Association of Egyptian American Scholars

37th Annual International Conference

www.aeascholars.org

"The Role of Information Technology and its Scientific Applications for Egypt's Advancement in the 21st Century"

Under the patronage of

H. E. Dr. Hany Helal

Minister of Higher Education & Scientific Research

Dr. Maher El-Domiaty

President, Zagazig University

Dr. Salwa Abd Alla El Garieb

Secretary General of the Supreme Council of Universities (Egypt)

Dr. Mohamed Attalla

President, Association of Egyptian American Scholars (AEAS)

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Treasurer, AEAS

Conference Finance Chair

December 26th – 29th, 2010

Cairo University & Zagazig University

Cairo & Zagazig – Egypt

AEAS MISSION STATEMENT

To create a forum for North American Egyptian scholars that facilitates dialogue and promotes partnerships with Egyptian counterparts to implement beneficial scholarly endeavors

AEAS Board Of Directors

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Egypt Side Coordinator:	Dr. Amal Abbas

Message from Dr. Maher El-Domiaty
President , Zagazig University

It gives me great pleasure to welcome all participants in the 37th. Annual International Conference of the Association of Egyptian American Scholars. We are honored to have the activities of the third day of the conference at our university.

Zagazig University was inaugurated in the academic year 1974. ZU has two campuses located in Zagazig City, the capital of Al-Sharkia, located at the eastern side of the Nile delta and Zagazig city is 70 km away from Cairo.

ZU stands as one of the leading universities in Egypt providing education and research across a wide range of disciplines from arts and humanities to basic science and medicine.

Since its establishment, ZU has opened its gates to students of all socio-economic background regardless of gender or religious beliefs.

Beginning with a student population of just 10,998 in the year 1974, ZU has now grown to more than 90000 undergraduate students and over 11954 postgraduate and research students from Egypt, and abroad, served by 5387 academic staff and over 16000 administrative staff covering 177 scientific departments in eighteen faculties and institutions, nine university hospitals, a student hospital, nine dorms and an international stadium.

Welcome to Zagazig University and we will do our best to ensure that your time at ZU is productive, rewarding and enjoyable.

Dr. Maher El-Domiaty
President, Zagazig University

AEAS President Message

Dear Conference Delegates and Colleagues

I wish to welcome all of you to the 37th annual conference of the Association of Egyptian American Scholars (AEAS) 2010. This conference marks another major milestone of AEAS mission to foster an environment for Egyptian researchers in North America to collaborate with their counterparts in Egypt. With over 85 papers, this conference marks another record high of the collaboration between Egyptian scholars. This year's conference will include four plenary talks to provide our colleagues in Egypt, Canada and USA with the opportunity to share their experiences with each other This conference reflects once again this strong interaction through the determined efforts of the Egyptian Ministry of Higher Education and H.E. Dr. Hany Hilal, Minister of Higher Education and Scientific Research.

This year's conference also marks a new direction of AEAS's history where relationships with Universities outside Cairo is strengthened. For the first time a part of the conference program is being held at the Zagazig University. This has become possible through the collaborative effort and the generous invitation from Dr. Maher El-Domiaty, President of Zagazig University. Also, Dr. Hala Foad, President, Tanta University, has invited AEAS to a round table discussion and a visit to Tanta University.

This year's Scholar of the Year Award is presented to Dr. Hind Hanafy, president of Alexandria University for her long commitment to Higher Education. Also, this year AEAS is delighted to provide a le 10,000.00 research grant in the name of its late Vice President Dr. Ramsis Toma to one young distinguished researcher who is currently enrolled in a program in an Egyptian university or a research institution.

On behalf of the AEAS executive board of Directors and its general membership, I wish to thank the Supreme Council of Universities, specially its Secretary General Dr. Salwa El Ghareeb for hosting this conference and their valuable and strong support to its success. It is also important to acknowledge the valuable support of the Project Development, External Relations and Copy Rights Center at Ain Shams University under the leadership of Dr. Maged El Deeb, President of Ain Shams University.

We are looking forward to a three interactive days of fruitful discussions and collaborative scientific exchange for the benefit of our beloved Egypt.

Dr. Mohamed Attalla, P.Eng.

President

Association of Egyptian American Scholars

Acknowledgement

We would like to thank Professor Dr. Mohamed Maged El Deeb President of Ain Shams University for his cooperation and support, and the colleagues from Ain Shams University for dedicating the time and effort to finalizing the conference printouts.

Keynote Speeches

Opening Ceremony Keynote Speech:

"Nano-Technology, the Great Potential of the Very Small"

Dr. Mostafa El-Sayed
Julius Brown Chair and Regents Professor;
Director, Laser Dynamics Laboratory
Atlanta, Georgia

Cairo Keynote Speech:

"Enabling a More Sustainable Better World"

Dr. Waguih ElMaraghy
Professor & Head
Department of Industrial and Manufacturing Systems Engineering,
Intelligent Manufacturing Systems Centre (IMS)
Faculty of Engineering, University of Windsor
Ontario, Canada

Zagazig Keynote Speech:

"A Strategic Approach to a Sustainable & Intrinsic Egyptian Science & Technology"

Dr. Amer El-Ahraf
AEAS Immediate Past-president
Vice-president Emeritus, California State University, Dominguez Hills
Los Angeles, California

Presentation: (For University Presidents and their designates)

"Balanced Score Card, University Strategic Plan Assessment Tool"

Dr. Hussein Mouftah,
Canada Research Chair and Distinguished University Professor
School of Information Technology and Engineering
University of Ottawa, Canada

Conference Schedule Overview

Sunday December 26th, 2010 – Open Ceremony

12:30 – 1:00 pm:	Registration
1:00 – 1:15 pm:	Opening & AEAS President Address Dr. Mohamed Attalla
1:15 – 1:25 pm	AEAS Conference Organizing Committee chair Dr. Ayman Mosallam
1:25 – 1:35 pm	Secretary General of Supreme Council of Universities Dr. Salwa Gharib
1:35 – 1:45 pm	President of Zagazig University Dr. Maher El-Domiaty
1:45 – 2:15 pm	Keynotes Speech: "Nano-Technology, the Great Potential of the Very Small" Dr. Mostafa El-Sayed
2:15 – 2:45 pm	Engineering Sector Report Dr. Mohamed Sheara Dr. Mohamed Megahed Dr. Mohamed Attalla
2:45 – 3:15 pm	Medical Sector Report Dr. Rashad Barsoum Dr. Tawfik Ayoub Dr. Amer El Ahraf
3:15 – 3:45 pm	Commerce Sector Report Dr. Saqr Ashour Dr. Ismael Gomaa
3:45 – 5:00 pm	AEAS Reception

Conference Schedule Overview

Monday December 27th, 2010 – Conference Day 1

8:00 – 8:30 am	Registration
8:30 – 9:30 am	Opening – Dr. Mohamed Attalla Keynote Speech – Dr. Waguih ElMaraghy
9:30 – 12:00 pm	Scientific Presentations
12:00 – 1:00pm	Lunch & Plenary Talk Moderator: Dr. Ahmed ElSawy Dr. Somaya Hosny "Accreditation process, the first school to be accredited in Egypt" Dr. Hussein Anis "E-Learning in Engineering Education – General Challenges and the Egyptian Experience"
1:00 – 2:15 pm	Scientific Presentations
2:15 – 2:30 pm	Coffee Brake
2:30 – 4:10 pm	Scientific Presentations

Monday December 27th, 2010 – Dinner & Award reception

6:30 – 7:00 pm	Reception
7:00 – 10:00 pm	Award Ceremony "Scholar of the Year Award" Dr. Hind Hanafy "Life Time Membership" Dr. Salwa El Gharib "AEAS Scholarship 2010" Marwa Kamal Darwish, Researcher Suez Canal University.

Conference Schedule Overview

Tuesday December 28th, 2010 – Conference Day 2

8:00 – 8:30 am	Registration
8:30 – 9:30 am	Plenary Talk Moderator: Dr. Aly Mansour Dr. Mohamed Labib Salem "Potential use of adoptive transfer of immune cells in anti-cancer therapy" Dr. Ahmed Hossam Eldine "A Future vision for Engineering Education and Scientific Research in Egyptian Universities"
9:30 – 12:00 pm	Scientific Presentations
12:00 – 1:00pm	Lunch & Plenary Talk Moderator: Dr. Mohamed Hegab Dr. Mohab Anis "Collaboration with the Technology Innovation & Entrepreneurial Center, Ministry of Telecommunication" Dr. Tarek Saleh "Innovation in services industry"
1:00 – 2:15 pm	Scientific Presentations
2:15 – 2:45 pm	Coffee Brake& Plenary Talk Moderator: Dr. Ayman Mosallam Dr. Khaled El Dahaby "Sustainable Buildings in Egypt"
2:45 – 3:45 pm	Cairo Resolutions

Conference Schedule Overview

Wednesday December 29th, 2010 – Zagazig University

8:30 – 9:00 am	Registration
9:00 – 9:05 am	Opening Dr. Mohamed Attalla
9:05 – 9:20 am	Zagazig University President Address "Zagazig University, a Model Egyptian Regional University" Dr. Maher El-Domiaty
9:20 – 9:35 am	Keynote Speech "A Strategic Approach to a Sustainable & Intrinsic Egyptian Science & Technology" Dr. Amer El-Ahraf
9:35 – 10:20 am	Plenary Talk& Discussion
9:35 – 9:50 am	Dr. Omar Mahmoud "Pharaonic old Zagazig University"
9:35 – 10:05 am	Dr. Ahmed Fayez "Energy Resources in 21st century"
10:05 – 10:20 am	Discussion of Plenary Talks
10:20 – 10:50 am	Coffee Brake& Walk to Conference Halls
10:50 – 1:10 pm	Scientific Presentations
1:10 – 2:10 pm	Lunch &Round Table Discussions
2:10 – 3:10 pm	Zagazig Resolutions & Conference Closure
3:10 – 3:40 pm	Visit of Zagazig University Museum

Schedule of Scientific Presentations

Cairo University Sessions

Health & Medicine Schedule:

Monday December 27th, 2010 – Conference Day 1

Room 1

Co-Chairs	**Dr. Fouad Kandeel** **Dr. Marwa A. ElShaer**
09:30 – 09:55 am	**Dr. Moustafa Abdel-Nasser** *Training course for preparing the university teacher; an evaluation report*
09:55 – 10:20 am	**Dr. Moustafa Abdel-Nasser** *Developing policies and procedures in patient safety in our hospitals*
10:20 – 10:45 am	**Dr. Khadiga AbuGabal** *Leptin in relation to cancer breast in women*
10:45 – 11:10 am	**Dr. Samar Ahmed** *Student perception of peer critique of student-selected study components in forensic medicine curriculum*
11:10 – 11:35 am	**Dr. Samar Ahmed** *Problem oriented sessions for teaching forensic medicine and clinical toxicology*
11:35 – 12:00 noon	**Dr. Ashraf Ansara** *Opportunities for cooperation/partnership to establish health care facility at the villages*
Co-Chairs	**Dr. Mona Orady** **Dr. Samar Ahmad**
1:00 – 1:25 pm	**Dr. Tawfik Ayoub** *Medical Education Reform, a Stepping Stone Towards Medical Services Advancement*
1:25 – 1:50 pm	**Dr. Mona El-Said** *The association of HLA class II DR Alleles with HCV infection in Egyptian children*
1:50 – 2:15 pm	**Dr. Amer El-Ahraf** *An ecological definition of heath: as a philosophical foundation for a comprehensive approach to public health in a new era*

Co-Chairs	**Dr. Amer El Ahraf** **Dr. Moustafa Abdel-Nasser**
2:30 – 2:55 pm	**Dr. Fouad Kandeel** *Epigenetics and metabolic memory*
2:55 – 3:20 pm	**Dr. Fouad Kandeel** *Global diabetes health initiative*
3:20 – 3:45 pm	**Dr. Fouad Kandeel** *Pathophysiologic strategies for the prevention and/or treatment of type 1 diabetes*

Health & Medicine Schedule:

Tuesday December 28th, 2010 – Conference Day 2

Room 1

Co-Chairs	**Dr. Ashraf Ansara** **Dr. Menha Swellam**
09:30 – 09:55 am	**Dr. Marwa A. ElShaer** *Immunohistochemical study of protein p53 in Egyptian psoriasis*
09:55 – 10:20 am	**Dr. Ibrahim Labib** *Study of the effects of environmental pollution by organophosphorus pesticides on male reproduction*
10:20 – 10:45 am	**Dr. Ibrahim Labib** *The effect of environmental pollution by pyrethroid pesticides on vital organs*
10:45 – 11:10 am	**Dr. Amany Said Maghraby** *Immunoprophylactic effect of Fasciola Gigantica worm homogenates with saponin extracted from Atriplex nummulari*
11:10 – 11:35 am	**Dr. Gamela Nasr** *Enhancement of science & technology studies (STS) in Egypt internet based self-assessment learning as an addition to medical undergraduate courses*
11:35 – 12:00 noon	**Dr. Gamela Nasr** *Vision in development of quality of medical education and health care services in Egypt*
Co-Chairs	**Dr. Tawfik Ayoub** **Dr. Gamela Nasr**
1:00 – 1:25 pm	**Dr. Mona Orady** *Overview and assessment of robotic hysterectomy for benign indications*
1:25 – 1:50 pm	**Dr. Roba M. Talaat** *Analysis of tumor necrosis factor-alpha polymorphism at position -308 g/a in Egyptian Hepatitis C Virus (HCV) infected patients using quantitative real time polymerase chain reaction (QRT-PCR)*
1:50 – 2:15 pm	**Dr. Menha Swellam** *Can angiogenic markers early detect bladder cancer?*

Engineering Schedule

Monday December 27th, 2010 – Conference Day 1

Room 2

Co-Chairs	**Dr. Ahmed ElSawy** **Dr. Mohamed Megahed**
09:30 – 09:55 am	**Dr. Said Abd ElHameed** *The Impact of Planning Elements Variables on the Square Meter of Land Share of Utility Networks Length*
09:55 – 10:20 am	**Dr. Nagia F. Ali** *Green Strategy for Development of Antimicrobial Printed Textile Fabrics*
10:20 – 10:45 am	**Dr. Mohamed Attalla** *Innovative Techniques For Building Inspection And Optimum Allocation Of Capital Renewal Funds*
10:45 – 11:10 am	**Dr. Ghada El Khayat** *Adoption of MIS/ERP systems and related technologies in the Egyptian Universities*
11:10 – 11:35 am	**Dr. Nasser El Shemy** *Mobile Multi-sensor Geomatics (M2G) Systems - An Emerging Technology Sector in Geomatics*
11:35 – 12:00 noon	**Dr. Salwa F. Elbeih** *A Comparative Study of the Suitability of advanced techniques for Landmine Detection in Egypt*
Co-Chairs	**Dr. S. A. Sherif** **Dr. Salwa F. Elbeih**
1:00 – 1:25 pm	**Dr. Mohamed Elhabiby** *Geomatics for non-destructive Archaeology*
1:25 – 1:50 pm	**Dr. Waguih ElMaraghy** *The Grand Challenges for Engineering Education and Research*
1:50 – 2:15 pm	**Dr. Ahmed ElSawy** *Managing Virtual Teams in a Senior Project Course*

Co-Chairs	**Dr. Sayed M. Sayed** **Dr. Said Abd ElHameed**
2:30 – 2:55 pm	**Dr. Mohamed Gamal El-Din** *Advanced Oxidation Technologies in Water and Wastewater Treatment: Process Fundamentals and Applications*
2:55 – 3:20 pm	**Dr. Mohamed Hegab** *Closing the loop of engineering programs to meet abet requirement*
3:20 – 3:45 pm	**Dr. Hassan Mohamed-Nour** *Effects of Distributed Generation on the Performance of Smart Power Grid*
3:45 – 4:10 pm	**Dr. Ayman Mosallam** *Development of the Egyptian Green Pyramid System: An Essential Step for Egyptian Green Infrastructure*

Engineering Schedule:

