daejeon, South Korea, 15-18 December, 2009.

#### Department of General Studies

1. "Psychology in the Arab World", **Bendania, A.** 2<sup>nd</sup> International Conference on Teaching Psychology, July 24-26, 2009. Vancouver: Canada.
2. "The Nature of University Culture", **Bendania, A.** The National Seminar On Higher Education Pedagogy: Intellectual Reconstruction in Algeria. 18 October 2009. Kasdi Merbah University, Ouargla, Algeria

#### College of Sciences

##### Chemistry Department

1. "Exploring The Chemical Reactivity Of Asphaltenes", **Siddiqui, M. N.** "237<sup>th</sup> ACS National Meeting & Exposition" Salt Lake City, USA, Preprints, Division of Fuel Chemistry, 54(1), 14-15, March 22-26, 2009.
2. "Synthesis of Polyisoxazolidines: A novel class of polymers for inhibition of mild steel corrosion", **Hasan A. Al-Maullem, Shaikh Asrof Ali, Abdullah Lajami**, Poster presented at Taibah International Chemistry Conference in Al-Madinah Al-Munawwarah, Saudi Arabia, March 23<sup>rd</sup> -25<sup>th</sup>, 2009 .
3. "Nanomaterial-Based Bioassay: From Bench to Point-of-Care Biosensor" **A. Kawde, X. Mao and G. Liu**, Taibah International Chemistry Conference, March 23-25, 2009, Al-Madinah Al-Munawwarah, KSA.
4. "Oligonucleotide-based Signal Amplification of Nucleic Acids Hybridization Electroanalytical Ultrasensitive Detection" **A. Kawde**, 60<sup>th</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, March 8-13, 2009, Chicago, IL, USA,

##### Earth Sciences Department

1. "Fracture Detection Using Azimuthal P-wave Amplitude Variation with Offset (AVOA) in a Carbonate Reservoir, Khurais Field, Saudi Arabia (Invited Lecture)", Balhareth, H.M. and **Al-Shuhail, A.A.**, Fractures Detection and Characterization, SEG/EAGE/DGS, Al-Khobar, Saudi Arabia, Dec 16, 2009.
2. "Hands-on teaching through a student senior project in Geophysics at KFUPM", **Kaka, S.I., Al-Shaibani, A.M., and Al-Shuhail, A.A.**, GSA Annual Meeting, Portland, USA., October 18-21, 2009.
3. "Lower Paleozoic Fluvial Deposits of Arabia: Facies, Environments and Depositional Styles, Saudi Arabia", **Osman, A.**, 9<sup>th</sup> International Conference of Fluvial Sedimentology, San Miguel de Tucumán - Argentina, 24-28 October, 2009.



4. "Geomorphological Features and Sedimentological Characteristics of Coastal and Inland Sabkhas: Eastern Province, Saudi Arabia", Hussain, M., **Al-Ramadan, K.**, and **Al-Shaibani, A.** 27<sup>th</sup> IAS Meeting on Sedimentology, Alghero, Italy, 20-23 September 2009.
5. "Linking Diagenesis and Porosity Preservation to Sequence Stratigraphy of Gas Condensate Reservoir Sandstones, the Jauf Formation (Lower to Middle Devonian), Eastern Saudi Arabia", **Al-Ramadan Khalid**, Morad Sadoon, Norton A. Kent, Hulver Michael, International Association of Sedimentologists Special Publication: Linking Diagenesis to Sequence Stratigraphy of Sedimentary Rocks, UAE University, May 2009.
6. "Complex Differentiation Tools for Geophysical Inversion", **Abokhodair, A.** Frontiers of Chemical Science and Education in the Middle East, Amman, Jordan. November 14 – 19, 2009.

#### Department of Mathematics & Statistics

1. "Monads and Comonads in Categories of Modules over Semirings", **Abuhlail, J.**, Styria, Austria (July 26-August 1, 2009).
2. "Injective Morita Contexts (Revisited), Poster", **Abuhlail, J.**, Homological and Geometric Methods in Algebra, Trondheim, Norway, (August 10-14, 2009).
3. "52nd Annual International Congress of South African Mathematical Society", **Bokhari, A.H.**, University of Johannesburg, (November 2-4, 2009).
4. "Application of the graphs of KPZ equation driven by Levy noise", **Boubaker, S.**, 333<sup>rd</sup> Conference on Stochastic Processes and Their Applications. Berlin, Germany, (July 27 – 31, 2009).
5. "24th summer conference on topology and its applications", **Echi, Othman**, Brno, Czech Republic, (July 14-17, 2009).
6. "International Conference on Topology and its applications", **Echi, Othman**, 2009 Hacettepe University, Ankara, Turkey, (July 06-11, (2009).
7. "Type I Operators and the Approximation of Singular Two-point Boundary Value Problems", ElGebeily, M., **Messaoudi, S.**, and O'regan, D., International Conference on Mathematics and Information Security, Sohag University, Egypt, (November 13-15, 2009).
8. "Common fixed point iterations of a finite family of quasi-nonexpansive maps", **Khan, A.R.**, International Conference of Applied Mathematics and Engineering Mathematics, Imperial College, London ,UK, (July 1 -3, 2009 )
9. "Two Special Functions on Topological Spaces", **Latif, Raja M.**, Second International Conference on Topology and Its Applications, Department of Mathematics, Hacettepe University, Ankara, Turkey, (July 06-11, 2009).

10. "Products of Toeplitz operators on the Bergman space" **Louchi, I.**, Seminaire d'Analyse de l'Institut de Mathematiques de Bordeaux, Universite Bordeaux 1, France, (September 21, 2009).
11. "A general decay result in a viscoelastic Timoshenko system", **Messaoudi, S.** International Conference on Complex Systems and Applications ICCSA 2009, Le Havre France, (June 29-July 02, 2009).
12. "Uniform Stability in Timoshenko-type System", **Messaoudi, S.**, International Conference on Mathematics and Information Security (ICAMIS 2009), Sohag, Egypt, (November 13<sup>th</sup> – 15<sup>th</sup>, 2009).
13. "Stabilization by a weak fractional derivative", **N.-e. Tatar**, International Conference on Complex Systems and Applications, Le Havre, France, (June 29-July 02, 2009).
14. "Exploring the Sources of Student Motivation in Learning Mathematics at the Preparatory Year Level: The Case of Bilingual Arabs Students", Yushau, B., **Omar, M.H.**, **Al-Attas, H.**, and **Al-Absi, B.**, 7Th Southern Hemisphere Conference on Mathematics and Statistics Teaching and learning (Gordon's Bay DELTA '09), 272-289, (November 2009).
15. "Mr. Paint and Mrs. Correct", **Schauz, U.**, British Combinatorial Conference, Scotland, Great Britain, (July 9, 2009).

#### Conferences inside the Kingdom:

1. "Parabolic Inclusions with Nonlocal Conditions", **Boucherif, A.**, First Annual Math Days, KSU, Riyadh, Saudi Arabia, (December 16-17, 2009).
2. "Distribution of sample variances based on Bivariate normal population" **Joarder, A.H.**, First Conference of the Saudi Association for Statistical Sciences (SASS), King Khalid University, Abha, Saudi Arabia, (14-15 April 2009).
3. "The Prime Ideal Structure of Symbolic Rees Algebras", **Kabbaj, S.**, The First Annual Maths Days (FAMD), KSU, Riyadh, Saudi Arabia(December 15-16, 2009).
4. "Uniform Stability in Timoshenko-type System", **Messaoudi, S.**, First Annual Math Days, KSU, Saudi Arabia, December 16-17, 2009).
5. "Controlling the wave equation by fractional derivatives", **N.-e. Tatar**, First Annual Math. Days, FAMD, KSU, Riyadh, Saudi Arabia, (Dec. 16-17, 2009).

#### Presentation:

1. "Lie symmetry methods, wave equation on a manifold", **Bokhari, A.H.**, University of Johannesburg, 52<sup>nd</sup> Annual International Congress of South African Mathematical Society, University of Johannesburg (November 3, 2009).

2. "Chaired first morning session of 52<sup>nd</sup> Annual International Congress of South African Mathematical Society", University of Johannesburg", **Bokhari, A.H.**, University of Johannesburg, (November 4, 2009).

#### Physics Department

1. "Laser Induced Breakdown Spectroscopy and Its Applications in Detection Of Health Hazardous Contaminants", **M.A. Gondal**, Invited Distinguished Speaker, World Academy for Laser Applications(WALA) Conference, Bahrain International Exhibition Centre. October 19-21, (2009)
2. "Laser Sensor for Detection of Toxic Ingredients in Cosmetic Products for Human Use", **M.A. Gondal**, M.M. Nasr, **Z.H.Yamani**, Invited Distinguished Speaker, World Academy for Laser Applications(WALA) Conference, Bahrain International Exhibition Centre. October 19-21( 2009).
3. "Advanced Laser Based Techniques and Their Applications in Pollution Monitoring", **M. A. Gondal**, Kuwait Lab Technolgy Conference and Exhibition, Key note speaker, November 4,5 (2009).
4. "An in vitro study for the antimicrobial activity of Nano ZnO and Pd loaded Nano ZnO" M. A. Randhawa, A. J. Al-Zahrani, **M. A. Gondal**, A. A. Bagabas, 11<sup>th</sup> International Conference on advanced materials, (ICAAM 2009) Rio De Janeiro, Brazil, 20-25 September (2009).
5. "Laser induced Photo-catalytic degradation of organic contaminants from water using semiconductor metal oxides, paper 3C-O646" **M. A. Gondal**, K. Hayat, M. N. Sayeed, 6<sup>th</sup> world Congress on Oxidation Catalysis, 5-10th July, Lille, France (2009).
6. "Laser Induced Photo - Catalytic Process for Removal Of Bacteria from Waste Water using nano structured Semiconductor Catalysts", **M. A. Gondal, A. Dastageer and A. Khalil**, The International Conference on Water Conservation in Arid Region (ICWCAR,2009), Jeddah,12-14 October (2009).
7. "Linear Accelerator Photon Beam Interaction with the Virtual Physiological Human", **N. Maalej**, Umar M. Mwidul, Belal Jalal and **A. A. Naqvi**, World Congress of Medical Physics and Biomedical Engineering, Munich, Germany, 6-12 Sep., (2009).
8. "Stress Engineering of a-Si Morphology Characterized With Fractal Dimension" S. Castro-Galnares, **N. Tabet**, M. Bertoni, A. Abdallah, T. Buonassisi, MRS Meeting, Boston, 30 Nov.-5 Dec. (2009).

9. "Elemental Analysis of Chloride-contaminated BFS Cement Concrete", **Naqvi A. A.**, M. Maslehuddin, **M. A. Garwan**, **M. M. Nagadi**, O.S. B. Al-Amoudi, **Khateeb-ur- Rehmana** and **M. Raashid**, SAAGAS 22, 22nd Seminar Activation Analysis and Gamma-Spectroscopy, held on Feb. 24-27, 2009 in Vienna, Austria.
10. "Effect of substrate temperature on the growth of nanostructured ZnO thin films prepared using dc magnetron sputtering", M. Hezam, **N. Tabet** and **A. Mekki**, presented at the International Conference on Nanotechnology and Advanced Materials, Bahrain University, Bahrain, 4-7 May 2009.
11. "Synthesis and Characterization of DC Magnetron Sputtered Zinc Oxide Thin Films under High Working Pressures", M. Hezam, **N. Tabet** and **A. Mekki**, presented at the International Conference on Materials for Advanced Technology, Singapore, 28 June-3 July 2009.
12. J Al-Sadah and J Zagzebski, " Ultrasound Angular Scatter Imaging: Beam Forming Method", World Congress 2009, Munich, Germany; Sep 2009.
13. "Feasibility of Polycrystalline Alanine-in-Glass Tubes as Gamma-Ray Dosimeters", **A.M. Al-Karmi** and M.A. Morsy, presented at the World Congress on Medical Physics and Biomedical Engineering, Munich, Germany, 6-12 September 2009, and published in the IFMBE Proceedings (ed. O. Dössel and W.C. Schlegel), 25(3)(2009), pp. 234-236.