Tuesday December 28th, 2010 – Conference Day 2

Room 2

Co-Chairs	**Dr. Hassan Mohamed-Nour** **Dr. Ghada El Khayat**
09:30 – 09:55 am	**Dr. Hussein Moufatah** *Wireless Sensor Networks for Smart Grid Applications*
09:55 – 10:20 am	**Dr. Mahmoud Mohamed Mourad** *Solar Radiation and Its Effect on the Planning of Streets in Desert Cities: New Assiut city (Egypt), as a case study*
10:20 – 10:45 am	**Dr. Nagy Nosseir** *E-Learning and FE Examinations in Engineering*
10:45 – 11:10 am	**Dr. Nagwa Omar** *Efficient Wireless Sensor Network Transport Protocol*
11:10 – 11:35 am	**Dr. Elsayed Orady** *Future Trends in Educating Engineers to face the Challenges of the New Century*
11:35 – 12:00 noon	**Dr. Ashraf Salah Eldin** *Open Source Application as a tool for distance Learning Model as a case study*
Co-Chairs	**Dr. Mohamed Gamal El-Din** **Dr. Nagia F. Ali**
1:00 – 1:25 pm	**Dr. Sayed M. Sayed** *Re-classifying bridges with unknown foundations*
1:25 – 1:50 pm	**Dr. Sayed M. Sayed** *UNRAP as pavement base course - are we ready for it?*
1:50 – 2:15 pm	**Dr. S. A. Sherif** *Distributed Energy with Flexible Fuel for Egypt with Cooling and Fresh Water Production*

Humanities, Science, Education & Business:

Monday December 27th, 2010 – Conference Day 1

Room 3

Co-Chairs	**Dr. Aly Mansour** **Dr. Brince Ghattas**
09:30 – 09:55 am	**Dr. Eman El-Khatib** *Improving Coloration and Antimicrobial Effect of Silk Fabrics*
09:55 – 10:20 am	**Dr. Mohamed Abaas** *Community Practice from Development to Empowerment through Information Technology*
10:20 – 10:45 am	**Dr. Laila Abou-Zeid** *Combating oxidative stress as a hallmark of cancer & aging: computational modeling and synthesis of Chalcone Bioisosteres as potential antioxidant and antiproliferative agents*
10:45 – 11:10 am	**Dr. Mostafa Afifi** *Proposed Search for Worldwide Accurate Moon Calendars that establish Predictable Unified Feast Days*
11:10 – 11:35 am	**Dr. Fatma Bassyouni** *Synthesis and pharmacological activity evaluation of some analogues of pyridine derivatives*
11:35 – 12:00 noon	**Dr. Hatem El Ghandoor** *Measuring Polymeric Nanoparticles Size using Laser Speckle Interferometry Technique*
Co-Chairs	**Dr. Mostafa Afifi** **Dr. Fatma Bassyouni**
1:00 – 1:25 pm	**Dr. Riad El-Mohamedi** *Biological control of Pythium root rot on broccoli plants under greenhouse conditions*
1:25 – 1:50 pm	**Dr. M. M. El-Molla** *Nanotechnology to improve Coloration and Antimicrobial of Silk Fabrics*
1:50 – 2:15 pm	**Dr. Mohamed Elhennawi** *Egypt and the Global Financial Crisis*
2:30 – 2:55 pm	**Dr. Brince Ghattas**

	Analysis the Expectation Gap of Management Accounting Role in Rationalization of TQM Decisions in Industrial Enterprises
2:55 – 3:20 pm	**Dr. Fatma Elzhahraa Mahmud**
	The role of philosophy of education in promoting multicultural approach in curriculums
3:20 – 3:45 pm	**Dr. Aly Mansour**
	Bank Owned Projects, Bank Misr Model 1928-1968

Humanities, Science, Education & Business:

Tuesday December 28th, 2010 – Conference Day 2

Room 3

Co-Chairs	**Dr. Nabil Salem** **Dr. Ahmed Yousef**
09:30 – 09:55 am	**Dr. Abdalla Mousa** *Union dyeing of wool/polyester blend fabrics using sulphatoethyl sulphone/monochlorotriazine reactive-disperse dyes*
09:55 – 10:20 am	**Dr. Soad M. Nasr** *Toxicological effects of benzo(a)pyrene on blood components and oxidative stress in mice*
10:20 – 10:45 am	**Dr. Nabil Salem** *A Whole New Vision going forward with Education Reform K-12 in Egypt*
10:45 – 11:10 am	**Dr. Ahmed Yousef** *Ozone use for sanitization or decontamination of food, water and environment*
11:10 – 11:35 am	**Dr. Farid Abd El Karim** *Effect of some plant volatile aldehydes on gray mold disease of strawberry fruits during storage*

Schedule of Scientific Presentations

Zagazig University Sessions

Medicine:

Wednesday December 29th, 2010 – Conference Day 3

Hall A

Co-Chairs Dr. Maher El-Domiaty
Dr. Wael El-Hayeg
Dr. Tawfik Ayoub

10:50 – 11:10 am	**Dr. Wael Al-Sheimy** *Multi center study of combined thrombo-embolectomy and intra-operative thrombolytic therapy in acute lower limb ischaemia*
11:10 – 11:30 am	**Dr. Ghada Elmesallamy** *Differential effects of alprazolam & clonazepam on immune system and blood vessels in non-stressed and stressed adult male albino rats*
11:30 – 11:50 am	**Dr. Nermine A. Ibrahim** *A new ethical dilemma for hemodialysis patients: exposure to Diethyl Hexyl Phthalate*
11:50 – 12:10 pm	**Dr. Mahanta Putul** *A study on eruption of third molar of Libyan individual and its comparison with the Egyptian*
12:10 – 12:30 pm	**Dr. Amira Hassan Waly** *"Agent-host-environment model of blunt abdominal trauma in children: five year experience & preventive inferences"*
12:30 – 12:50pm	**Dr. Mohamed Mansour** *Bacteriological aspects of raw milk in Zagazig city, Egypt*

Engineering:

Wednesday December 29th, 2010 – Conference Day 3

Hall B

Co-Chairs Dr. Ashraf El Shihy
Dr. Mohamed Hegab

10:50 – 11:10 am	**Dr. D. S. El Monayeri** *Enhancement of self -purification process of drains in Egypt*
11:10 – 11:30 am	**Dr. Fathy Farag** *Fully Balanced Digitally Programmable Switched-MOFET FIR Filter for Low-Voltage Applications*
11:30 – 11:50 am	**Dr. Ahmed Reda** *Analysis and Design of RF CMOS Mixer For Low Voltage Application*
11:50 – 12:10 pm	**Dr. Ahmed Reda** *CMOS Two-Stage Amplifier Design Methodology for Automatic Analog Circuit Design*
12:10 – 12:30 pm	**Dr. Hamdey Shehab El-Deen** *Behavior of FRP-reinforced concrete beams under combined and torsion flexure*
12:30 – 12:50pm	**Dr. Hamdey Shehab El-Deen** *Behavior of reinforced RCA beams*
12:50 – 1:10pm	**Dr. Ahmed Wahba** *A Novel Analog MOS Four Quadrant Multiplier*

Egyptology, Education &Environmental Health

Wednesday December 29th, 2010 – Conference Day 3

Hall C

Co-Chairs Dr. Ahmed Refaay
Dr. Basem Ashour
Dr. Amer El-Ahraf

10:50 – 11:10 am	**Dr. Amer El-Ahraf, Dr. Shokry Elkantiry** *Women's health in ancient Egypt*
11:10 – 11:30 am	**Dr. Amer El-Ahraf** *An ecological definition of heath: as a philosophical foundation for a comprehensive approach to public health in a new era*
11:30 – 11:50 am	**Dr. Mohamed Fawzi El-Shaied** *Hydrology of Nile delta in ancient times*
11:50 – 12:10 pm	**Dr. Mahmoud Omar Selim** *Discover a head of statue for king Amenhotep IV (Akhenaton) spotlight on Amarna art in ancient Egypt*
12:10 – 12:30 pm	**Dr. Nabil Salem** *A whole new vision going forward with education reform k-12 in Egypt*

Scientific Abstarcts

Medicine & Public Health Abstracts

Training Course For Preparing The University Teacher; An Evaluation Report

Moustafa Abdel-Nasser[1]

[1]Faculty of Medicine, Al-Azhar University

In December 2001, an obligatory training course was decided by the committee of the Faculty of Medicine, Al-Azhar University for preparing a university teacher. The project is an extension to continuous education and training programs for the Faculty staff and their assistance carried out by Medical Education Unit (MEU) since its foundation in 1970s. Courses held before were a short courses (2-3 days), but these new ones are comprehensive and multifunctional as they extends to about two weeks (10-14 days). Until now, 18 courses were held, nearly 2-3 per year. The eighth training course is the model used herein. The course was held during the period from 1-18 January, 2005 and includes 35 trainees. Our training program aims at: a) acquiring the university staff both knowledge and skills suitable for his job as teacher, b) preparing the university staff to be a researcher, c) training the university staff to be able to use the recent teaching materials, and d) preparing the university staff to be a student leader.

Program evaluationwere carried out using: **a) pre-and post-tests:** to test their student achievement in response to their concept about teaching, research and leadership (knowledge was graded as good, moderate and weak), **b) observation:** positive sharing in discussion, **c**) **attendance:** to be used as credit hours**, d) multiple questionnaires:** to assess the performance of students and staff. **Methods of training** were traditional lectures, group discussion, brain storming, workshops and assignments An improvement was happened in the trainee's knowledge by the end of the course This was evidenced by good knowledge which was noticed for the three variables (mentioned above), i.e. 15.6%, 9.4 % and 46.8% in the *pre-test*, Vs. 53.3%, 59.4 % and 68.8% in the *post-test* ($P \leq 0.5$). Time for lecture and discussion were found enough by 93.5 % and 71%, respectively, compared to 6.5% and 29% ($P \leq 0.5$) who found time not enough. Most of the trainees found that important topics were covered and their content was suitable (87% and 96.8 %, respectively). Again, most of them found that topics were beneficial (96.8 %).

A final evaluation report which was presented to the policy makers and head of the funding agency to be discussed and studied by the Faculty committee. It was stressed on:i- all staff should attend similar courses to improve their capabilities in teaching, assessment and research, ii- introducing training courses about the characteristics of successful leader, iii- increasing models and audiovisuals used in teaching and assessment, iv- improving methods of assessment at the undergraduate level, v- introducing training courses in statistics and computer sciences, vi- giving emphasis on the technology of education.

Developing Policies And Procedures In Patient Safety In Our Hospitals

Abdelnasser M.[1], Fuentes V. C.[2]

[1]Ph.D. (Microbiology & Immunology), Formerly Quality Supervisor
[2]Quality Improvement Nurse; Maternity & Children Hospital, Najren, Saudi Arabia

Patient safety is as an essential component of quality health care for infants, children, adolescents, adults and those with special health care needs. This encourages to consider thoughtfully the environment in which health care services are delivered and to implement practices that decrease a patient's risk of injury or harm during the delivery of care. All health care providers i.e. Physicians, Nurses, Technicians and whoever provides care to patients including support services staff shall use every reasonable precaution to provide a safeenvironment. Procedures are categorized as follows:

1. General Precautions: Patients should use footwear when out of bed. All staff shall wear hospital photo I.D. when on duty. The patient care area and hall are clean, well lighted, and free from clutter. Furniture is in good repair. The following signs should be posted on the door or chart, where applicable: a-" No Smoking Oxygen in Use", " Compressed Gas Storage" or "Oxygen Storage" sign. b- Radioactive precautions (e.g., patients with implants), c- Isolation Precaution, d- Fall Risk. Supplies, machines, and equipment are stored in designated areas. Broken or malfunctioning equipment should be removed from clinical area. All spills are cleaned immediately. " Near Misses", accidents and occurrences are immediately reported to Total Quality Management Department using Occurrence Variance Report (OVR).

2. The identification band is applied following initial identification of the patient.

3. Patients shall be placed in a bed that has functional side rails.

4. Observe inpatients with a history of seizure disorder or patients admitted for active seizure disorder or who experience seizures while in hospital / clinic.

5. Staff shall accompany all patients: For initial ambulation after surgery, after procedures requiring sedation and after prolonged bed rest

6. Wheels of stretchers, wheelchairs, scales, and beds are locked when a patient is lifted from or assisted onto those equipments.

7. Encouraging patients to become an active, involved, and informed member of their health care team.

Guidelines and precautions for patient care through the safety measures within their professional practice should be defined in each health care facility.

Leptin In Relation To Cancer Breast In Women

Gamal Emira[1], Khadiga AbuGabal[2], Sahar Talaat[3], and Hosam Fahmy[4]

[1]Surgical Oncology Development, National Cancer Institute, Cairo University
[2]Chemical Pathology Department, Faculty of Medicine, Beni Suef University ,
[3]Pathology Department, Faculty of Medicine, Cairo University
[4]Clinical Pathology Department, Faculty of Medicine, Ain Shams University

Leptin, the obese (ob) gene product, is a novel circulating hormone that is expressed abundantly in the adipose tissue and produced by human mammary epithelial cells. Leptin reflects the amount of energy stores regulates energy balance and is associated with circulating levels of reproductive hormones. The increasing prevalence of obesity in many parts of the world emphasizes the importance of learning more about the relationship between obesity and cancer and the mechanisms involved in their interaction. Obesity seems a major component in cancer risk factors with a particular influence on reproductive tract tumours. It alerts the pathways of estradiol metabolism, decreases estradiol binding and facilitates the synthesis of estrogen. Estrogens exert their effect on breast carcinoma cells though estrogen receptors. To determine whether leptin is involved in the aetiology of breast cancer we measured serum leptin and estradiol levels, using ELISA technique, with evaluation of estrogen receptors by immunohistochemistry, in 30 cases of patients of infiltrating duct carcinoma (IDC) “study group” from the National Cancer Institute and 10 cases of females presenting with benign disorders of the breast “control group”. Data were analyzed, our results showed significant increase in serum estradiol in the study group ($P < 0.05$) with highly significant increase in serum leptin ($P < 0.001$) as regards control group. In addition, lipid profile showed highly significant increase in triglycerides in the study group ($P < 0.001$) and highly significant increase in T.cholesterol ($P < 0.01$) but insignificant decrease in LDL-cholesterol ($P > 0.05$) compared to control group. There was also highly significant increase in serum leptin level in cases showing grade 3 expression as estrogen receptors, as regards cases showing grade 1&2 estrogen expression ($P < 0.01$). A highly significant increase in serum leptin is also seen in the group of positive lymph nodes metastases compared group to the group of negative lymph nodes metastases ($P < 0.01$). In conclusion, since our patients showed serum levels of leptin significantly higher than controls, in association with elevated values of essential of estradiol, estrogen receptors, leptin can be used as a clinical marker for cancer breast.

Key words: Leptin; estradiol receptors; progesterone receptors; breast cancer; obesity gene.

Student Perception Of Peer Critique Of Student-Selected Study Components In Forensic Medicine Curriculum

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Introduction: A variety of positive feedback of peer evaluation has been documented and it is generally believed that peer evaluation can promote critical thinking. The study of students' perception to learning issues is a must and has to be directed to different student modalities. In Egypt, the era of learning style innovation is yet young and students' perception of the change has to be assessed given the cultural background and the learning style that has overtaken their pre-faculty education years. **Aim of Work:** This study is aimed at describing the perception of students to peer critique on their Student selected study (SSS) assignment presentation. **Subjects and methods:** All students in the third round of forensic medicine for the year 2009 were invited to participate in the study. A feedback questionnaire sheet was designed for peer critiques to fill out anonymously. **Results:** 526 students received the questionnaire while 382 filled them in giving a 72.6% response. The respondents were 166 females and 216 males. Respondents in our study believed that peer critique was adequate. They also agreed on the usefulness of comments about both strengths and weakness. Results show a significant difference in the number of male and female students who show comfort in receiving peer feedback and those who show comfort in receiving and giving feed back and those who are not comfortable with either of the two processes. Participants highlighted a number of strong points in the peer critique process e.g. that it was easy to understand. They also outlined a number of weak points e.g. questionable competency peers. **Conclusion:** Peers critique within the learning environment in the forensic medicine curriculum is acceptable.