### **College of Computer Science & Engineering**

#### **Information & Computer Science Department**

1. "The Effect of Refactoring to Patterns on Cohesion Metrics", **Alshayeb, M.** The 2009 International Conference on Software Engineering Research and Practice (SERP'09), Las Vegas, July 13-16, 2009.
2. "Type-2 Fuzzy Logic Based System for Classification of Bioinformatics Datasets" **Tarek Helmy**, **Mohamed Al-Mulhim**, **Zeehasham Rasheed**, Proceedings of the 2009 International Conference on Bioinformatics & Computational Biology (BIOCOMP'09), Las Vegas, Nevada, USA, July 13-16, 2009.
3. "Performance Evaluation of Disk Scheduling Algorithms in the Presence of Bad Sectors", **Tarek Helmy**, 24<sup>th</sup> IEEE the International Conference on Computer and Information Sciences, pp. 537-542, Sept. 14-16, 2009, Northern Cyprus, Turkey
4. "Empirical Evaluation of LSI-Based Indexing Techniques of Arabic Gigaword Documents" **Mohammad S. Al Awad**, **Mohammed S. Al Logmani**, **Sameh Awaidhah** and **Wasfi G. Al-Khatib**, In Proceedings of the 2009 International Conference on Information and Knowledge Engineering, Las Vegas, USA, July, 2009.

5. "A Self-Adapting Web Server Architecture: Towards Higher Performance and Better Utilization", **F. Azzedin, and K. Al-Issa**, High Performance Computing and Simulation Conference (HPCS'09), July, 2009, Leipzig, Germany.
6. Visual Analysis of History of World Cup: A Dynamic Network with Dynamic Hierarchy and Geographic Clustering, **Adel Ahmed, Xiaoyan Fu, Seok-Hee Hong, Quan Hoang Nguyen, Kai Xu**, Visual Information Communications International - VINCI'09, September 2009, ISBN 978-1-4419-0311-2
7. "Investigating the Effect of Refactoring on Software Testing Effort", Elish K. and **M. Alshayeb**, In Proceedings of the 16th Asia-Pacific Software Engineering Conference (APSEC'09), Penang, Malaysia, December 2009.
8. Learning the Difference between Partially Observable Dynamical Systems. **Sami Zhioua, Doina Precup, François Laviolette, Josee Desharnais**, European Conference in Machine Learning/PKDD (2) Sept 2009: 664-677
9. "A Modulo-based Labeling Scheme for Dynamically Ordered XML Trees", **Salahadin Mohammed; Raed AlShaikh; Ghalib Hashim; AbdulRahman BinHuraib** 4th International Conference on Digital Information Management (ICDIM-2009), November 1 - 4, 2009, Michigan, USA.
10. "Classification of Premium and Regular Gasoline Using Support Vector Machines as Novel Approach for Arson and Fuel Spill Investigation", **K. Faisal, S. O. Olatunji, and L. Ghouti**, The 2009 International Conference on Artificial Intelligence (ICAI'09): July 13-16, 2009, USA).
11. "An Empirical Comparison of Open Source Java and C++ Programs in Following Coding Standards", **Shouki Abdullah Ebad**, The international Conference on Information and Communication Systems (ICICS 2009), Jordan, Dec 2009
12. "Optimal Component Selection for Component-Based Systems", **Muhammad Ali Khan and Sajjad Mahmood**, In proceedings of International Joint Conferences on Computer, Information, and System Sciences, and Engineering, December 2009.
13. New Data Mining And Intelligence System Scheme In Protein Structure Prediction Based On Extreme Learning Machine **Emad A. El-sebakhy, Tarek R. Sheltami, and Salahadin A. Mohammed**: International Conference on Bioinformatics and Computational Biology (BIOCOMP'09): July 13-16, 2009, USA)

#### Computer Engineering Department

1. "Resiliency of Open-Source Firewalls against Remote Discovery of Last-Matching Rules", **K. Salah, K. Sattar, Z. A. Baig, M. Sqalli, and P. Calyam**, The 2<sup>nd</sup> International Conference on Security of Information and Networks (SIN 2009), October 6-10, 2009, North Cyprus, Turkey.

2. "An Entropy-Based Countermeasure against Intelligent DoS Attacks Targeting Firewalls", **F. Al-Haidari, M. Sqalli, K. Salah, and J. Hamodi**, The IEEE International Symposium on Policies for Distributed Systems and Networks, Policy'2009, Pages: 41-44, July 20-22, 2009, Imperial College London, UK.
3. "Performance Evaluation of a Generalized Energy Efficient Time Based Protocol under Different Applications", **Tayseer AL-Khdour and Uthman Baroudi**, 6th ACM Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks (PE-WASUN 2009), October 29-30 2009, Tenerife, Canary Islands, Spain

#### Systems Engineering Department

1. Simulation-based multi-craft workforce scheduling", **H.K. Alfares**. Proceedings of the 6th St. Petersburg Workshop on Simulation, 28 June - 4 July 2009, St. Petersburg, Russia, Vol. II, pp. 915-921.
2. "Integer programming to maximize battery production productivity", **H.K. Alfares** 40th Annual Meeting of the Decision sciences Institute, New Orleans, LA, USA, 14-17 November, 2009.
3. "Scheduling and Optimum Resource Allocation inflexible Job Shop Manufacturing", **Umar Al-Turki, Shaikh Arifusalam, Mehmood Khan and Mohammed El-Seliaman**, Advances in Materials and Processing Technologies (AMPT 2009) conference, Kuala Lumpur, Malaysia, 26-29 October 2009.
4. "Intelligent Sensor for Predicting the Quality of Reduced Iron in Direct Reduction Furnaces", **Abdul-Wahid A. Saif, Mohamed Habib, Mostafa Elshafei and Muhammad Sabih** 2009 IEEE Symposium on Industrial Electronics and Applications (ISIEA 2009), , Kuala Lumpur, Malaysia, October 4-6, 2009.
5. "Efficient Algorithms for Pulse Parameter Estimation, Pulse Peak Localization and Pileup Reduction in Gamma Ray Spectroscopy", **M.W. Raad, L. Cheded**, Accepted in IMEKO XIX World Congress (Fundamental and Applied Metrology), Lisbon, Portugal, Sept. 6-11, 2009.
6. "Robust Control of a closed-loop identified system with parametric/model uncertainties and external disturbances", **R. Doraiswami, L. Cheded & H. Khalid, Qadeer, A. Khoukhi**, Accepted in International Conference on Intelligent Systems, Modelling and Simulation (ISME 2010), Liverpool, UK, Jan. 27-29 , 2010
7. "A Genetic-Optimized Artificial Neural Networks for Predicting Viscosity and Gas/oil Ratio Curves", **M. Oloso, A. Khoukhi, A. Abdulraheem, M. El-Shafei** SPE/EAGE Reservoir Characterization and Simulation - Conference & Exhibition, Abu-Dhabi, UAE, 19 - 21 Oct 2009
8. "Stabilization of Linear Time-Delay Systems by Three-Term Controllers", **Magdi S. Mahmoud**, Proc. The Third International Multi-Conference on Systems and Control (MSC 2009), Saint Petersburg, Russia, July 8-10, 2009, Invited Paper # 92.