Problem Oriented Sessions For Teaching Forensic Medicine And Clinical Toxicology

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Background: Problem Based learning is a well-established learning construct within the medical programs. Many studies have been conducted to prove its efficiency and its impact on the medical student and the kind of graduate it produces. Using problem oriented learning (POL) as a method of instruction and incorporating it into the body of the curricula is not as well established as PBL. **Aim of the work:** This study aims at studying the effect of POL on the learning process within the forensic medicine and clinical toxicology curriculum. It also aims at studying the acceptability of the method between the students and their perception of its impact. **Methods:** POL was introduced into the curriculum of the academic year 2008-2009. Results of the final exam where analyzed and compared with the previous year. 100 students randomly chosen answered a questionnaire regarding the POL experience. **Results:** There is a significant elevation of the student results in the end of year exams after using the POL. 81% of the students expressed their appreciation of the problem-oriented sessions. Meanwhile 31% of students thought that having three weekly sessions to discuss the problem was too much. **Conclusion:** Using problems as an instruction method in the forensic medicine and clinical toxicology curriculum could be a beneficial method of instruction.

Opportunities For Cooperation/Partnership To Establish Health Care Facility At The Villages

Ashley Ansara

Regency Health and University of South Florida

Objective: To explore the opportunities for cooperation/partnership to establish health Care facility at the Villages

University of South Florida

. * Founded in 1956 in Tampa,, Florida
. * USF enrollment in 2009 is 43,000 students
. * USF is in the top 20 universities in the USA regarding the number of students
.

USF/Health:

. * Medicine, nursing, public health, pharmacy,
. * Research Budget: $320 million
. * 400,000 SF out patient facilities and nine hospital affiliations

Regency Health:

. * A subsidiary of Ansara Holding Corporation, Inc founded in 2001 in Orlando, Florida by Dr Ansara
. * Over 200,000 SF of healthcare facility and commercial building in Florida
. * Completed the largest ambulatory surgical center in Seminole County 12,400 SF facility within 44,000 SF of dedicated Health Care Building as private ownership..
. * Operate and manage Ansara Medical Center, LLC (over 50,000 SF) in Altamonte Springs, Florida

USF/Health Complex:

1. Patient safety and quality care
2. Physicians centric patients centric
3. 2/3 US populations is overweight
4. Skill shortage technology advancements
5. Increase inefficiencies and waste
6. Increased cost
7. Customer dissatisfactions

The Villages:

- Self-contained community started in 1960 in Lake and Sumter County (Central Florida) near Lady Lake. It is 80 miles north Tampa on HWY 75
- 65% developed with 75,000 resident
- Projected 105,000 residents at the year 2016

- It is the only place in the USA that have over 100,000 residents of senior residents that live in community the main transportation method is the golf cart.
- It is a capture pool of patients that require advance health care continuously
- Two hospitals with over 300 beds
- Tremendous needs for advance health care that will require an academic research institution to operate in that area.

Why should USF-Health go to the Villages?

- USF-Health has been recognized nationally and internationally for their programs in Alzheimer's, Geriatrics, and Neurosurgery and brain repair.
- The Villages has capture audience for over 100,000 averages age 62 years and average income close to $100,000 per year. All have Medicare and supplement private insurance
- Regency Health, LLC is private enterprise with strong track record in healthcare highly motivated to enter into a partnership with USF
- It is still open market for advance health care in the Villages.
- We are not going to compete with the local healthcare providers; we need to create a niche that characterizes us from the rest.

Future Needs:

1. **We need new paradigm in health care specifically to senior citizens**
2. **Yesterday technology will not solve today challenges**

USF/ Health are working with the followings:

1. Moffitt Cancer Center
2. Tampa General hospital
3. Pepin Heart Hospital
4. Bay Care Nursing
5. Morton Plant Mease Hospital
6. All Children Hospital;
7. University Community Hospital

Points to discuss:

1. Is Regency Health and USF-Health could be a good partners?
2. Could this relationship be an example for cooperation between private enterprise and public university?
3. What are the obstacles that we may face to achieve our common goals?
4. Can USF-Health through Health Professional Conferencing Corporation (HPCC) become equity partner?
5. Does the USF President and the Directors will encourage such joint venture beyond Hillsborough County to reach the Villages?
6. What are the areas of expertise that we would like to bring to the Villages?

Proposal:

There are three approaches that could be discussed in our meeting:

Approach One: Relationship between Owner and Tenants

1. Regency Health will develop the necessary building including the shell and allowances for the tenant improvements to USF-Health
2. USF-Health will be the anchor tenant and sign a traditional Lease Agreement
3. USF-Health will manage their own facility

Approach Two: Relationship between Full Pledge Partners

1. Full pledge partnership between USF-Health and or subsidiary Health Professional Conferencing Corporation (HPCC) and Regency Health, LLC. A new entity will be formed.
2. Both organizations with their extensive expertise and proven track record in transforming healthcare will provide entrepreneur and clinical programs and related services to the new entity.
3. Other partners may join from the start such as physicians and care providers
4. Each member will have to contribute equity to the project and sign on the loan agreement unless Regency Health will be the General Partner and others will be Limited Partners.

Approach three: Relationship between Franchisor and Franchisees

1. USF-Health will be the Franchisor providing their expertise, logo, name, clinical and management supervisions, full associations to USAF-Health, etc. to a new entity that will be formed between Regency Health (general Partner) and Physicians (Limited Partners) .
2. It will require state and federal approvals and extensive legal works

Medical Education Reform, a Stepping Stone Towards Medical Services Advancement

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Over the last few decades and due to convoluted reasons the medical service has deteriorated in Egypt. The issues becomes more complex with the approach of implementation of the General Agreement on Trade Services (GATS) and medical system that allows foreign medical doctors to practice in Egypt. The problem has obviously caught the attention of high authorities in Egypt to act on the subject. Among the various reasons for medical service deterioration is the deterioration of medical education.

The supreme council of Universities has commissioned the medical sector committee leadership to investigate the problem, and the AEAS was contacted to contribute in the efforts to advance medical education in Egypt.

This paper discusses some of the important issues we see important to the advancement of medical education and hence the amelioration of medical services in Egypt.

The Association Of HLA Class II DR Alleles With HCV Infection In Egyptian Children

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Background and study aims: HLA class II antigens appear to play an important role in the individual's immune response to viral infection. The aim of this study is to assess the relationship between HLA class II antigens with the clinical, laboratory and histopathological state of the liver in Egyptian children and adolescents with chronic HCV infection. **Patients and methods:** The study included 46 chronically infected HCV non HBV and non HIV children and adolescents. Their mean age was 10.4± 4.23 years (3-17).HLA DRB typing by PCR for patients and 20 controls were done. **Results:** The most frequent allele demonstrated among patients were DRB1*03, DRB1*04 and DRB1*13 (45.6, 39.1 and 26.1%) respectively. Analysis of DRB1 frequencies between patients and control revealed that DRB1*15 is significantly reduced among patients when compared to the control group $p<0.01$. Patients possessing the allele DRB1*03 were encountered with significant reduced platelet count ($p=0.03$) and this allele was presented more in patients with minimal grade of inflammation. Patients with DRB1*04 had significantly low serum albumin ($p=0.04$) and patients with DRB1*13 had a significant high serum AST levels $p=0.05$. **Conclusion,** in Egyptian HCV infected children, special HLA patterns were found; HLA DRB1*03 was present in nearly half of patients, while HLA DRB1*15 frequency was significantly reduced among cases than controls.

Key words: Children; Egypt; Fibrosis; HCV; HLA.

An Ecological Definition Of Heath:As A Philosophical Foundation For A Comprehensive Approach To Public Health In A New Era

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In an invitational paper by the US President's Committee on Health Education, El-Ahraf and Hanson first presented a new definition of health known as the "Ecological Definition of Health". There was no shortage of definitions of health including that of the World Health Organization. And, there was, and still is, no scarcity of controversy on how to define health and why. Yet, the circumstances leading to an excellent definition of health at the conclusion of WWII have yielded to a new era characterized by a number of powerful ideas and forces requiring new responses or at least enhanced responses.

These included not only the greater recognition of the impact of the environment on health but, also the integral reciprocity of personal and environmental health akin to that of the relationship of a fetus and its womb where one cannot enjoy its own health without the health of the other. Additionally, a new health ideology spoke of heath promotion and not merely prevention and treatment of disease. Above all there has been the realization that the natural setting for conducting public health programs is that of human ecology. These, among other factors, have been behind the thinking of El-Ahraf and Hanson in the process of their development of a philosophical foundation for health in general and public health in particular. Such philosophical foundation that has been successfully tested in an urban human ecology setting, is the ecological definition of health discussed in this paper with its four dimensions of well being and its introduction of the issue of eco-pathology.

Rather than abrasively criticizing other definitions, we have given them thoughtful consideration and much appreciation for their authors' work that allowed us to build on past achievements particularly those made by the World Health Organization.

EPIGENETICS AND METABOLIC MEMORY

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"Metabolic memory" refers to the phenomenon by which the body's micro- and macro-vasculature continues to respond to a previous level of glycemic control for a period long after the control has actually improved or worsened. For example, severe diabetic retinopathy or nephropathy may progress in the short- to mid-term even after glucose levels have been improved.

Large-scale clinical trials [e.g., the Diabetes Control and Complications Trial (DCCT) (1) and the Epidemiology of Diabetes Interventions and Complications (EDIC) Study (2)] have demonstrated that intensive metabolic control achieved early in the course of diabetes substantially reduces the development and progression of diabetes and its associated microvascular complications. Additionally, prospective observational studies have demonstrated that atherogenic and inflammatory mediators are elevated even prior to the onset of diabetes, and significantly contribute to the subsequent development of macrovascular complications. Collectively, these data suggest that metabolic memories are stored early in the course of diabetes.

Potential mediators of metabolic memories include "epigenetic changes." *Epigenesis* may be defined as acquired changes in DNA function without changes in the underlying DNA sequence that persist over rounds of cell division, and even transgenerationally, and thus may be known as "epigenetic inheritance." The molecular basis of epigenetic inheritance is complex, and involves the activation or modification of certain genes. In diabetes, epigenetic changes may arise from DNA damage that occurs via high levels of glucose, oxidative stress, and inflammation, and includes DNA methylation, histone methylation and acetylation, and telomere shortening. Methylation, for example, is a form of alkylation that involves the attachment or substitution of a methyl group. Methylating agents can modify DNA at many different sites, thereby producing lethal and mutagenic lesions. Telomeres are DNA sequences necessary for DNA replication, which shorten during cell division at a rate that is related to the level of oxidative stress. Once telomeres are shortened to a critical length, cells are triggered into replicative senescence; this process is thought to be one of the mechanisms responsible for the formation of vascular plaques in diabetes. The effects of advanced glycation end-products (AGE) on DNA and long-lived tissues, such as vascular basement membranes, may also mediate metabolic memory. On the other hand, insulin is thought to suppress inflammation, as well as glucotoxicity and lipotoxicity (and the consequences thereof, such as the formation of AGE and epigenetic phenomena); therefore, insulin plays a highly pivotal and beneficial role in the treatment of diabetes.

A more detailed understanding of the molecular mechanisms involved in these changes would afford new opportunities to reduce the long-term effects of diabetes by utilizing the mediators of metabolic memory as therapeutic targets. Histone deacetylase inhibitors, currently being researched in human cancer trials, have shown protection against epigenetic damage and

diabetic nephropathy in animal studies. Other current drugs, such as ACE inhibitors, HMG CoA reductase inhibitors (i.e., “statins”), and metformin also exhibit anti-AGE and DNA protective effects.

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GLOBAL DIABETES HEALTH INITIATIVE

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Diabetes mellitus continues to be one of the most serious global health threats of the modern era. In 2010, diabetes mellitus affected 285 million people worldwide; if current trends continue, this number will double by 2030[1]. As diabetes is a well-established risk factor for ***heart disease, stroke, and kidney failure,*** diabetes-related deaths will also double between 2005 and 2030[2]. With as many as half of all diabetic patients remaining undiagnosed, these already sizable figures are likely gross underestimations. Because 46% of diabetics are of working age (40-59 years), diabetes is also a significant burden on the global economy in terms of reduced productivity and work days lost—estimated at $58 billion annually in the U.S. alone.[3] The outright costs of treating diabetes and its complications are massive, and represent 11.6% of all healthcare expenditures worldwide[1]. While 80% of these costs occur in the world's richest countries, 70% of diabetics reside in lower-income countries, where inadequate and inefficient healthcare systems are prevalent. Attempts to implement acceptable standards of care for diabetes have been suboptimal, and are frequently confounded by a lack of patient compliance and reliable long-term outcome data, particularly within and among countries.The NHANES 1999-2000 study[4] showed that in the U.S., only 7.3% of adults with diagnosed diabetes have achieved the treatment goals of HgbA1c <7%, blood pressure <130/80 mm Hg, and cholesterol <200 mg/dl; in countries with fewer healthcare resources, even poorer outcomes can be expected. The diabetes epidemic is further exacerbated by insufficient numbers of diabetologists, as well as a crucial lack of education about diabetes among other medical specialties. In a study of primary care providers in Egypt[5], just 10.2% of physicians understood the diagnosis and management of diabetes and its complications, and only 4.5% recognized the importance of regular exercise and patient education in improving therapeutic outcomes.

Attempts to improve long-term therapeutic outcomes for patients have been largely ineffective due to the inconsistent implementation of standards of care for diabetes, inefficient healthcare delivery systems, inadequate numbers of trained physicians, and a general lack of financial resources in many parts of the world. Even with specific training in complex insulin dosing and administration, however, diabetes management is still frequently based on little more than trial-and-error than any validated protocol. In view of these significant issues, there is a critical need for a cost-effective solution that will be capable of simplifying diabetes management and minimizing physician time/effort spent on expensive and unstructured treatment plans (consisting of guesswork, repeated office visits, and the use of high-cost and/or less effective drugs), while simultaneously improving patient acceptance of behavioral modification and therapeutic drug regimens, that can also be applied on a global scale to large numbers of diabetic patients. Fortunately, recent progress in computer science has provided us with a vital opportunity to use cutting-edge technology to address the impending global diabetes epidemic.

To address this problem, we propose a major paradigm shift that radically departs from the antiquated and costly manner in which diabetes care is being delivered today (subjective, trial-and-error, physician-centered) to a modern, cost-effective, objective, and evidence-based system using *in silico* prediction models to generate a customized treatment plan that will meet the specific needs of individual patients and improve daily metabolic control, reduce long-term complications, and achieve better long-term therapeutic outcomes for mass populations of diabetic patients on a global scale. Specifically, we propose to: **1)** Harness the latest computer science technology to develop and pilot a novel paradigm for treating diabetes by using a fully-automated, *in silico* carbohydrate modeling decision-support program that will generate a customized treatment plan for each patient based on culturally relevant nutritional and behavioral modification programs and cost-conscious drug treatment algorithms, helping to circumvent the extreme shortage of diabetologists needed to care for the 438 million people expected to have diabetes by the year 2030[1], with a concomitant increase in annual global diabetes healthcare costs to $490 billion[6]—due, in part, to insufficient and/or inefficient healthcare systems worldwide; **2)** Develop and validate the first globally accepted diabetes registry, featuring: a common dictionary with complete semantic and syntactic interoperability with existing diabetes databases/registries of participating centers/countries and culturally relevant electronic data acquisition systems, which will enable the development of country-specific health economics data analyses; **3)** Concurrently develop and validate the low-cost infrastructure necessary for maximum patient recruitment, retention, and treatment compliance, including: adapting ubiquitous mobile phones to develop technology for promoting patient follow-up and transmitting patient-specific data to treating centers; web-based physician and allied health professional training programs; and converting costly PCR methods (currently used to measure diabetes/complications biomarkers) to less expensive plate readers. For this massive endeavor, we will seek support from national and international peer-reviewed funding agencies, as well as private foundations and organizations, such as the European Union and the World Bank.

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Immunohistochemical Study Of Protein P53 in Egyptian Psoriasis

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Background: The histopathologic changes characteristic of psoriasis might be related to an abnormality in the apoptotic pathway. **Aim of the work:** The aim of this study is to evaluate the possible role of protein P_{53} in the pathogenesis of psoriasis through a case control study as it could be one of the targets of psoriasis therapy. **Patients andMethods:** This study included; 30 patients of different clinical variants of psoriasis and 25 controls normal skin biopsies. All patients were subjected to complete history taking, clinical examination including psoriasis area and severity index (PASI) score and skin biopsies, all patients stopped topical or systemic medication 4 weeks prior to biopsies. Five mm incisional biopsy specimens were taken from the 30 patients and from each biopsy one stained with hematoxylin and eosin to confirm the diagnosis ,the other to be prepared for immunohistochemical detection using mouse monoclonal antibody (Do7) against P53 protein , results were compared with 25 control ..**Results:** Psoriatic plaques revealed P53 nuclear staining detected in 13 out of the 30 patients (43.3%), and 17 (56.7%) showed negative immunoreactivity in keratinocytes. **Conclusion:** From these results it can be concluded that apoptosis plays a role in the pathogenesis of psoriasis and this may be mediated through abnormal expression of apoptosis regulating proteins P53 .