9. "H2 control for Networked Control Systems with Markovian Data Losses and Delay", **Yuanqing Xia, Zheng Zhu and Magdi S Mahmoud**, Proc. of the Second International Symposium on Intelligent Informatics (ISII2009), QinHuangDao, China, September 13-15, 2009, and the publication in ICIC Express Letters, Vol. 3, No. 3, September 2009, pp. 1-6.
10. "Value Management: A Step towards the Development of Economic Construction Practice in Sudan.", **Eltom Mohamed A. , Haroun, Ahmed E.** in International Conference on Building Science and Engineering- ICON-BSE2009, Johor Bahru, Malaysia, December 14-15, 2009.
11. "Identification of NARX Hammerstein models based on large scale support vector machine regression". **Al Dhaifallah, M. and Westwick, D.**, In Proceedings of 15th IFAC Symposium on System Identification , pages 1656.1661, July 6-8, 2009.
12. "Nonlinear modeling and identification of stretch reflex dynamics using support vector machines". **Al Dhaifallah, M. and Westwick, D.**, In Proceedings of 31st IEEE EMBS, pages 4371-4374, September, 2-6, 2009.

### **College of Industrial Management**

#### **Department of Accounting & MIS**

1. "Web Site Assessment in the Airline Industry: An Empirical Study of GCC Airline Companies". **Saleh Alwahaishi, V. Snasel and A. Talet**. 2nd IEEE International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2009), pp. 193-198. London, United Kingdom, 4-6 August 2009.
2. "Electronic Commerce growth in developing countries: Barriers and Challenges". **Saleh Alwahaishi, A. Talet and V. Snasel**. 1st IEEE International Conference on Networked Digital Technologies(NDT 2009), pp. 238-245. Ostrava, Czech Republic, 29-31 July 2009.
3. "Measuring the impact of Learning Culture and IT Use on Knowledge Sharing: A Case of KFUPM" **Eid, M.**, published in the proceeding of the ECIS 2009 Conference, 8-10 June 2009. Verona, Italy.
4. "Case Study: A Web-based Supply Chain Management System – Worth the Cost?," **Razi, J., VandenLangenberg, K. and Tarn, J.** Proceedings of the ACME 2009 International Conference of Pacific Rim Management, San Francisco, July-August. (2009)

#### **Department of Finance & Economics**

1. "Recent and Ongoing Advances in Econometric Methodology for Applied Research", **Mansur Masih**, Annual Conference of the International Academy of Business and Economics, Las Vegas, USA, October 2009

#### **Department of Management & Marketing**

1. “The effect of strategy, contextual factors, on performance of firms: a conceptual model” **Sohail, M. Sadiq** (2009) Sixth AGBA Conference, “Business and Entrepreneurship Development in a Globalized Era” 27-31 December, University Utara Malaysia, Kedah, Malaysia.



## **10. BOOKS PUBLISHED AND CONTRIBUTIONS**

### Mechanical Engineering Department

1. "Acoustic chamber for detection of insects", **Hawwa, M. A. and Al-Sulaiman, F. M.**, US Patent 7,597,003, Date of Patent: October 6, 2009.
2. "Apparatus for deicing a surface of an aircraft", **Al-Qutub, A. M, and Hawwa, M. A.**, US Patent 7,556,22, Date of Patents: July 7, 2009.
3. "Introduction to Precision Machine Design and Error Assessment", **S.Mekid**, ISBN13: 9780849378867, CRC Press.

### General Studies Department

1. Industrial sociology", **Khedair S. Alkhedair**, Obekan Publishing Company, Riyadh 2009.

### Earth Sciences Department

1. "Erionite and its Health Effects", **Dogan, A.U.**, Dogan, M., and Hoskins, A.J., Chapter in Encyclopedia of Environmental Health, Wood, S.I. (ed.), Elsevier-Oxford, 2009 (In Press).

### Department of Mathematics & Statistics

1. "Commutative Algebra and its Applications" M. Fontana, **Salah-Eddine Kabbaj**, B. Olberding, and I. Swanson. Walter de Gruyter, Bewrlin, 2009, ISBN: 978-3-11-020746-0.
2. "Application of the Feynman graphs to stochastic equation driven by non-Gaussian noise", **Boubaker, S.**, (2009), Preprint, Dhahran (2009) (Book)

### Systems Engineering Department

1. "Maintenance Forecasting and Capacity Planning", **H.K. Alfares, S.O. Duffuaa, M. Ben Daya, A. Raouf, J. Knezevic and D. Ait-Kadi** (Eds), Handbook of Maintenance Management and Engineering, Springer-Verlag, London, 2009, pp. 157-190.
2. "Maintenance Organization", (in Handbook of Maintenance Management and Engineering, **Haroun, A. E., Duffuaa, S. O. eds Ben-Daya, M., Duffuaa, S., Abdul Raouf, Knezevic, J., Ait Kadi, D.**). Springer, 2009.
3. "Maintenance Control" (in Handbook of Maintenance Management and Engineering), **Duffuaa, S.O., Haroun, A.E. eds. Ben Daya, M., Duffuaa, S., Abdul Raouf, Knezevic J., Ait-Kadi, D.**), Springer, 2009.