Key words: Apoptosis , immunohistochemistry, P53, Psoriasis.

Study of the effects of environmental pollution by organophosphorus pesticides on male reproduction.

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-Pesticides are diverse group of chemicals which have been developed to kill, prevent or suppress a wide variety of pests they include insecticides, herbicides, fungicides, nematicides and rodenticides.

-Organophosphorus (OP) compounds are insecticides used in a wide scale for protection of crops, stored food products and to maintain and improve public health through the control of vector born disease. In 1974,the use of this insecticides caused the death of thousands of living domestic animals.

-Chronic and/or occupational exposure of humans and animals to the pesticides may cause, among other manifestations, reproductive failure including not only reduced fertility but also embryo/fetal loss, birth defects, low libido, deterioration of semen quality and testicular degeneration.

-Trichlorfon and diazinon are among the commonly used organophosphorus insecticides for combating parasitic infections in farm and pet animals. To assess the effect of these insecticides on male reproduction, daily oral doses of 1/20 and 1/10 of the LD50 were given to mature male rats for 180 consecutive days. Fertility index. Semen evaluation and morphology and histopathology of the genital organs were the criteria used to evaluate the rat's reproductive efficiency.

-Oral administration of either trichlorfon (15 and 30mg/kg b.wt.) or diazinon (17.5 and 35 mg/kg b.wt.) caused a marked decline in fertility index (72.5% ,45.0% ,65.0% and 47.5% respectively versus 80.0% in control).Respective percentages of spermatozoal abnormalities were 29.9 , 33.7 ,34.8 % versus 19.0% in control rats.

-Trichlorfon (30mg/kg b.wt.) and diazinon (35mg/kg b.wt.) significantly decreased the weights of most genital organs and caused moderate to severe testicular degeneration.

-The tested groups examined showed; focal degenerative changes. The seminiferous tubules were separated by wide interstitial spaces. Some seminiferous tubules showed disorganization and exfoliation of the spermatogenic cells into the luminae .

There were widespread pyknotic nuclei of the spermatogenic cells. In addition, other seminiferous tubules revealed vacuolated spermatogenic cells and sertoli cells. Toluidine blue stained sections showed intracytoplasmic vacuoles in spermatogonia and sertoli cells. In some specimens, the limiting basement membrane surrounding the seminiferous tubules was corrugated and discontinuous. The spermatogenic cells were separated from the limiting membrane in some areas with wide intercellular spaces. The degree of the cytotoxic effects of the tested pesticides and the degenerative histopathological effects on the reproductive organs was much increased as the period and the daily dose increased.

***Recommendations:**

-According to the obtained results in the present study, the tested pesticides exert a potent side effects and histological and histochemical changes, so it can be recommended that:

A) Reducing exposure to pesticides:

-Pesticides should not be the only solution for pest control.

-If necessary, less toxic, non-mutagen or carcinogen compound can be recommended. Also, improvement of pesticides transportation, storage, handling, disposal and application systems.

-Spraying team should de consisted of well-trained workers, they should be well equipped to protect themselves against the occupational exposure.

B) Good control of pesticides trading and application should take place all over the country.

C) A national plan should be established in order to monitor the environmental hazards of all the recommended pesticides.

The Effect Of Environmental Pollution By Pyrethroid Pesticides On Vital Organs

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Pyrethroid is a highly insecticidal compound used for the control of cotton pestsin several countries and for other crops. Exposure to these chemicals can be during the production, use, transport andstorage. The pathological & cytotoxic effects of pesticides are not limited to occupational incidents but also, to levels ofthese chemicals in food and environment. Since the use of Pyrethroid in agriculture is relatively recent, there is considerable less information available.

The aim of this work was to study the effect of one of Pyrethroid (Fenvalerate) indifferent doses (1/10 and 1/4 LD50) through different periods, histologically andhistochemically, on the liver and kidney of Albino rats. These organs are considered as important sites for metabolic and excretory activities and they depend for their properfunction upon the integrity of a complex enzyme system.

In comparison with normal organs, histological study showed signs of irritation ofthe intoxicated organs after. 14 days in the form of cloudy swelling, hydropic degeneration and necrosis which appeared to extend centripetally in the hepaticlobules, as well as appeared in the renal tubules and glomerulli. Also, marked cellularinfiltration, congestion of the blood vessels and areas of necrosis in the liver and kidneyof the treated rats were observed.

Concerning the histochemical changes e.g. succinic dehydrogenase, alkaline andacid phosphatases (final effect), in the treated rats, the activities of these enzymeswere decreased in comparison to the normal (control) rats. The degree of decrease wasmuch increased as the period and the daily dose increased.

According to the present results, the tested pesticide exerts a cytotoxic effects. So it can be recommended that: The use of pesticides should be restricted and ifnecessary, it should not be the only solution for pests' control**.**

Immunoprophylactic Effect Of Fasciola Gigantica Worm Homogenates With Saponin Extracted From Atriplex Nummulari

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Background: The object of the present study is to evaluate the level of IL-12 cytokine in *Fasciola gigantica* worm homogenates mixed with or without saponin that was extracted from *Atriplex nummularia*. Method: Forty female Swiss albino mice were divided into four groups. At 0 and 15th days of immunization protocol, first group was immunized with *Fasciola gigantica* worm homogenates (50µg/mouse /100µl PBS). Second group was immunized with *Fasciola gigantica* worm homogenates (50µg/mouse/100µl PBS) mixed with saponin. Third group was immunized with saponin only (50µg /100 µl PBS). Fourth group was non-immunized and considered as negative control. Sera were collected post 1st and 2nd immunizations to detect the IL-12, IgM and IgG levels using enzyme linked immunosorbent assay as well as western blotting. Results: The level of IL-12 was significantly increase ($P<0.05$) post 2nd immunization with *Fasciola gigantica* worm homogenates mixed with or without saponin. The level of IL-12 was increased (2.9 and 2.5 folds post 1st and 2nd immunizations) respectively with saponin. The level of IL-12 was increased (2.77 folds) post 1st immunization with *Fasciola gigantica* worm homogenates without saponin.The data of detection of IL-12, primary and secondary immune responses and western blottingconfirm our conclusion that *Fasciola gigantica* worm homogenates with or without saponin have an immunoprophylactic effect.

Enhancement Of Science & Technology Studies (Sts) In Egypt Internet Based Self-Assessment Learning As An Addition To Medical Undergraduate Courses

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Research that intervenes in public controversies about science and technology is really needed. Much effort is needed to support these studies especially in a developing country like Egypt. As one such call to action expressed it, the aim of such intervention would be to build a more 'accountable integrated' science and technology concept. Technology always should be hand in hand to achieve educational purposes.

It is suggested that a rich blended learning environment may enhance efficient learning compared to traditional face-to-face education. According to the student's point of view, learning is probably considered efficient if good grades can be achieved in short time and under little effort. Self-regulated learning competence is the extent students are able to develop their own learning strategies and knowledge in a particular educational setting. Self-regulated learning competence itself is the degree to which learners are met cognitively, motivationally, and behaviorally active participants in their own learning. This can be later have an impact upon their grades and even their personality.

The goal for learners is to be their own teachers as well as to gain the experience of others. In fact this in this way of learning there is a need for resources as well as personal capabilities to perform the task in a perfect way.

Vision In Development Of Quality Of Medical Education And Health Care Services IN EGYPT

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The ultimate purpose of medical education is to improve the quality of health of the population. No major and equitable effective healthcare reform can achieve results if not based on a well-addressed organized educational reform and shape. Really there is a major need to rationalize and improve the quality of healthcare services through the application of ethical values and real access to and coverage of the population in Egypt through organized form of education.

Medical Education is a basic important —rather neglected at times— factor to be strengthened and taken into account to achieve effective results. However, national accreditation processes alone are not enough to ensure the quality of medical education. Therefore, there is a need to evaluate not only the minimal resources to support the student at the admission to medical school but also once graduated, the educational process has been able to develop the knowledge, skills and values that allow to be recognized as a physician by himself/herself, his/her community and the society he/she is committed to serve.

Expectations of healthcare services are everyday increasing and there should be a share of opinion on what constitutes good or best care. To earn the label “good effective safe ”, care it must meet standards expected by consumers as well those of expert providers based upon solid graduates. Here comes the role of medical education.

Overview and assessment of robotic hysterectomy for benign indications

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Introduction:

Hysterectomy is one of the most common gynecologic procedures performed for benign indications.. To date more than 80% of hysterectomies are still performed via laparotomy. Minimally invasive laparoscopic and vaginal hysterectomy procedures were limited by uterine size, complex pathology, patient BMI, and history of previous surgeries. The advent of robotic surgery using the daVinci Surgical System, developed by Intuitive surgical, hasgiven laparoscopic surgeons the ability to approach more complex cases minimally invasively, thus decreasing the need for laparotomy. Since its approval bye the US FDA for use in gynecologic procedures in 2005, the adoption curve for daVinci Hysterectomy has been exponentially growing.

Objectives:

The objectives of this presentation is to review available data and studies conducted to assess the risks and or benefits of robotic hysterectomy, and evaluate possible advantages or disadvantages of its adoption as compared to traditional approaches to hysterectomy.

Methods:

A Medline and Ovid literature search of all publications with keywords Robotic Hysterectomy was performed. Search results were screened to exclude assessments of surgery performed in the setting of malignancy. Outcome comparisons were made in terms of assessment of differences in blood loss, complication rates, surgical time, and length of stay in the hospital for both routine hysterectomy and those with complex pathology.

Results:

DaVinci Hysterectomy has been shown to be safe and effective with low morbidity and fewer conversions to laparotomy than the traditional laparoscopic approach to hysterectomy. Blood loss and length of hospital stay are comparable to laparoscopic hysterectomy. Although operative time is initially increased, this decreases significantly with increasing surgeon experience and becomes comparable to laparoscopic hysterectomy towards the end of the learning curve.

Conclusions:

Since its approval for usage in gynecologic procedures, daVinci assisted Robotic Hysterectomy, has allowed the performance of complex hysterectomies preserving the advantages of traditional laparoscopic surgeries without increasing complication rates or conversions. Therefore, its continued adoption and expansion of usage in hysterectomy is likely.

Analysis Of Tumor Necrosis Factor-Alpha Polymorphism At Position -308 G/A In Egyptian Hepatitis C Virus (HCV) InfectedPatients Using Quantitative Real Time Polymerase Chain Reaction (qRT-PCR)

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The cytokine tumor necrosis factor alpha (TNF-α) is important in generating an immune response against a hepatitis C virus (HCV) infection. The functions of TNF-α may be altered by single-nucleotide polymorphisms (SNPs) in its gene, TNF-α. We hypothesized that SNPs in TNF-α may be important in determining the outcome of an HCV infection. To test this hypothesis, we investigated the possible role of the functional polymorphism located in the promoter region of TNF-α gene (-308G/A) in the progression of HCV infection in Egyptian patients using a quantitative real-time polymerase chain reaction (qRT-PCR). The distribution of TNF- α (-308G/A) polymorphism and its impact of serum level of TNF-α was compared in 30 HCV infected patients (categorized into 15 patients with HCV-induced cirrhosis and 15 HCV-related HCC) and 15 normal healthy Egyptian volunteers without any history of liver disease. Our results showed a gradual elevation of TNF- α level with a maximum production in HCC patients. The alleles at the TNF-α -308 position in studied population indicates that the frequency of the G/G (81.6%) is higher than G/A (4.1%) or A/A (6.1%).In conclusion, this study demonstrated a statistically significant difference in the frequency of TNF- α codon -308 polymorphism between healthy subjects and those infected with HCV. No associations were observed between polymorphisms of TNF-α codon -308and HCV infection. These findings suggest that TNF- α codon-308 polymorphism may not be a host genetic factor associated with susceptibility to HCV infection.

Can angiogenic markers early detect bladder cancer?

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Purpose. Angiogenesis is tightly regulated by a large number of proangiogenicfactors. Among them vascular endothelial growth factor (VEGF), basic fibroblast growth factor (bFGF), hepatocytegrowth factor (HGF) and angiogenin (ANG). In the present study, weadapted and evaluated measurement of these factors using ELISA and compare the results with Western blotting and voided urine cytology.

Materials and methods. This study included 240 patients diagnosed with bladder carcinoma, 108 patients with benign bladder lesions, and 110 healthy individuals served as the control group. All were subjected to: serologic schistosomiasis antibody assay in serum, urine cytology, and estimation of angiogenic factors from voided urine.

Results. The intra- and inter- assay CVs of the investigated markers ranged from 10.3-12.3 and 10-13.7, respectively. The recovery of the added angiogenic factor to urine pool was 98%-103%, 97%-103%, 98%-104% and 97%-100% for VEGF, bFGF, ANG and HGF, respectively. The concordance rate with Western blotting was 97.5%. Levels and the positivity rates of urinary angiogenic markers and urine cytology were significantly higher in malignant group as compared to benign and healthy ones. Basic FGF increased significantly in SCC of bladder cancer; moreover, bFGF and HGF were significantly correlated with tumor grade. Angiogenic markers showed significant association with clinical stage.

Conclusion. Quantitive measurement of urinary angiogenic factors in voided urine samples by ELISA was reliable. Sensitivity of bFGF and HGF were superior among the other investigated markers and cytology in low-grade and early stages suggesting their convenience as sensitive, non-invasive diagnostic and screening tools for bladder cancer.

Engineering

The Impact Of Planning Elements Variables On The Square Meter Of Land Share Of Utility Networks Length

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Through the study of many detailed master plans for residence areas, along with studying road networks that are considered the basic axes to determine the features of the planning and the engineering loci for the utility networks, in addition to the study of location sectioning options, till designating and determination of planning criteria. aiming at deriving mathematical model that links the planning criteria to the estimating share of square meter of land of utility networks Length with using applications to prepare and measure the accuracy of representing the results of these models to the real results.

Key Words :
Construction projects management – Housing – Utilities.

Green Strategy For Development Of Antimicrobial Printed Textile Fabrics

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A green synthesis strategy was established in the realm of textile finishing, aiming at development of antimicrobial printed cotton and silk fabrics. The synthesis referred to treatment of these fabrics with chitosan of low, medium and high molecular weight using different concentrations of each. This was followed by screen printing using a natural dye extracted from prickly pear fruits. Thus obtained fabrics were monitored for nitrogen, color strength and antimicrobial activity. Results signified that the chitosan concentration and its molecular weight determine the magnitudes of both antimicrobial activity and color strength. Utilization of medium or high molecular weight chitosan at a concentration of 2% in the treating solution inhibit completely the growth of *s. aureus* and *E. coli* which represent two types of bacteria, gram +ve and gram –ve, respectively, meanwhile the color strength assumes the highest values. Antimicrobial activities of the treated fabrics in question with respect to other strains of bacteria along with their color strength are reported. Also reported is mode of interactions of chitosan with cotton and silk fabrics as well as a comparison between the results obtained with these two substrates.

Innovative Techniques For Building Inspection Andoptimum Allocation Of Capital Renewal Funds

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Capital renewal programs are essential to sustaining the operability of existing civil infrastructure assets and involve a perpetual cycle of inspection, analysis, and fund allocation decisions. Among the various asset management functions, inspection and fund-allocation are very challenging in terms of time, cost and technology. To address these problems, this presentation introduces innovative techniques developed based on extensive research and can be implemented individually or combined into any asset management system: (1) a hand-held inspection device that allows on-site recording of all inspection data directly on digital floor plans included in the tablet system along with directly associating pictures to the inspected components; and (2) a unique optimization algorithm that maximize the benefit gained from capital renewal dollars, considering the many combinations of alternative funding levels for thousands of assets simultaneously. The presentation provides a description of these essential asset management functions and discusses their implementation in a prototype system that suits the Toronto District School Board, which is the largest school board in Canada. The proposed techniques are innovative, have great potential cost and time savings, and can help organizations with a large number of assets, such as municipalities, school boards, and public asset owners, to improve the condition of their inventory, with highest return on the limited renewal budget.

Keywords: Asset Management, Computer Application, Optimization, Life Cycle Analysis, sustainability, Capital Renewal, inspection, optimization.

Adoption Of MIS/ERP Systems And Related Technologies In The Egyptian Universities

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Management information systems (MIS) provide information needed to manage organizations effectively. They represent an internal control tool used to solve problems in faculties and universities among other organizations. Information gathered by the system is analyzed in order to support human decision-making. The Egyptian supreme council of universities had invested in a university management information system that is currently being implemented allover Egypt. The paper presents the case of the system implementation over the last year at the faculty of commerce, Alexandria University. Naturally the implementation suffers a number of problems related to the resistance to change and the fear of being monitored through the technology. The benefits of the system's full implementation may be obvious. Information will be available on a number of issues such as students' grades and statistics and on the career progress of employees and faculty members. However, a one year experience of the system implementation reveals the lack on addressing the resources in the faculty. The management of internal and external resources, including tangible assets, financial resources and materials, is needed for efficient and effective management of educational institutions. Enterprise resource planning (ERP) focuses of this. The purpose of ERP is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders. The current MIS has to evolve towards the application of the ERP ideas in order to improve the management in the universities and to support the achievement of the quality program objectives. This will also lead to reviewing the workflow and the business process and enable their improvement. This paper addresses the proposed evolution to a University Resources Planning (URP) system in light of the previous year implementation experience of the new MIS and considering the limitations and capacities in our faculties. Besides, the need of supporting technologies to complement the system is also addressed. These may include barcode systems, fingerprint readers and RFID technology among others. They will help record student attendance and will guarantee legal access to the campus and will help with other issues, otherwise done manually. The complete view of the system considering resources planning and management together with additional technologies is detailed in the paper with an analysis of the feasibility of the implementation.

Mobile Multi-Sensor Geomatics (M^2g) Systems - An Emerging Technology Sector In Geomatics

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Geomatics is an emerging, innovative, key information technology for the twenty-first century that deals with the acquisition, modeling, analysis and management of spatially referenced data and its real-time applications. Geomatics includes applications such as positioning by satellites, monitoring and control through remote sensing, land information management through Geospatial Information Systems (GIS), as well as real-time time applications such as forest fire fighting and wildlife tracking. Geomatics has a significant impact on our society and quality of life and is becoming an integral component of complex engineering and management systems that are aimed at creating a sustainable environment.

The past decade has witnessed an explosive demand for geospatial data. This demand has numerous sources and takes many forms, however, the net effect is an increasing need for data that is more accurate, has higher density, is produced more rapidly, and is acquired less expensively. Classical approaches of acquiring geospatial data such as aerial photogrammetry and terrestrial surveying are no longer adequate because they are either too slow, too labour intensive or do not provide the complete attribute information required for the application in question. A promising alternative to these classical techniques of data acquisition is the use of **M**obile **M**ulti-sensor **G**eomatics (**M^2G**) systems that integrate various positioning, navigation and remote sensing technologies. The benefits of these systems are numerous: autonomous operation without reference to ground control; portable deployment around the globe, be it on vehicles, helicopters, or airplanes; reduction in both the time and cost of data collection; data archival permitting additional data collection without additional field surveys; and finally the immediate transfer of sensor improvements to the overall system. In this paper, state of the art in multi-sensor systems and mobile mapping will be reviewed and some emerging applications and future trends will be discussed. The material introduced in the paper will be emphasized by real-life examples of **M^2G** Systems in land, air, marine, and underground systems for mapping and GIS applications.

A Comparative Study Of The Suitability Of Advanced Techniques For Landmine Detection In Egypt

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Due to the central geographical location of Egypt, Egypt was a location for many wars. As a result, Egypt suffers from the existence of twenty three million buried landmines and UXO emplaced in its territories. Locations of mines in Egypt are divided into two main fields; the Western Desert, spread in ten fields as a result of many wars since the World War II and the Eastern Desert, spread in six fields as a result of the Egyptian-Israeli wars that took place between years 1956 and 1973.

The presence of such active landmines that have indefinite life causes many problems. Landmines in Egypt pose as a severe challenge to economic development efforts in addition to that many civilians and soldiers may be killed or maimed because of its unknown location. The challenge is the lack of information of the exact location of these landmines. Therefore, there is a growing demand for reliable landmine inspection. There are several landmine detection techniques and each technique is suitable for detection under some conditions depending on the landmine type, type of casing, the explosive material, and the soil.

This research introduces different Electromagnetic landmine detection techniques; the Ground Penetrating Radar (GPR), Thermal IR imaging and Hyperspectral imagery techniques .These techniques are briefly described and their merits and drawbacks are highlighted and compared. The purpose of this comparison is to show the ideal conditions and the challenges for each technique. Furthermore, a comparison between these techniques from the points of view of complexity, safety and false alarm rate is presented.

Keywords: Landmine detection – Minefields - Remote Sensing Technologies -Electromagnetic detection - Ground Penetrating Radar-Thermal IR images-ground geophysical data-Hyperspectral imagery.

Geomatics For Non-Destructive Archaeology

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Classical archaeological methods by trowels and brushes need a lot of human effort, are time consuming and very destructive. The proposed presentation is oriented towards the study of gravity anomalies for the detection of tombs, cavities and anomalies in the structure of buildings for archaeology. The main advantage of the micro-Gravimetry is that it is a non-destructive technique. The use of micro-Gravimetry in archaeology is concept, which has not been completely explored over the past years. This research combines different sources of gravimetric and geodetic measurements to contribute to a better understanding of the role of gravity in archaeology.

The Grand Challenges For Engineering Education And Research

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Engineers play a key role in our societal development, contributing to and enabling initiatives that drive economic progress, enhance social and physical infrastructures, and inspire the changes that improve our quality of life. As a profession, we are committed to helping provide the best possible quality of life for all humanity at large. The Grand Challenges for engineers in the 21 Century include: Fresh water shortages; Aging infrastructure; Energy demands; Global warming; New diseases; Security, etc.. [National Academy of Engineering, 2008, "The Grand Challenges for Engineering", National Academy of Sciences, on behalf of the National Academy of Engineering, 52 pages].

Simultaneously industry and manufacturing are facing unprecedented challenges due to globalization and distributed manufacturing. As a result, the business environment of manufacturing enterprises is characterized by continuous change and increasing complexity, and the challenges for companies arise not only from the need for flexible technical solutions, but also from managing complex socio-technical systems. In spite of this turbulent business environment, industry is also now expected to contribute tangibly to the sustainable development of manufacturing and the environment. This creates an added dilemma between societal values and individual values to simultaneously achieve technical excellence, manufacturing competitiveness and quality of life.

Researchers and Graduates with the ability to understand both complex technological processes and the creative arts and social skills are increasingly sought after in today's industrial and business world in areas of: Manufacturing Management, Health and Service Sectors, Product Engineering and Technical Sales, Transportation and Logistics. Using their strong technical and communication skills, engineering managers oversee a variety of team-based activities. By focusing on the critical role of engineering in solving our most complex global issues, we aspire to make the profession more attractive to both male and female students.

To address these challenges of the future, the Industrial and Manufacturing Systems Engineering Department (IMSE) at the University of Windsor, Canada is proposing to introduce an innovative, the first in Canada, "Bachelor of Engineering Arts" (BAE) in the field of Management Engineering. Like Industrial Engineering, Management Engineering is concerned with the design, installation, operations and improvement of integrated systems consisting of equipment, materials, information and energy flows, and people. Unlike other engineering disciplines Management Engineering is concerned with the entire system, and especially the role people play in such systems. The educational approach is, therefore, more multidisciplinary

and includes the study of human factors involved in industrial operations, service industries, the health sector, and indeed any business, organization or government.

Keywords:
Engineering Education, Grand Challenges for Engineering, Sustainability, Socio-technical Systems

Managing Virtual Teams In A Senior Project Course

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The Senior Projects course at Tennessee Technological University represents the practical execution of the technological skills and knowledge the students gained from all sources throughout their college course work, work experience, and life. This course is the capstone experience that requires both teamwork and individual skills in solving a real life industrial problem.

Since the students will be working in an industrial setting, wouldn't it be better for them to learn in an industrial setting? With some industry/education partnerships, this can become more of a reality. The students enrolled in the class are divided to groups of 2-3 students. They are required to solve an industrial problem in a nearby industry. Since the class is not meeting in a regular classroom setting, the class is taught as distance learning class using iLearn® course management system. Interactivity and group collaboration have been identified as the key success factors in designing and developing instructional materials of online education. An efficient feedback system is a critical interest that sustains a high level of engagement, whether between students and instructors, fellow students, or interfacing with the learning environment. The students enrolled in the class have access to the course and reference materials at any remote location.

Several research questions have surfaced from this experience: How do you manage the virtual team? Which communication media are students using (i.e., online or face-to-face) when completing group projects? Which media are most likely to be associated with team member satisfaction? Which methods are more likely to be associated with positive group performance? This paper will present our experiences and findings to these questions.

Advanced oxidation technologies in water and wastewatertreatment: process fundamentals and applications

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Advanced Oxidation Processes (AOPs) are the chemical treatment methods designed todegrade organic and inorganic compounds from contaminated air, water and wastewaterby generating powerful oxidants such as hydroxyl radical (•OH), one of the strongestoxidants. Most of AOPs use a combination of strong oxidizing agents such as hydrogenperoxide (H2O2) and ozone (O3) with catalysts and ultraviolet light (UV) irradiation. Sincetheir early applications in the 1970's, AOPs have shown great potential in degradingorganic pollutants. The most significant disadvantage of AOPs is the high energyconsumption. To overcome the high costs, AOP is commonly used as a pre-treatment stepin a treatment scheme to convert the initially persistent organic compounds into morebiodegradable intermediates, which can be treated using biological processes or othertechnologies. Current applications of AOPs include the degradation of emergingcontaminants such as persistent organic pollutants, endocrine disruptors, pharmaceuticals,personal care products, and surfactants, some of which cannot be reduced byconventional treatment technologies. This presentation is designed to bring forward therecent advances in the fundamentals as well as the application of the Advanced OxidationProcesses in the field of water and wastewater treatment.

Closing The Loop Of Engineering Programs To Meet Abet Requirement

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The accreditation of engineering programs from accrediting agencies, such as Accreditation Board of Engineering and Technology (ABET), is a goal of every engineering program. The accreditation agencies look for proof of the existence of closing the loop of improvement of the program through checking the objectives and the outcomes of the program. Showing the process of improvement for objectives and outcomes is always a challenging task to a lot of engineering programs. This software is presenting a framework to perform that task in easy way and make it understood. The framework is using one of the total quality management techniques. This technique is called PDCA (Plan-Do-Check-Act). The technique is implemented to close the loop of the improvement of the engineering program objectives and outcomes.

Effects Of Distributed Generation On The Performance Of Smart Power Grid

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In smart grid, technological advances in computers, communications, digital signal processing and sensors will be utilized to yield a more reliable, secure, efficient and interactive power system. Distributed generation (DG) with clean energy including wind power, solar, fuel cell, etc. is a major part of this smart grid. With most power systems operating near their maximum generation capacity, and due to the ever-pressing environmental concerns, the proliferation of DG sites has been steadily widening. This penetration of DG into a power grid, however, introduces a number of critical issues including power quality, reliability and system stability. In this paper, the effects of DG penetration upon the performance of smart grid are investigated. In particular, the influence of the variation in distributed generation levels on voltage stability of the grid is simulated and analyzed.

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In January 2009, a major step was taken by establishing the Egyptian Green Building Council (EGBC), which was proposed by a combination of industry and academic experts, who also helped with the specification of bylaws and constitution. Membership in the EGBC consists of both national and international personalities including government ministers from Cabinet level agencies, officers from respected NGO's, prominent businessmen, seasoned labor leaders, and major contractors. One of the objectives for establishing this council is to provide a mechanism to encourage building investors to adopt BEECs as well as other sections of existing codes that satisfy both energy efficiency and environmental conservation. By focusing on new construction, the EGBC could use its leverage as a professional organization to educate and convince engineers, builders, contractors and owners about the benefits of green construction to the individual, to the community, to the nation and most significantly to the bottom line. In this manner, green construction would be the desired goal for all new building projects and building energy efficiency codes would identify the materials, tools and road map to achieve the desired goal. In that sense, the primary motivation was to eliminate any stigma or clichéd perspectives associated with green construction and, instead, present green construction as a financially logical and appropriate course of action that integrates important global and national concerns to produce viable sustainable products that meet the short term and long term needs of people. Figure (1) shows the structure of the Egyptian Green Building Council.

The significance of those concepts is aptly presented in Figure (2), which provides a visual definition of sustainable development and Figure (3), which puts forward one aspect of green construction that is concerned with energy efficiency and passive exploitation of the natural environment.

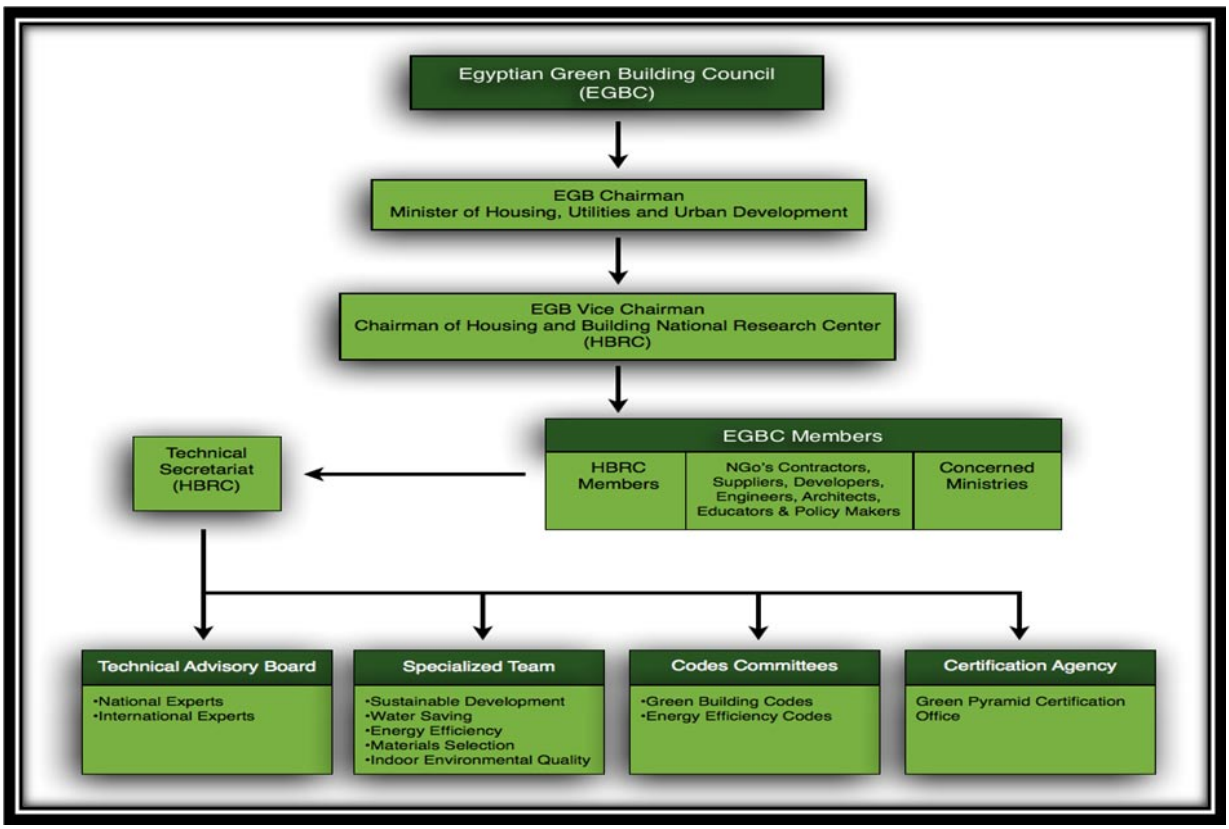
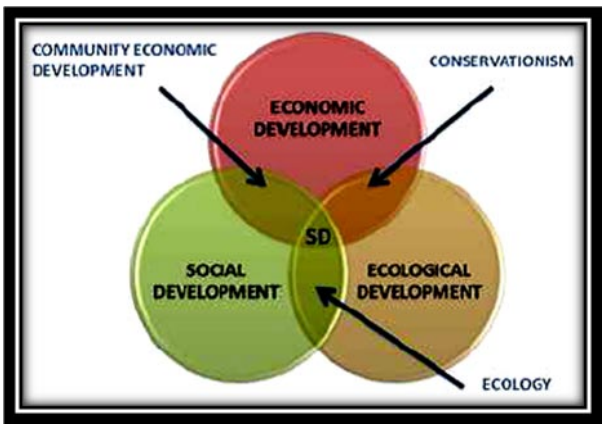