Department of Finance & Economics

1. "King Abdullah Financial District: A new value proposition in the Middle East, in Investing in the GCC Markets-Regional Opportunities and Challenges", **Ramady. M. A.**, (ed) CPI Financial Books.
2. "Power brokers: The emergence of the GCC Sovereign Wealth Funds and their increasing global influence, " **Ramady. M .A.** in Investing in the GCC Markets-Regional Opportunities and Challenges " (ed) CPI Financial Books.

City & Regional Planning Department

1. "Localization in Saudi Arabia: Social and Economical Perspectives" **Dr. Adel S. Aldosary**, Principal investigator, Book writing project, approved proposal, KFUPM, 3/07 to 9/09 .
2. "Eastern Province Tourism Development Strategic Plan; Updated Final version" **Dr. Adel S. Aldosary**, Co-Investigator, Supreme Commission for Tourism, 12/08 to 08/09.

## **11. TECHNICAL REPORTS, FUNDED PROJECTS AND PATENTS**

### **College of Engineering**

#### **Civil Engineering Department**

1. "Transportation Study of KFUPM Campus", **Ratrout, N.T.**, KFUPM, Dhahran, July 2009.
2. "Production of Granular Activated Carbon from Date Palm Tree Branches", **Vohra, M.S. (P.I.), Al-Zahrani, M.A., and Essa, M.H.**, Final Revised Report, KACST Funded Project, October 2009.
3. "Multi-Criterion Optimal Design of Reinforced Concrete Beams and Columns: Experimental and Analytical Studies", **Alghamdi, S.A. (P.I.) and Ahmad, S.**, Final Report, KACST Project AT-23-21, November 10, 2009.
4. "Environmental Effects of Wastewater Treatment Plants: Evaluation & Guidelines", **Vohra, M.S. (P.I.), Al-Suwaiyan, M.S., Al-Zahrani, M.A., and Essa, M.H.**, Final Revised Report, KACST Funded Project, December 2009.
5. "Utilization of Heavy Oil Fly Ash to Improve Asphalt Binder, Sulfur Asphalt and Asphalt Concrete Performance", **Al-Abdul Wahhab, H. et al.**, Second Progress Report, submitted to Saudi Aramco, July 2009.

#### **Electrical Engineering Department**

- 1- "Uplink MIMO Scheduling Design and Evaluation of V-BLAST Users." **Samir Alghadhban.** Technical Report submitted to DSR under Junior Faculty Grant.
- 2- "Design of Active 24-GHz Microstrip Linear Phased Array Antenna for Microwave Sensors," **Sheikh S. I. (PI), Saad Al-Sharani (CI) and Umar Johar (CI)**, Final report, KFUPM funded project (IN-07-0345), December, 2009

#### **Mechanical Engineering Department**

1. "Evaluation and Operation of Fog Water Collection in Asir Region in the Kingdom of Saudi Arabia," **H. I. Abualhamayel and P. Gandhidasan**, KACST Project # AR-26-25, Progress Report # 4, September 2009.

## College of Computer Science and Engineering

### Systems Engineering Department

1. Method and apparatus for programmable flow characteristics”, [PA2] **Moustafa Elshafei and Ashraf Dasa**, US PTO, Patent Pending Publication No. 2009/0240376, September 2009.

## College of Sciences

### Chemistry Department

1. “Investigating The Reactivity Behavior Of Arabian Asphaltenes”, **Mohammad Nahid Siddiqui** SB070020, SABIC funded project, Duration: 12 Months, completed May 2009.
2. "On-Demand Analyte Monitor and Method of Use” **A. Jina, B. Chua, S. Desai, and A. Kawde**, US Patent 2008/0312518 A1.
3. “Methods and Apparatus Incorporating a Surface Penetration Device” **A. Jina, B. Chua, S. Desai, A. Parmar and A. Kawde**, US Patent 2008/0058726 A1.
4. “Field-Deployable Electrochemical Sensors for Heavy Metals Detection” **Kawde, A.** (Principal Investigator), **Al-hooshani K.** (Co-Investigator) Project Number: AT-28-27, Progress Report-1, submitted to King Abdulaziz City for Science and Technology (KACST), Jun. 2009.

### Earth Sciences Department

1. "Remediation of Contaminated Groundwater Using Advanced Oxidation Technology", **B. Tawabini**, Funded by Saudi Aramco.
2. "Geological & Geostatistical Aquifer Characterization of Outcrop of Wajid Sandstone in South West Saudi Arabia", **A. Osman, M. Makkawi**, KACST, 2007-2009.
3. "Tectonics and Sedimentations of the Upper Triassic Minjur and Miocene Burchan Formations: A Geochemical Approach Involving Trace and Rare Earth Element Chemistry", **A. Osman**, LPG 10-38. KACST, 2007-2008.
4. "Geophysical Progress Report of KACST Project: Hydrogeology and Economic Importance of Inland and Coastal Sabkhat of Eastern Province, Saudi Arabia", **Al-Shuhail, A.A.**, 2009, 24 pp.

### Department of Mathematics & Statistics

1. "A threshold for validity of the bootstrap in a critical branching process", **I. Rahimov**, Technical Report# 403.
2. "Estimation of kurtosis for multivariate data", S. E. Ahmed, M. H. Omar and **A. H. Joarder**, Technical Report# 404.

- 3 "The Probability of a Sample Outcome in Sampling Without Replacement", **Anwar H. Joarder, A. Laradji** and M.H. Omar, Technical Report# 405.
- 4 "Evaluated sets in the spectrum of a commutative ring", Saeid Jafri and **Raja M. Latif**, Technical Report# 406.
- 5 "A Gentle Approach to Linear Regression" **Anwar H. Joarder** and M.H. Omar, Technical Report# 407.
- 6 "On two classes of irresolute functions", Saeid Jafri, **Raja M. Latif**, Seithuti P. Moshokoa and N. Rajesh, Technical Report# 408.
- 7 "Topological Properties of Delta Open Sets", **Raja M. Latif**, Technical Report# 409.
- 8 "Characterizations of Mappings in  $\theta$  Open Sets" **Raja M. Latif**, Technical Report# 410.
- 9 "Linear Parabolic Problems With Integral Initial Conditions" **Abdelkader Boucherif**, Technical Report# 411.