Figure (1): Organizational Chart of the Egyptian Green Buildings Council
(Source:*Egyptian Green Buildings Council Website [http://Egypt-GBC.org])*



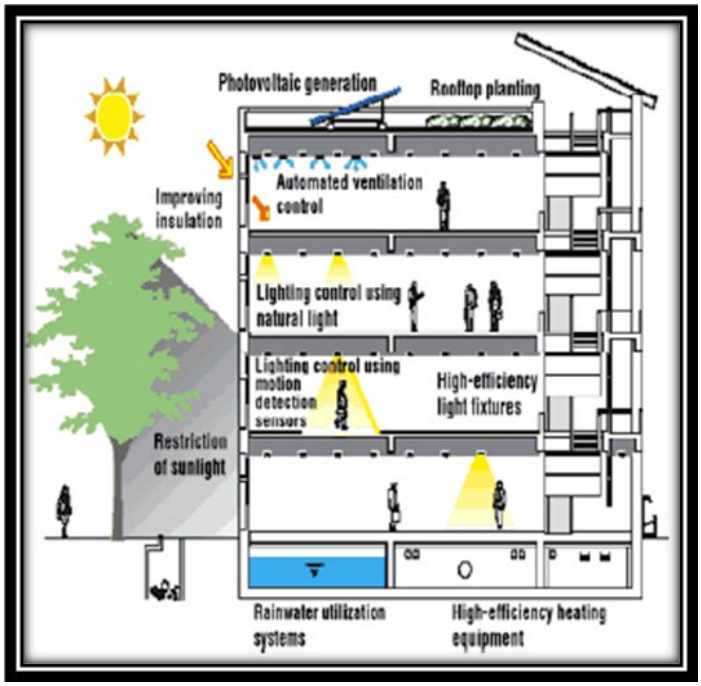


Figure (2): Sustainable Development Figure (3): Green Construction

As an immediate action to activate the role of this council was the approval of developing a national Green Building Rating System called the Green Pyramid Rating System (GPRS), which was proposed and formulated by industry and academic experts. In September 2009, the Council has commissioned members of the community to define the framework of a rating system and a national committee has been formed to review and ultimately approve the Green Building Rating System, which took place this month (Decemeb2010). Recognizing the unique ecological, industrial and social challenges of the region, the rating system will help to define what constitutes an "Egyptian Green Building". To accomplish that goal, the rating system will build upon the Egyptian BEECs and integrate proven methodologies and techniques used in successful programs from the United States, United Kingdom, Asia, South America and the Middle East.

The Green Pyramid Rating System represents the EGBC's effort to improve occupant well-being, environmental performance and economic returns of buildings using established and innovative practices, standards and technologies. The Rating System, like its forbearers in other nations, will identify basic intent, requirements and documentation submittals that are necessary to achieve each prerequisite and voluntary credit in support of new and existing projects that ultimately seek to qualify for certification and gain access to potential benefits.

There are three levels for the Green Pyramid Rating System (GPRS) as shown in Figure (4):

- Silver Pyramid,
- Golden Pyramid, and
- Green Pyramid.

Figure (4): The Three Levels for the Green Pyramid Rating System (GPRS)
(Source: Egyptian Green Buildings Council Website [http://Egypt-GBC.org])

Unlike other international rating systems, the highest level of certification is labeled “green” rather than platinum. For example, to raise the awareness, confirm that ultimate goal and promote the fact that the most valuable level is reaching “green”.

The initial response by the construction industry and the engineering community in Egypt to establishing a national Green Building Council was overwhelmingly positive for several reasons including the development of logical and valuable incentive system that would encourage compliance and reward efficiency. The following are some of the potential incentives related to a Green Permit that are proposed by the council:

1) Access to preferred locations and property per the Government of Egypt,

2) Financial Assistance including guarantees, credit and insurance,

3) Utility Concessions,

4) Equipment support and finance, and

5) Employee support and assistance.

WIRELESS SENSOR NETWORKS FOR SMART GRID APPLICATIONS

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Electrical power grid is among the critical infrastructures of a nation. In the past several years, the power grid operators have experienced several major blackouts which have caused large financial losses. In a close future, the imbalance between the growing demand and the diminishing fossil fuels, aging equipments, and lack of communications are foreseen to worsen the conditions of the power grids. For this reason, governments and utilities have recently started working on renovating the power grid to meet the power quality and power availability demands of the 21st century. The opportunities that have become available with the advances in Information and Communications Technology (ICT) have paved the way to this modernization. The new grid empowered by ICT is called as the smart grid.

The natural extension of the advanced technologies to the consumer premises can be through Wireless Sensor Networks (WSNs) which are able to provide pervasive communications and control capabilities at low cost. WSNs have broad range of applications in the smart grid. In this presentation we discuss the application of the WSNs in the smart grid and provide a number of examples and their possible deployment in Egypt.

Solar Radiation And Its Effect On The Planning Of Streets In Desert Cities: New Assiut City (Egypt), As A Case Study

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Introduction:

In hot dry regions, the climatic factors have a great effect on the human life, especially the solar radiation which affects the behaviour of human activities during the day time and also through the night. Planning of streets and its orientations is one of the most important factors which control the effect of direct solar radiation upon the street surfaces, so we can control the quantity of the direct solar radiation that impacts the street surfaces all over the year. Planning of streets and its orientations in the right direction is necessary in order to get the maximum benefit of sun movement. By controlling the orientation of streets we can decrease the quantity of direct solar radiation that impacts the street surfaces during the over-heated period of the year ,and also increase the quantity of direct solar radiation that impacts the street surfaces during the under- heated period of the year.

This paper is concerned in the effect of direct solar radiation upon Planning of streets and its orientations in hot desert cities, A mathematical model is implemented on a computer program written and designed by the researchers in visual basic, for computing the quantity of direct solar radiation gained by street surfaces all over the year in different orientations, at New Assuit City (Egypt), as a case study.

Research Objectives:

This paper aims at studying the direct solar radiation and its effect on Planning of streets and its orientations at NewAssuit City (Egypt), by using a computer program written and designed by the researcher in visual basic in order to find out the perfect orientations of the streets in the area of study.

Research Methodology:

This research use a Deductive Method followed by a Case Study Method which is organized in the following steps:

1-A Climatic Analysis for climatic elements in hot dry regions
2-A Detailed Analysis for the climatic elements of the study area: New Assuit City (Egypt)
3- A Detailed Analysis of the computer program and the suggested mathematical models for all the street cross sections.
4- Discussions of the results and conclusions.

Finally: The paper suggested a plenty of recommendations which should be taken into consideration during the process of planning and building design in hot desert cities.

E-Learning And Fe Examinations In Engineering

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The profile of today's college student increasingly falls outside the bounds of the "traditional" student. 21st century learners are "digital natives"—more comfortable with texting messages and Facebook profiles—than they are with textbooks and face-to-face communication. Many attend part-time or distance learning programs. They start school later in life, stay longer, hold part or full-time jobs, balance family life and parenting, and increasingly speak English as a second language. Universities, community colleges, technical colleges and vocational universities must be more nimble and creative than ever before in order to engage, equip, and retain their diverse students' populations.

A proliferation of E-learning, orvirtual learning, systems are available to foster and encourage dynamic interaction between students and instructors as well as peer-to-peer communication between students and instructors. When passion is conveyed, when curiosity is piqued, when tough questions are probed, when brainstorming is encouraged, in short, when collaboration happens—this is when learning really takes place.

In my capacity as a professor of aerospace engineering and a program director for the Fundamental of Engineering (FE) Review Course at San Diego State University (SDSU), I explored and am currently implementing the use of Blackboard suit and McGraw Hill's Aris in teaching of a fluid mechanics course, and the FE Review course. The fluid mechanics course (EM 340) has 130 students currently. A large size compared to the typical 25-students size in the past. The FE Review course is attended by engineers employed in the local industry and undergraduate engineering students in their senior year.

The educational objectives in teaching of the above courses are to achieve **a balance** between today's virtual learning techniques and the traditional, slow-developing, chalk-on-the-blackboard teaching of the past. In the process, we look to

- Build community and engage 21st century learners
- Increase student-teacher & student-student engagement
- Bring services & office hours on-line
- Quickly and easily deploy new, collaborative technology
- Remove physical & geographical constraints to learn

Also, on the island u have to wear tags on your neck. Everyone on the island gets a small computer called a gizmo, so they can know where everyone is by their tags.

Efficient Wireless Sensor Network Transport Protocol

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Wireless sensor networks (WSNs) are generally composed of one or more sinks (or base stations) and tens to thousands of sensor nodes scattered in a physical space. The sensor nodes sense physical information, process crude information, and report required information to the sink. The sink can query sensor nodes for such information [1]. Many applications in Wireless Sensor Networks require collecting all data without loss from nodes. End-to-end retransmission, which is used in the Internet for reliable transport, is inefficient in Wireless Sensor Networks, because of the wireless communication, and limited resources [2].

The design of a data transport protocol for wireless sensor networks (WSNs) is focused on providing end-to-end reliability, congestion control, and achieving fairness in bandwidth allocation taking into consideration the limited sensor recourses such as power source, memory space. Most of the data transport protocols proposed in the literature for WSNs focus on either reliable data delivery or on congestion control. Only a few protocols such as RCRT [3] and STCP [4], dealt with both issues.

In this paper, we propose an Efficient Wireless Sensor Network Transport Protocol (EWSNTP). The current work represents a modified version of the work that appeared in [4, 5]. The protocol is designed to control congestion, allocate the bandwidth efficiently, and provide reliable data transport by using hop-by-hop retransmission.

The reliability part of EWSNTP protocol is a modified STCP that is proposed in [4]. The sensor can generate multiple data flows. The flows are classified as continuous and event-driven. The NACK mechanism is used with the continuous flow and the ACK is used with event driven flow. In the present work, in order to mange the loss of the ACK/NACK, multiple copies are sent in different paths. Checksum field is added to the packet header in order to discover the corruption in the received packets. Most of the functionalities of EWSNTP are implemented at the base station and in selected check points to save considerable energy and memory at the sensor nodes. The check points have higher memory space and processing capabilities than the other sensor nodes thus the packets are cashed in the checks points only and many important calculations are performed there.

In the case of continuous flow, if the base station detects packet loss it sends NACK to the previous check point in the path which resend the correct cashed packet if it exist else it sends NACK to the previous check point in the path and so on until reaching the source node. The error check is performed in the check points and in the base station. If the packet is corrupted, NACK is sent to the previous check point which resends the packet. The cashed packets are deleted after calculated timeout. The packets can also be deleted in case of very low memory space based on their priority. In case of event driven flow if the packet is received correctly at the check point it sends ACK to the previous one which delete the cashed packet. If the check point didn't receive ACK after calculated timeout it resends the packet. This scenario is repeated until reaching the base station.

Based on flow characteristics, global priority, rate of transmission and application reliability requirements, EWSNTP adapts itself to allocate throughput in an energy efficient manner. The priority is used as an effective factor in throughput allocation. It is based on the type of the flow, the location of the sensor node, the energy of the sensor node. Based on the global priority, different mechanisms are used to preserve the reliability. In special cases the check points and the base station can reserve the recourses in advance for the node for reliable and fast transmission. Node location is important information that is used to reduce the data redundancy. The base station can reject establishing connection with node according to this information.

Concerning the congestion control, it follows the protocol developed in [5]. We use the weighted average queue length as detection criteria and two bits for notification which are used as an indication for the congestion degree. The proposed protocol differs than the one proposed in [5] in the rate adjustment. We use the sensor base rate, global priority and congestion degree to adjust the rate. The congestion check is performed only in the check points. Based on the received congestion degree and global priority, every child node adjusts its generated traffic as well as the transition traffic by using the same mechanism.

We performed extensive simulation experiments to test EWSNTP. Compared with other protocols, the experienced latency was within acceptable limits and network lifetime is prolonged. In future work, EWSNTP will be implemented on a real sensor test-bed. The effect of different MAC layer and network layer algorithms on EWSNTP will be also studied.

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Future Trends In Educating Engineers To Face The Challenges Of The New Century

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Technological innovations are occurring at an astonishing pace. Currently, the scientific and engineering knowledge is doubling almost every ten (10) years. With the fast pace of the technological advancements, the world is becoming a global village where it is now possible for people from all over the globe to collaborate and compete in real time. At the same time, there are many exciting breakthrough technologies including sustainable technology, nanotechnology, material science and photonics/optics, biotechnology, nanotechnology, information and communication technology, logistics and manufacturing. These developments demand adjustment of the engineering education not only to include the breakthrough technologies but also to include social and global aspects. The engineering education, therefore, have to be adjusted to provide the right education and training for future engineering students. It should provide the required knowledge and the necessary skills to face and succeed in overcoming the new challenges. Future engineers should understand the social, global and professional context of engineering practice. The presentation starts with an overview of the world reality (past and future), the emerging global world markets and engineering demands. It then discusses the development of the breakthrough technologies. The world demand, the aspirations, the attributes and the required skills of the future engineers will then be presented. It concludes with the presentation of the implications of technology and recommendations for the future curriculum and other aspects of future trends in engineering education.

Open Source Application As A Tool For Distance Learning Moodel as A Case Study

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On the increase curiosity in online education and degrees has been further induced by the recent national and global worries of various disease outbreaks.
We will review a new open source Product, Virtual School with customized pricing that match all levels of educational requirements
Virtual School solution is built on state-of-the-art collaboration technology, offering a real-time and cost effective interaction between students and instructors. Additionally, it comes with a user-friendly interface, which makes it easy to use by students, educators, and administrators and provides a platform not only for real-time interactive learning, but also for knowledge sharing and collaboration.
Moodle is an alternative to proprietary commercial online learning solutions, and is distributed *free* under open source licensing. An organization has complete access to the source code and can make changes if needed. Moodle's modular design makes it easy to create new courses, adding content that will engage learners.
Virtual School Solution is based on Moodle Platform which now being used by over than 400,000 users around the Globe.
Activities are at the heart of a course management system. Moodle was designed by an educator and computer scientist, with "social constructionist" principles in mind.
"Constructionist asserts that learning is particularly effective when constructing something for others to experience. This can be anything from a spoken sentence or an internet posting, to more complex artefacts like a painting, a house or a software package.

Some features of Moodle structure and how it works?

Learner Management Features

Creating learning content is only part of what a good course management system (CMS) must do. The CMS must *manage* learners in a variety of ways. Learner management includes:

- Access to information about learners in a course.
- Ability to segment participants into groups.
- Site, course and user calendar event scheduling.
- And so much more…e.g. applying scales to different learner activities, managing grades, tracking user access logs and uploading external files for use within the course etc.

***Learner Management Features* – Participants**

One click and the educator can view activity from all participants enrolled in the course. Learners create a personal profile that can include a picture, helping connect students socially in the online learning community.

***Learner Management Features* - Groups**

Assigning learners to a group is a common practice in education and business. Moodle allows the course instructor to easily create group categories, and determine how members will interact with each other and within various activities.

***Learner Management Features* - Calendar**

Keeping a calendar of events is important to both the learner and course instructor. Events can be created for different categories, including:

- Global events that appear in all courses (system admin).
- Course events set by an instructor.
- Group events set by instructor relative only to a group.
- User events set by learner (e.g. due dates, personal etc.).

Upcoming Events appear on the course homepage, alerting the learner across all courses they are enrolled in of different category events. Alerts are colour-coded by category.