### **College of Environmental Design**

#### **Architecture Department**

1. "A Design Decision Support System using Intelligent Agents", **Reffat, R. M.** The 6th Symposium on Decision Technology and Intelligent Information Systems, INTERSYMP 2009, 21st International Conference on Systems Research, Informatics and Cybernetics, Baden-Baden, Germany, (2009), pp. 74-78.

#### **City & Regional Planning Department**

1. "Increasing the capacity of the Mataaf Area in the Grand Mosque (Alharam) , around Kaaba, Mecca" **Dr. Adel S. Aldosary**, Co-Investigator, Ministry of Higher Education, 10/08 to 05/09.
2. "Strategic Planning Project: Developing a Network of Leisure, Recreation, and Sport Facilities for Campus Residents (delayed)" **Dr. Adel S. Aldosary**, Principal investigator, KFUPM, 3/07 to 05/09.
3. "The Economic Intelligence profile of Saudi Arabia: Eastern Province and GCC Countries Competitiveness Analysis ( English)" **Dr. Adel S. Aldosary**, Final Report in both printed and Cd version are available, 09/07 to 04/08
4. "Tourism Observatory on the Eastern Province" **Dr. Adel S. Aldosary**, Project proposal for EPTO funding, 08/07 to 08/08.

## **12. INTERNAL LECTURES AND SEMINARS OFFERED BY KFUPM FACULTY**

### Civil Engineering Department

1. “Piling and Stone Columns Optimization: Analytical and Practical Approaches”, **Aiban, S.A.**, Opening Keynote for the Conference “Piling and Deep Foundations: Saudi Arabia”, Radisson Blue Hotel, Riyadh, Saudi Arabia, 8-9 Nov. 2009.

### Chemical Engineering Department

1.     Speaker       :     Dr. S.M.J. Zaidi (Keynote Speaker)  
        Topic        :     Progress in Polymer Electrolyte Membrane Research for  
                               Fuel Cell Applications: Proceedings of the International  
                               Conference on Membrane Science & Technology, Kuala  
                               Lumpur, Malaysia  
        Date         :     May 13 to 15, 2009
  
2.     Speaker       :     Dr. S.M.J. Zaidi (Plenary Speaker)  
        Topic        :     Progress and Novel Strategies for Membrane Development  
                               for PEM Fuel Cell – Proc: International Symposium and  
                               Exhibition on Fuel Cell Technologies, Mumbai, India  
        Date         :     November 11 to 13, 2009

### Electrical Engineering Department

1.     Speaker       :     Mr. Nael Obeid, GM, Management, Eng. Kailash Purohith  
        Topic        :     Power System Simulation using “MiPower”, Power  
                               Research and Development Consultants Ltd. Bangalore,  
                               India  
        Date         :     December 29, 2009
  
2.     Speaker       :     Dr. Ahmed Tewfik, Professor  
        Topic        :     Real Time Tracking of 3D Organ Deformation Using  
                               Limited Field Optical Views, Department of Electrical  
                               Engineering and Computer Science, University of  
                               Minnesota, USA.  
        Date         :     December 21, 2009
  
3.     Speaker       :     Dr. Merouane Debbah, Head of Alcatel-Lucent, Chair on  
                               Flexible Radio.  
        Topic        :     Essentials of Random Matrix Theory (RMT), SUPELEC.,  
                               France.  
        Date         :     December 20, 2009.
  
4.     Speaker       :     Dr. Ghassan Al-Regib, Associate Professor

- |    |         |   |   |
|----|---------|---|---|
|    | Topic   | : | True Convergence via Immersive Communications, School of Electrical and Computer Engineering, Georgia Institute of Technology, USA. |
|    | Date    | : | December 16, 2009.  |
| 5. | Speaker | : | Dr. Atef Shamim, Research Fellow  |
|    | Topic   | : | RF System-on-Chip (SoC) and System-on-Package (SoP) Design for Wireless Communications, KAUST                                       |
|    | Date    | : | December 6, 2009  |
| 6. | Speaker | : | Mr. Roy Moxley, Senior Product Manager.   |
|    | Topic   | : | Synchrophasor-Based Power System Monitoring, Analysis, and Control, Schweitzer Engineering Laboratories Inc., USA.                  |
|    | Date    | : | November 8, 2009  |
| 7. | Speaker | : | Mr. Shahab A. Najmi, Sr. Manager (Technical Marketing).   |
|    | Topic   | : | Semi-conductor Industry and Opportunities in IC Design and Fabrication Process Design., IC Microsystems, Malaysia.                  |
|    | Date    | : | October 21, 2009.   |

#### Mechanical Engineering Department

- |    |         |   |  |
|----|---------|---|--|
| 1. | Speaker | : | Dr. Wael Ahmed   |
|    | Topic   | : | Two-phase flow and applications  |
|    | Date    | : | November 10, 2009  |
| 2. | Speaker | : | Drs. Amro Al-Qutub and John Lienhard                                       |
|    | Topic   | : | Overview of the KFUPM-MIT Collaboration Program                            |
|    | Date    | : | November 10, 2009  |
| 3. | Speaker | : | Dr. Kamal Youcef-Toumi   |
|    | Topic   | : | Research and Educational Activities in the KFUPM and MIT Center            |
|    | Date    | : | November 10, 2009  |
| 4. | Speaker | : | Dr. C. Suryanarayana   |
|    | Topic   | : | Bulk metallic glasses  |
|    | Date    | : | November 14, 2009  |
| 5. | Speaker | : | Dr. Josef Oehmen   |
|    | Topic   | : | Lean Product Development – Insights from MIT’s Lean Advancement Initiative |
|    | Date    | : | December 15, 2009  |
| 6. | Speaker | : | Dr. Nouar Tabet  |
|    | Topic   | : | Solar Cells : Recent Development   |

- Date : Dec., 15, 2009
7. Speaker : Dr. Mustapha Abbad  
Topic : In-Line Separator – New technique for the water separation in oilfield  
Date : Dec., 22, 2009
8. Speaker : Dr. Jamiu Adinoyi  
Topic : MS Proposal Presentation  
Date : December, 29, 2009