To tray a working and real running module browse: http://http://elearning.hightechvision.net/ , which High Tech Vision is using for its online courses

Re-Classifying Bridges With Unknown Foundations

Sayed M. Sayed, PE, M.ASCE, Hisham Sunna, PE, M.ASCE,
and Pamela R. Moore, PE

An innovative, rational and deterministic methodology to re-classify bridges with unknown foundations based on **Static/Back-Calculation (S/B-C) of pile tip elevations** is presented. This would apply directly to the Scour Evaluation for Bridges with partial or no construction records and can be used in the Geotechnical and Structural Analysis Scour Assessment as well as validation and optimization of Non-Destructive Testing (NDT).
Since the mid 90's, the Static/Back-Calculation (S/B-C) Method has been developed and adopted by the writers as a calibration tool for the geotechnical/structural model in the Soil-Structure scour evaluation for several hundred bridges with known foundations (i.e., available construction records) in the State of Florida. Inference and Back-Calculation (Reverse Engineering) methods have been used by the writers to analyze the stability of bridges with partial construction records since 2005. The S/B-C method can be used to ***Re-Classify Bridges with Unknown Foundations*** *(i.e., bridges with no construction records) from* ***"unknown"*** *to* ***"known"***. It is used to determine the foundation embedment depth (i.e., reasonable "minimum" embedment) for unknown foundation bridges. The method eliminates the use of Non-Destructive Testing (NDT) for embedment depth determination. The approach is based on satisfying static equilibrium under ultimate loads (ASD – Allowable Stress Design or LRFD – Load and Resistance Factor Design) for the existing bridge pier/bent conditions using three-dimensional non-linear finite element analysis. It is applicable to partially and fully-embedded (i.e., buried pile cap) piled-foundation substructures where physical measurements of the super-structure and top of the sub-structure foundation elements (type and shape) can be made. Once the re-classification to **"known"** from **"unknown"** is done using the Static/Back-Calculation Method, the scour evaluation (Hydraulic Analysis; Soil-Structure Evaluation; and Remedial Measures, if needed) is subsequently done in the conventional manner.
The S/B-C can be used to validate embedment determinations done by NDT methods in previous or current projects. For "high priority" unknown foundation bridges, the S/B-C reasonable "minimum" embedment as well as the embedment required for stability considering the scour can be used to plan and implement any future NDT, if required by the owner, for these bridges. In general, the S/B-C will also reduce the extent of any NDT that may be done in the future and presents an alternative to positive discovery of bridge foundations. The S/B-C Method is a powerful tool that removes a major stumbling block in the path of the scour evaluation program for unknown foundation bridges. It alleviates the potential impact of budget cuts experienced by various transportation agencies and accelerate the screening of these bridges in a timely manner to protect the public.
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UNRAP as pavement base course – are we ready for it?

Sayed M. Sayed, PE, M.ASCE, John M. Pulsifer, M.ASCE
and N. Mike Jackson, PE, M.ASCE

The paper presents an overview of the on-going efforts to assess the applicability of **UN**treated **R**ecycled **A**sphalt **P**avement (**UNRAP**) as base course for pavement sections. Three different temporary pavement sections were constructed. Two sections were constructed with UNtreated Recycled Asphalt Pavement (UNRAP), one with a stabilized subgrade and the other with a compacted subgrade. The third section was constructed with a limerock base and stabilized subgrade, and was used for comparison purposes. The UNRAP material used in the temporary pavement sections was milled off of the existing roadway. Laboratory and field testing, including Dynaflect and Falling Weight Deflectometer (FWD), were performed and evaluated. The study suggested the UNRAP base performed as well or better than the limerock base. The results of this study, together with a previous study, indicate that UNRAP can be used successfully as base material for both shoulders and traffic lanes. Use of UNRAP for base courses on certain projects is a cost-effective alternate over conventional base materials. The results of the Dynaflect and FWD and the rut depths observed throughout the limited duration of this project were comparable to those of the limerock base. The results also indicate a substantial improvement of UNRAP properties with time. The results of the field and laboratory testing, as well as engineering analyses and evaluations are presented. Recommendations for future construction and research will be discussed. The data gathered so far suggest that UNRAP is a viable alternate material for base courses, but are we ready for it?

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Distributed Energy With Flexible Fuel For Egypt With Cooling And Fresh Water Production

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Distributed generation of electricity has long been recognized as a potential means of increasing overall energy efficiency via appropriate local utilization of waste heat. Such combined heat and power (CHP) systems can utilize a variety of small engines, but typically, either diesel or gas turbine plants are chosen. The waste heat extracted from the exhaust is either used directly in process or heating applications, or used to drive absorption refrigeration units, creating combined cooling, heating and power (CCHP) plants. The choice between diesel and gas turbine engines is generally driven by the tradeoffs amongst capital, fuel, maintenance, and siting costs, as well as regulatory considerations. Gas turbines become attractive when continuous or quasi-continuous operation is required, where emissions are heavily regulated, where relatively high-grade heat is needed, and/or where low maintenance is a premium.

Recent emphasis on sustainability includes careful examination of the potential of dispersed fuel resources in meeting a portion of the societal energy needs. These fuel resources include biomass, municipal wastes, and other low heating value feedstocks. For such feedstocks, transportation must be minimal in order to maintain their viability in providing a positive energy contribution, in all cases except those in which the material is gathered for other purposes. Efficient use of dispersed feedstocks, then, couples well with distributed generation. Seasonal variations in the feedstock mix, however, would lead to less than optimal overall conversion efficiency if the generation system were to require a single fuel type. Hence, the ideal system would allow fuel flexibility, not only to maximize overall conversion efficiency, but also to minimize life cycle costs. Such a system, supplied via renewable fuels, would ideally operate continuously, following the local demand for heat, power, or refrigeration. Thus it is important that the energy conversion system be efficient at part power, not just at the design point. Furthermore, if a large number of distributed energy plants are to be installed, displacing equivalent capacity of new, large plants, then the emission performance of the small plants must be excellent to avoid a net negative environmental impact.

A distributed energy network capable of continuous operation could also potentially result in improved grid robustness, provided that grid architecture development enables distributed energy plants to function on power “islands” during large-scale interruptions. In emergency operation, such microgrids could continue to supply services, decreasing the burden on emergency agencies to project services over long distances.

In short, there would appear to be significant advantages to gas turbine based distributed energy plants, especially if fuel flexibility, part-load efficiency, and emissions could be improved. This presentation describes a proposed distributed energy plant which promises to

fulfill these requirements, called the High Pressure Regenerative Turbine Engine (HPRTE). It is a semi-closed cycle gas turbine engine, combined in a unique way with an absorption refrigeration system. This system is ideal for desert regions away from the electricity grid such as the Egyptian Western Desert. Such a system could potentially have a substantial positive contribution in re-distributing the Egyptian population away from the banks of the River Nile into currently un-inhabited desert regions.

Improving Coloration And Antimicrobial Effect Of Silk Fabrics

M. M. El-Molla[1], E.M. El-Khatib[1], M.S. El-Gammal[1,] S.H.Abdel-fattah[1]

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An aqueous binder of polyurethane acrylate based on polyethylene glycol 6000 has been prepared for either ink preparation for pigment dyeing and/ or for printing pastes for coloration of silk fabrics.

Polyurethane acrylate oligomers have been prepared from isophoron diisocyanate, polyethylene glycol 6000 and hydroxy ethyl acrylate using dibutyl tin dilaurate as a catalyst. The results show that the binder can be used safely with TiO_2nanoparticles in preparing either ink for pigment dyeing or printing pastes for coloration silk fabrics and improved the UV-protection, anti-bacteria and wrinkle resistance of silk fabrics.

Keywords : Nanotechnology , Coloration, Antimicrobial, UV-protection, anti-bacteria Silk Fabrics.

Community Practice From Development To Empowerment Through Information Technology

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Purpose: This study describes the process of community practice as one of three methods in social work practice , how the community practice in our communities transform from development to empowerment as urgent need in our local communities , the role of information technology in this transformation.

This study try to make a big focus about the role of information technology in community practice from Development to Empowerment, also it try to explore the reality of information technology initiatives for community development , how communities organizations , governmental and non- governmental organization use information technology tools for community empowerment.

Method:

This studybelongs to the pattern of descriptive studies which using the social surveymethod through the sample, and applied study through a questionnaireaddressed to the members of community, board members of NGOs, practitioners in community practice, also the study will apply in Aswan governorate.

Results:

Results refer to the importance role of information technology in community development with a great role in community empowerment, also result provide some obstacles and problems in the way of use information technology in community practice, there are a lot of local initiatives and projects support information technology in community practice.

Implications:

This study provides new information for social workers who are and will be working or volunteering in community development projects about using information technology in community empowerment, how we can set a plan for community development based on information technology, the best ways for support developmental issues through information technology.

Combating Oxidative Stress As A Hallmark Of Cancer & Aging: Computational Modeling And Synthesis Of Chalcone Bioisosteres As Potential Antioxidant And Antiproliferative Agents

Laila Abou-zeid and Hany B. Nashat

Oxidative Stress and Cancer

Oxygen-free radicals, more generally known as reactive oxygen species (ROS) are well recognized for playing a crucial role as beneficial species.

ROS are generated by normal cellular processes, environmental stresses, and UV irradiation. ROS react with cellular components, damaging DNA, carbohydrates, proteins, and lipids causing cellular and tissue injury.

Normal, non-cancer cells typically function at a low, steady-state level of oxidative stress. Prolonged exposure to elevated levels of ROS can cause serious damage to a cell and shut off immune functions leading to development and progression of different types of cancer. To protect against this damage, cells have natural anti-oxidant defense mechanisms to scavenging excessive levels of ROS and other oxidative species enhancing DNA repair.

Recently studies revealed that there is an association between tumor oxidative stress, and excessive telomerase activity (TA).

Novel chalcone analogs are designed using Computational Molecular Modeling technique to spotlight on the significance of the functional groups of the Chalcone analogs have been docked to identify their selective recognition in 3DU6 active sites and to achieve proper selective antioxidants.

Proposed search for worldwide accurate moon calendars that establish predictable unified feast days

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Analyses are given for worldwide Moon Month start days. These are based on the start of the moon-month visibility delay, of more than 18 Hours after the Moon-Sun conjunction time. This delay time of visibility after conjunction is more than the 12 Hours time period needed for the moon to complement its approximate month period of 29.5 days, for completion of the 30 days month period, in some parts of the globe, and subtracted from the 29.5 days to get the 29 days month, in other parts of the globe. Existing astronomers never apply this simple and logic consideration. This basic analytical concept is applied successfully using two worldwide regions since starting this analysis in the Gregorian year 2000. The prepared moon calendars since the year 2000G, based on this concept, was successful; in large agreement with the published major predictions worldwide. The two worldwide regions are the American & the Far East Asian continents and the European, African and West Asian continents. 30 day and 29-day months are alternatively interleaved beautifully all over the years and verified same calendar feast days worldwide. The start daytime line is assumed at the 180^{o} longitude and the moon month average days used is the long time established number (since the ancient Egyptians, and still used by NASA predictions) of 29.53 days. The 0.03 days difference, from the exact 29.5 days, adds one day every 33.33 moon months. It also forces the 29 and 30-day month sequence with its sequence between the two world continents, to be reversed.

In order to establish the moon month predictions for extended applications; it is needed to follow up the moon epoch routines over many months (that might extend to more than one year) in order to verify its repetition and reliability of its applications, as described in this paper. The epochs can be followed by establishing daily accurate moon rise and set times, with follow up of the delay patterns established in previous papers, that accurately determines the times of perigee and apogee every 27.3 days on given locations in Europe, the Middle East and South Africa. Noting that these locations can flexibly be selected in accordance with international agreements and availability of accurate observatories.

This paper explains briefly the previously published and established analysis and moon observations, with the needed moon epochs that are determined by the apogee and perigee accurate times, necessary for accurate predictions of each month crescent and establish the proposed international long term calendars.

Synthesis And Pharmacological Activity Evaluation Of Some Analogues Of Pyridine Derivatives

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In the present study, a series of new derivatives of pyridine-2-ylimino-1,3-dihydro-2H-indol derivatives, substituted -4-ylimidazo[1,2-a]pyridine derivatives , aza pyridine derivatives , imidazo[1,2-a]pyridine derivatives and 1H-benzimidazol-1-ylmetyl)-3-(pyridine) derivatives were synthesized through condensation reaction of pyridine derivatives with different aryl acids derivatives, indole derivatives and diamine derivatives, respectively. All of the synthesized compounds produced in good yields. The Structures of the synthesized compounds were established on the basis of elemental analysis, IR, 1H NMR, C13 NMR and Mass spectral data. The anticancer activities of the synthesized compounds were evaluated against different types of human cancers. The anticancer activities of the synthesized compounds were evaluated utilizing different human cell lines. Some of the tested compounds showed good inhibitory effects on the growth inhibition (GI50) of the tested cancer cell lines.
Keywords: Pyridine, Indole, Aryl heterocyclic, Anticancer activity.

Measuring Polymeric Nanoparticles Size Using Laser Speckle Interferometry Technique

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One of the important promises of nanotechnology is the development of techniques and tools for cancer diagnosis using safe, noninvasive, low-cost means with high resolution and sensitivity. In this paper a new technique for detecting the size of polymeric nanoparticles, namely -chitosan polymer- is presented . Existing clinical imaging modalities, such as computed tomography, magnetic resonance imaging (MRI), positron emission tomography, and ultrasound, differ from one another in terms of detection sensitivity, spatial–temporal resolution, signal-to-noise ratio, quantitative accuracy, and long-term safety.[1],[2]Our recent work revealed that speckles can be formed when nanofluids containing a proper volume fraction of nanoparticles are illuminated by a monochromatic laser beam. On the basis of a Rayleigh scattering model for a single nanoparticle illuminated by a TEM_{00} laser beam, we theoretically and numerically study the speckle formation when nanofluids are illuminated by a TEM_{00} laser beam. The results show that the laser speckles possess a Gaussian distribution, which are in agreement with the experimental results. The results may be useful for using a laser speckle velocimetry to determine the velocitiies of nanoparticles in nanofluids.

The chitosan polymer is the second most abundant polymer in nature, after cellulose. Chitosan has been extensively employed in the development of micro- or nano-carriers (23), with a specific focus on the use of complex actives such as nucleic acids, e.g. siRNA (24), or proteins (25), possibly having enzymatic activity (26).

Chitosan nanoparticles were produced by ionotropic gelation of chitosan with sodium tripolyphosphate (TPP), a small ion with a triple negative charge throughout the physiologically acceptable pH range (28).

Chiosan nanoparticles play a very important role for anticancer drugs delivery to be effective in cancer treatment (27).This was achieved by using the system of double – beam speckleinterferometry. The optical setup uses a He-Ne laser for thesource together with a lens to expand the laser beamand double apertures illuminating through both of them the samescattering surface. A high resolution, commercial charge coupled device (CCD) photo cameraprovides images of the two superimposed speckle fields through thedouble apertures, interference fringes are formed within the speckle pattern, where the images of the two apertures overlap. Thus a periodic grid structure is introduced within each [1]speckle .A first exposure was taken with the absence of the specimen and a second one after introducing the chitosan polymer sample in the way to the rough surface. By simple subtraction ofthe two digital pictures, we obtain a moiré nano fringe pattern that givesus information about the polymeric Nanoparticles size. The results may be useful for using a laser speckle velocimetry to determine the velocitiies of nanoparticles in nanofluids (1).

The proposed method yielded a theoretical precision of 10 nm for in- plane displacement with a monochromatic CCD camera of 10-bit gray scale (1024 gray scales) sensitivity and micro scale surface resolution for millimeter scale object with 640×480 pixels image resolution by an He–Ne LASER (632.8 nm wavelength) light source. The gray-level method is proposed to calculate the non-obvious interferometry Moiré' fringes by traditional double beam speckle interferometry, and the result showed that this method works for this purpose. Speckle Interferometry; Nan speckles; Nanoparticles; Bio-speckles.

Biological Control Of Pythium Root Rot On Broccoli Plants Under Greenhouse Conditions

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Pythium ultimum,*Rhizoctonia solani* and *Fusarium solani* were the most fungi isolated from roots of broccoli (*Brassica oleracea* L. var. *italica*) plants showing root rot disease symptoms in different governorates in Egypt. Pathogenicity test proved that *Pythium ultimum* is the causal agent of root rot disease on broccoli plants .No significant difference between broccoli varieties (Atlantic F1 and southern star) in their susceptibility to *Pythium ultimum* infection. *Trichoderma harzianum,T. virdi* , *Bacillus subtilis* and *Pseudomans fluorescens* isolated from the rhizospheric soil of healthy broccoli plants could inhibit the growth of *Pythium ultimum* on PDA medium *in vitro* .Under greenhouse trials, dipping roots of broccoli seedlings in water suspensions of each bio control agent i.e., *Trichoderma harzianum* , *T. virdi* ($5x10^6$ spore/ml) , *Bacillus subtilis* and *Pseudomans fluorescens* ($8x10^7$ spore/ml) or mixing soil with the same suspensions of bio control agents gave the least effect in reducing Pythium rot disease if compared with applying the two methods together .As applying a combination of soil mixing plus root dipping method was generally more effective in reducing disease incidence than each method applied individually .The use of bio control agents as soil mixing or root dipping treatments as applicable safe and fungicides alternative might be used for controlling Pythium root rot on many crops especially under organic farming system .