#### Systems Engineering Department

1. “6<sup>th</sup> Petersburg Workshop on Simulation”, **Dr. Al-Fares**, held in Petersburg, Russia from June 28 to July 4, 2009.
2. “Invitation for Research Collaboration”, **Dr. Magdi**, from Department of Automatic Control from July 15 – August 14, 2009.
3. “Models for Success in Managing National R&D”, **Dr. Al-Fares**, two day national policy workshop on fostering innovation, Higher education and global excellence in Thuwal, Saudi Arabia on 31 Oct- Nov 1, 2009.
4. “IEEE Symposium on Industrial Electronics Applications” **Dr. Magdi**, held in Kuala Lumpur, Malaysia, from October 4 to 6, 2009.
5. “IEEE Symposium on Industrial Electronics Applications” **Dr. Al-Saif**, held in Kuala Lumpur, Malaysia, from October 4 to 6, 2009.
6. “Advances in Materials and Processing Technologies”, **Mr. Arifusalam**, held in Kuala Lumpur, Malaysia, from October 26-29, 2009.
7. “International Conference on Electric Power and Energy Conversion Systems, **Dr. Magdi**, held in Sharjah, UAE, from November 10-12, 2009.
8. “40<sup>th</sup> Annual Meeting of the Decision Science Institute”, **Dr. Al-Fares**, held in New Orleans, USA from November 14-17, 2009.
9. “International conference on Industrial Engineering and Engineering Management”, **Dr. Malick Ndiaye**, held in Hong Kong, from December 8-11, 2009.

#### Computer Engineering Department

1. Speaker : Professor Pinaki Mazumder from Department of Electrical Engineering & Computer Science, University of Michigan (UM), Ann Arbor, USA  
Date : Wednesday, December 21, 2009  
Title : “Design using Quantum Clots and Nanowires”
2. Speaker : Professor Pinaki Mazumder from Department of Electrical



- Engineering & Computer Science, University of Michigan (UM), Ann Arbor, USA
- Date : Tuesday, December 22, 2009
- Title : “Beyond CMOS Technology and Evolutionary Architectures”
3. Speaker : Professor Pinaki Mazumder from Department of Electrical Engineering & Computer Science, University of Michigan (UM), Ann Arbor, USA
- Date : Monday, December 23, 2009
- Title : “Accelerated Chip-Level Thermal Analysis Using Multilayer Green’s Function”

SE Faculty Seminars to others :

1. Speaker : Dr. H.K. Al-Fares
- Topic : “Introduction to Forecasting Models and Techniques”, 3<sup>rd</sup> Annual
- Date : April 4, 2009.

SE Seminars (Internal):

1. Speaker : Dr. M. Dhurgham
- Topic : “Introduction to Minitab”
- Date : November 2, 2009.
2. Speaker : Prof. Magdi S. Mahmoud
- Topic : “Decentralized Control : A Guide Tour”
- Date : November 3, 2009.
3. Speaker : Dr. Elkafi Hassini
- Topic : “Joint Pricing and Inventory when Supply and Demand are Uncertain”
- Date : November 10, 2009.
4. Speaker : Mr. Walid K. Al-Zubi, Research Assistant
- Topic : “Process Targeting for Multi-Stage Production System : A Network Approach”
- Date : November 16, 2009.

Seminars by Others to Department :

1. Speaker : Mr. Zamman
- Topic : “Six Sigma”
- Date : October, 2009.

2. Speaker : Engr. Talal Asmari (from Al-Rawal Company for Technology)  
 Topic : "Important Steps for funny Projects"  
 Date : October 19, 2009
3. Speaker : Mr. James A. Timmons (from ARAMCO)  
 Topic : Cost-Benefit Analysis – Process Costing, Activity-based Costing and Performance Measurement” – for ISE 304 Students  
 Date : November 10, 2009
4. Speaker : Dr. Josef Oehmen, Research Scientist, MIT, USA  
 Topic : "Supply Chain Risk Management : The Example of Swiss Companies Sourcing from China"  
 Date : December 15, 2009.

#### Chemistry Department

1. "Sources of marine pollution and their impact on marine organisms" **Assad A. Al-Thukair**, June 10, 2009, Qatif.
2. "Frontiers of Chemical Sciences IV: Research and Education in the Middle East" **A. Kawde**, Nov. 14-19, 2009, Amman, Jordon.

#### Earth Sciences Department

1. Speaker : Dr. SanLinn I. Kaka  
 Title : Recent Earthquakes Swarm at Al-Ais, Near Madinah  
 Venue : Student Center, Organized by the Deanship of Student Affairs, Dhahran, KFUPM  
 Date : June 09, 2009
2. Speaker : Dr. Bassam Tawabini  
 Title : Applications of Nanotechnology in Treating Contaminated Waters  
 Venue : Dammam Municipality. Dammam, Saudi Arabia  
 Date : June, 2009
3. Speaker : Dr. Bassam Tawabini  
 Title : E-Learning: Teaching and Learning Skills for Online Education  
 Venue : E-Learning Section, DAD, KFUPM  
 Date : May, Oct. and Dec., 2009.
4. Speaker : Dr. Osman Abdullatif  
 Title : Characterization and Prediction of Reservoir Heterogeneities: Lessons and Examples from Outcrop Analogs in Saudi Arabia  
 Venue : Saudi Aramco  
 Date : March 15, 2009.

5. Speaker : Dr. A. Al-Saafin  
 Title : Potential of raw materials for cement industry in central and eastern areas of Saudi Arabia  
 Venue : Holiday Inn, Al-Khobar  
 Date : October, 2009.
6. Speaker : Dr. A. Al-Shaibani  
 Title : Forty Five Years of Geosciences Teaching and Research at KFUPM  
 Venue : Global Theatre Session, 79<sup>th</sup> Annual SEG Mtg., Houston  
 Date : October 27, 2009.
7. Speaker : Dr. A. Abokhodair  
 Title : Bootstrapping Techniques and the Statistics of Estimation  
 Venue : Graduate Seminars, KFUPM ESD  
 Date : October, 2009.

#### Department of Mathematics & Statistics

Lecturers/Seminars by Math Faculty:

#### Regular Seminars

1	Speaker Title Date	:	Dr. Abdelkader Boucherif Parabolic inclusions with nonlocal conditions Tuesday, October 13, 2009
2	Speaker Title Date	:	Dr. Boubaker Smii Application of the graphs to SPDE driven by a Levy space-time noise Tuesday, October 20, 2009
3	Speaker Title Date	:	Dr. Faisal Fairag The matrix multiplication that makes sense! Tuesday, October 27, 2009
4	Speaker Title Date	:	Dr. Hassan Azad Sturm Liouville theory and orthogonal functions Tuesday, November 3, 2009
5	Speaker Title Date	:	Dr. Fiazud Din Zaman One some nonlinear equations of evolution type Tuesday, November 10, 2009
6	Speaker Title Date	:	Dr. Salim Messaoudi Uniform stability in timoshenko-type systems Tuesday, December 8, 2009
7	Speaker Title Date	:	Dr. Raja Latif Characterizations of Generalized Types of Fuzzy Alpha-Mappings in Fuzzy Topological Spaces Tuesday, December 22, 2009.

Research (Star) Colloquium Seminar

1	Speaker Title Date	:	Dr. Hassen A. Muttalak Estimating $P(Y < X)$ using ranked set sampling in case of the exponential distributions Sunday, October 25, 2009
2	Speaker Title Date	:	Dr. Abdulkadir Hussein Some sequential and group sequential methods and their applications in the medical fields (Part-1) Sunday, November 8, 2009
3	Speaker Title Date	:	Dr. Abdulkadir Hussein Some sequential and group sequential methods and their applications in the medical fields (Part-2) Sunday, November 15, 2009
4	Speaker Title Date	:	Dr. Anwar H. Joarder Robustness of statistical methods Sunday, December 13, 2009
5	Speaker Title Date	:	Dr. Boubaker Smii How to determine the law of the noise driving a stochastic partial differential equation (SPDE)? Sunday, December 20, 2009
6	Speaker Title Date	:	Dr. Abdul Kadir Hussein Do Not Kill your Children!": A Canadian survey on car-seat use, designs and methods Sunday, December 27, 2007

Visitor Seminars

1	Speaker Title Date	:	Prof. Theodore E. Simons (Univ. of Peloponnese, Athens, Greece and Chair Prof. at KFUPM) Numerical solution of differential equation Tuesday, November 17, 2009
2	Speaker Title Date	:	Dr. Abdul Rahman Al-Hussein (Univ. of Qassim) Maximum principle for controlled stochastic evolution equations Tuesday, December 15, 2009
3	Speaker Title Date	:	Dr. Mohamed Amine Khamsi (Texas Univ. at El-Paso (USA) and Adjunct Prof. at KFUPM) Reflexive Metric Spaces and the Fixed Point Property Tuesday, December 29, 2009

Commutative Algebra Weekly Seminar (Organizer: Dr. S. Kabbaj),  
October 2009 – January 2010  
(Seminars given by the following faculty members)

1	Speaker Title Date	: : :	M. Jarrar Matlis domains (1) Sunday, October 25, 2009
2	Speaker Title Date	: : :	A. Ben-Obaid Duals of ideals in a PVMD Sunday, November 1, 2009
3	Speaker Title Date	: : :	A. Ben-Obaid Ideal transform overrings of a PVMD Sunday, November 8, 2009
4	Speaker Title Date	: : :	A. Mimouni Projectively equivalent ideals and Rees Valuations (1) Sunday, December 13, 2009
5	Speaker Title Date	: : :	B. Mimouni Projectively equivalent ideals and Rees Valuations (1) Sunday, December 20, 2009
6	Speaker Title Date	: : :	J. Abuhlail Autonomous varieties Sunday, December 27, 2009
7	Speaker Title Date	: : :	O. Echi Koreselt numbers and sets Sunday, January 3, 2010
8	Speaker Title Date	: : :	M. Jarrar Matlis domains (2) Sunday, January 10, 2010
9	Speaker Title Date	: : :	J. Abuhlail Exact sequences in non-exact categories Sunday, January 17, 2010

### **Mathematics Assessment Team 2009**

An assessment team of three members from USA visited the Department of Mathematics and Statistics.

- (i) Prof. Maarten V. De Hoop, Purdue University, USA.
- (ii) Prof. Christian Houdre, Georgia Institute of Technology, USA.
- (iii) Prof. Krishnaswami Alladi, University of Florida, USA

### **Department of Finance & Economics**

1. Speaker : Dr. Mansur Masih  
Title : Price Dynamics of Different Types of Renewable Energy, Crude Oil, Natural Gas and Petrochemicals  
Date : December 29, 2009
2. Speaker : Dr. Houcem Smaoui  
Title : Privatization Dynamics and Economic Growth  
Date : July, 2009

Department of Management & Marketing

1.     Speaker       :     Dr. Salem Al-Ghamdi  
       Title        :     How to Promote Volunteerism on Life  
       Date         :     December 6, 2009

### **13. SEMINARS OFFERED BY OUTSIDE SPEAKERS IN THE UNIVERSITY**

#### **Petroleum Engineering Department**

#### **Chemistry Department**

1.     Speaker       :     Dr. Basheer Chanbasha  
        Title         :     Novel Analytical Techniques for Trace Level  
                               Quantization of Organic Compounds/Pollutants  
        Date          :     18 October, 2009
  
2.     Speaker       :     Dr. Amer Adnan El-Batta  
        Title         :     Copper (I) Iodide Dimethyl Sulfide Catalyzed 1,4-Addition  
                               Of Alkenyl Groups From Alkenylzirconium and Alkenylzinc  
                               Reagents.  
        Date          :     01 November, 2009
  
3.     Speaker       :     Dr. Mohammad Raziq Al Imam  
        Title         :     Self-assembly of Supramolecular Dendritic crowns into  
                               Helical Pyramidal Columns and Chiral Spheres.  
        Date          :     15 November, 2009

#### **Earth Sciences Department**

1.     Speaker       :     Dr. Hamdy H. Seisa (Mansoura University, Egypt)  
        Title         :     The common refractor element (CRE) method  
        Date          :     October 20, 2009-12-14
  
2.     Speaker       :     Dr. Khaled Hadj-Sassi (Schlumberger)  
        Title         :     Introduction to Inverse Problems in Geophysics: Theory and  
                               Applications  
        Date          :     November 10, 2009-12-14