Key words: Broccoli, Pythium rot, *T. harzainum*, *B. subtilis*, and *P. fluorescens*, biological control.

Nanotechnology To Improve Coloration And Antimicrobial Of Silk Fabrics

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An aqueous binder of polyurethane acrylate based on polyethylene glycol 6000 has been prepared for either ink preparation for pigment dyeing and/ or for printing pastes for coloration of silk fabrics.

Polyurethane acrylate oligomers have been prepared from isophoron diisocyanate, polyethylene glycol 6000 and hydroxy ethyl acrylate using dibutyl tin dilaurate as a catalyst. The results show that the binder can be used safely with TiO_2nanoparticles in preparing either ink for pigment dyeing or printing pastes for coloration silk fabrics and improved the UV-protection, anti-bacteria and wrinkle resistance of silk fabrics.

Keywords : Nanotechnology , Coloration, Antimicrobial, UV-protection, anti-bacteria Silk Fabrics.

Egypt And The Global Financial Crisis

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The world is currently in the midst of the deepest financial and economic crisis since the Great Depression in 1931. This crisis, which was initiated by the U.S. financial system in 2007 and reached the rest of the world by August 2008, is notable for its severity, speed and international span, hitting both developed and developing countries.

In this respect, this paper aims at investigating the extent of integration of the Egyptian economy in the global markets, as well as the spill over effect of the 2008 global financial crisis. An evaluation of the Egyptian economy before and after the occurrence of the crisis will be undertaken. The purpose is to identify the main causes for any perceived deterioration and to determine which are the outcomes of the global crisis and which are resulting from economic structural disorders.

Furthermore, the recent fiscal and monetary policies adopted by the government, including decisions related to public and private spending on investments, taxes, interest rates and currency exchange rates, as well as the 2004 economic and social reform plan will be assessed in terms of their effectiveness in mitigating the consequences of the crisis and improving the performance of the economy in general. The paper will also review the financial crises in selected European countries (Greece, Ireland, Spain and Italy) in order to draw lessons with regards to factors initiating the crises and the ways and means of avoiding them. In addition, a comparative analysis will be conducted to explore the "rescue packages" adopted by some countries in the Middle East and North African region to assess their effects on sustaining the economic performance in countries with similar as well as different economic characteristics.

Finally, several recommendations are proposed as to policy implications that deal with the current and possible future effects on the Egyptian economy and the measures that could be taken to avoid the repercussions of any future crises with the aim of restoring financial stability that would lead to economic recovery and secure sustainable development for the economy.

Analysis Of The Expectations Gap Of Managerial Accounting Role In Rationalization Of Tqm Decisions In Industrial Enterprises

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This paper aims to present and analyze the expectations gap of the managerial accounting role in industrial enterprises in the area of rationalization of TQM decisions.
This means highlighting and analyzing the gap between concepts, methods and procedures and the outcomes that the managerial accounting aim to achieve and what is already applied (within the limits of cost available to the application) from the practical results for the TQM rationalization in these enterprises.
In order to achieve this goal, a content analysis of the available literature and the relevant published research papers is required along with the results of the of empirical studies included in unpublished theses.
This leads to explore the extent of the gap and analyze its factors between the target set out in scientific studies and the reality that the applied and case studies in Egyptian enterprises revealed (for example). As well as to highlight the satisfaction degree of the decision makers with the managerial accounting reports which were actually being offered to them in this area.
Finally the researcher presents practical recommendations- from his point of view - To narrow the gap in order to provide the necessary requirements for the practical application of the advanced concepts and methods of managerial accounting. This requires the existence of practical guarantees on the effectiveness of the application, which justifies the cost from the management's point of view and ensures effective participation of related parties.
Based on the above, this paper includes the following points: -
First: Advanced concepts and methods of the management accounting in rationalizing TQM decisions in industrial enterprises (content analysis).
Second: Analysis of the availability of practical requirements for the application of concepts and methods of managerial accounting and to highlight the gap between target and reality (a sample of applied studies).
Third: Practical suggestions for the application of the expectations gap in order to effectuate the role of management accounting in the rationalization of TQM decisions.

Key Words: expectations gap, the methods of management accounting, rationalization of the decisions, the overall quality.

The Role Of Philosophy Of Education In Promoting Multicultural Approach In Curriculums

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In this paper we aim to strengthen the approach of multiculturalism in philosophy of education curricula. Indeed, philosophy of education plays a vital role for enhancing our curricula to encourage diversity, democracy, free of difference, solve conflicts and be more tolerant. Hence, theories of multiculturalism, so prevalent in the educational field in the last twenty years, have emerged as a particular response not only to the constitution of the pedagogical subject in schools, or to the interaction between the pedagogical subject and the political subject in democratic societies, but also as a way to identify the importance of multiple identities in education and culture. In short, theories of multiculturalism are intimately connected to the politics of culture and education.

Key words: - Multiculturalism- Diversity-Philosophy of education- Social inclusion – Social exclusion.

Bank Owned Projects, Bank Misr Model 1928-1968

Aly Mansour and Haitham Kabara

The financial crisis started in our first decade of the 21st century has affected most of the industrialized countries and spilled over most of the third-world countries. All countries and economic groups, such as EU, have been trying to find solutions to get out of the crisis but little has been achieved. Accusations of the root problems have bounced between the corporate world malpractices to the financial institutes' malpractice.

The corporate world malpractices have ranged from mismanagement to transferring the production process outside their own societies. Entrepreneurs opted to transfer their factories and the actual production phases outside their own societies to maximize their profits. Justifications presented by the corporate world were deceptive and misleading. Entrepreneurs claimed that cheaper labor elsewhere away from their own societies would lower the price of their final product purchased by customers within their own societies. Those entrepreneurs forgot that transferring production away from their own societies has caused major economic and social problems within those societies.

High unprecedented unemployment rates, recession, inflation, lower school and educational standards, lower quality of healthcare services, less infrastructure projects, and negligence of public interest due to lack of unemployed tax-payers are just few examples of the harmful effects caused by transferring production away from original producing societies. Entrepreneurs in the corporate world who have transferred their production projects/business disregarded the fact that those same societies are the first customers for their own products, not to mention all the harms accompanying those acts such as unprecedented high rates of unemployment and its impact on those societies. Sociologists have contributed the rise in unemployment to the rise in crime rates, divorce, children employment, and drug problems.

Financial institutes were blamed for giving away easy loans with little, or no, collaterals. Furthermore, financial institutes' worse mistake was to finance entrepreneurs who transferred production away from their own societies. Those financial institutes have forgotten that the money they are managing had been already invested by the same population that would be mostly harmed by such a transfer. Funding projects away from any society is worse than transferring projects away from that society, exporting financial institutes, as that is a disguised double-act of theft of the investors of that society. The first act of theft done by those exporting financial institutes is to invest away from the source of the investors causing high rates of unemployment. The second act of theft by exporting financial institutes is the lack of services due to the unemployed being unable to pay taxes. Thus, the whole society suffers due to lack of restrictions on deposited investments and depriving those investors from benefiting from the revenue of their own investments within their society – source of investment deposits.

One of the most successful models in the financial world that is surviving to this very day, over 82 years, is Bank-Misr. Although Bank Misr headquarters is in Cairo; however, its branches are

all over the Arab-World, Africa, Asia, Europe, and the American continents. Bank-Misr model was originally built on BOP "Bank-Owned-Projects". BOP system of Bank-Misr survived for almost 34 years without a single failing project. Most of BOP projects that started through the first 34 years of Bank-Misr BOP system are still surviving till now (www.Bankmisr.com/history). This paper will discuss the availability of modifying Bank-Misr BOP system in order to be generalized as an alternative for financial institutes suffering from the financial crisis of the first decade of the 21st century – and expected to continue for several years in the second decade. The model will focus on financial institutes within the Arab-World; however, the same model may be applied elsewhere.

Union Dyeing Of Wool/Polyester Blend Fabrics Using Sulphatoethyl Sulphone/Monochlorotriazine Reactive-Disperse Dyes

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Dyeing of wool, polyester and wool/polyester blend fabrics with two models of temporarily anionic sulphatoethylsulphone/monochloro-triazine reactive disperse dyes were investigated. Maximum exhaustion values and color yield were observed at pH 7. The results showed that reactive disperse dye containing bis- sulphatoethylsulphone/ monochlorotriazine reactive system were more convenient for neural dyeing of wool and wool/polyester blend fabrics compared with mono-sulphatoethylsulphone/monochlorotriazine analogous. Excellent to very good wet fastness properties on all dyed fabrics were achieved.

Keywords: Reactive disperse dyes; Wool/Polyester blend; Union dyeing

Toxicological Effects Of Benzo(A)Pyrene On Blood Components And Oxidative Stress In Mice

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Benzo(a)pyrene [B(a)P] is one of the most serious environmental pollutants and important fraction of polycyclic aromatic hydrocarbons (PAHs). The present work aimed to investigate the toxicological effects of long term exposure to B(a)P through evaluation of the haemogram, antioxidants status and lipid peroxidation in liver tissue. The B(a)P residue in the liver as well as body weight of the animals were also recorded. Sixty female Swiss albino mice were randomly divided into three equal groups. The first group was kept as control group. The second and third groups were given 20 and 40 mg/kg b.wt. as a single dose per week for 8 weeks, respectively. All groups were observed daily and clinical signs and body weight were recorded weekly for 30 weeks. Blood samples were collected from mice at the 8th, 16th and 30th weeks for haemogram and evaluation of alfa feto-protein and arginase activity.Oxidative stress and B(a)P residue in the liver tissue were detected at the 30th week. Results revealed thatboth treated groups suffered from depression, lower activity and ascites.The weight gain of treated groups was lower. Haemolytic anaemia was recorded in both treated groups at the 16th and 30th weeks. There was marked leukocytosis with lymphocytosis in early stage followed by leukopenia and significant lymphopenia at the end of the experiment. Arginase activity exhibited a marked increase while alfa feto-protein was detected only at 30thweek. In liver tissue of both treated groups, there was marked increase in malondialdehyde associated with significant decrease in glutathione reduced and glutathione-s-transferase. The residue of B(a)P residue in liver tissue was detected in treated groups. It was concluded that long exposure of B(a)P causing adverse effect on animal health; anaemia, leukopenia, tumor marker detected in blood, antioxidant/oxidative imbalance and accumulation of this toxic compound in the liver tissue.
Key words: Benzo(a)Pyrene, mice, haemogram, oxidative stress, tumor markers, residue.

A Whole New Vision Going Forward With Education Reform K-12 In Egypt

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Most Egyptians agree that the workplace is changing and that the skills necessary forsuccess in the 21st century College and workplace are different from those needed in the 20th century. *A Whole New Vision to prepare the new generation to* move from the Information Age to the Conceptual Age. The future belongs to a very different kind of person with a very different type of mind. Engineers and programmers will have to master different aptitudes, relying more on creativity than competence, more on tacit knowledge than technical manuals, and more on fashioning the big picture than sweating out the details.

The international workplace is changing as a result of three factors (1) Asia (2) abundance, (3) automation. To become competitive at the international level our work force will need new skills. in the Conceptual Age, a *whole* new vision which requires a major paradigm shift in our thinking process, one that incorporates both right brain and left brain directed aptitudes where the left brain is sequential, logical, and analytical, the right brain is nonlinear, intuitive, and holistic. Defining skills of the previous era are necessary, butno longer sufficient. Instead the "right brain qualities of inventiveness, empathy, joyfulness, and meaning increasingly will determine who flourishes and who flounders.

Education process should focus on creating skills rather than injecting information and create walking libraries. Current Egyptian education process is a true indicator that today's students are not prepared to compete internationally. Education and business leaders have also begun to question whether current assessments focus too much on measuring students' ability to recall discrete facts at the cost of not adequately measuring students' ability to think critically and solve problems. As a result, a widening gap has formed between the knowledge and skills students are acquiring in schools and the knowledge and skills needed to succeed in the increasingly global, technology infused 21st century workplace. As a first step toward bridging this gap, every student should be technologically literate by the time the student finishes the eighth grade, regardless of the student's gender, family income, or disability. Ministry of Education should establish an eighth-grade technology literacy requirement, the requirement is not a full statement of knowledge and skills students need nor does it include a mechanism for ensuring accountability. Ministry should develop policy and frameworks describing the need to improve children's higher-level technology-related skills and attempting to define those skills. While many different terms have been used to describe what students need, such as digital literacy, technological literacy, and 21st century skills, education leaders, should come together around a new common definition of what students need to know, Information and Communication Technology Literacy. Literacy reflects the need for students to develop learning skills that enable them to think critically, analyze information, communicate, collaborate, and problem-solve, and the essential role that technology plays in realizing these learning skills in today's knowledge-based society.

Ozone Use For Sanitization Or Decontamination Of Food, Water And Environment

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Ozone, a triatomic oxygen molecule, has a high oxidizing power and potent antimicrobial properties. Most bacteria, fungi, viruses and protozoa are sensitive to ozone treatment. Ozone has numerous applications in its gaseous or aqueous state. These include food, water, medical and environmental applications. For example, ozone is widely used in the treatment of municipal water, as a safer alternative to chlorine. Potential food applications include sanitization of fresh produce and whole shell eggs, and decontamination of nuts and spices. Ozone is also capable of reducing pesticide residues and mycotoxins on some food products. Methods to use ozone to sterilize medical instruments are being developed. Ozone-based washers are available for cleaning and sanitizing walls and floors.

At the Ohio State University, we have the most active ozone research program in the United States. The program is focused on improving the safety of food supply by developing ozone-based decontamination and sanitization methods. Under this program, a method to produce *Salmonella*-free eggs has been patented and is currently in the implementation phase. Recently, a method was developed to eliminate the enterohemorrhagic *Escherichia coli* on delicate fresh produce such as spinach and strawberries. However, there are challenges that limit further spread of ozone use in other applications. Some of these challenges are due to the nature of ozone itself. Others are related to equipment that generates the gas. Well-thought designs are needed for treatment chambers where gaseous or aqueous ozone comes in contact with the treated product. Control of ozone in work environment is essential for the safety of equipment operators and other workers in the facility. These applications and challenges will be presented in detail during the meeting.

Effect Of Some Plant VolatileAldehydes On Gray Mold Disease Of Strawberry Fruits During Storage

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Gray mold, caused by *Botrytis cinerea* is one of the important strawberry disease that causes losses before or after harvest wherever strawberry .Effect of some volatile aromatic aldehydes as vapor or solution on gray mold disease of strawberry fruits were tested .Five concentrations of plant aldehydes were tested as a vapor *i.e.* 0.0,10,25,50 and 100 µl/l for 30 min in fumigation chamber. Results indicated that, completely inhibited of linear growth and spore germination was obtained with Acetaldehyde and Cinnamaldhyde vapors at concentrations of 50 and 100 µl/l . Moderate reduction in linear growth and spore germination was obtained with Acetaldehyde and Cinnamaldhyde vapors at concentration of 25 µl/l..As for plant aldehydes solutions results indicated that, all tested concentrations of Benzaldehyde showed more effective against linear growth and spore germination of *B. cinerea* as compared with other tested plant aldehydes. Benzaldehyde solution at 1.0 and 1.5 ml/l resulted in complete reduction of both *B. cinearea* linear growth and spore germination. Strawberry fruits were fumigated with four concentrations of plant aldehydes vapors *i.e.*0.0,100,150 and 200µl/l for 30 min to study their effect against gray mold incidence .Results showed that, the most effective treatments are Acetaldehyde at 150 and 200 and Cinnamaldhyde at 200 µl/l which reduced the gray mold incidence by 78.0 , 90.0 and 70.0 % respectively . Treated strawberry fruits with Cinnamaldhyde vapor at 150 µl/l resulted in reducing gray mold disease by 65 %.Treated strawberry fruits with aldehydes solutions of Acetaldehyde and Cinnamaldhyde at concentration of 1.5 ml /l reduced the gray mold incidence by 70.0 and 80.0 % respectively.

It could be suggested that some plant aldehydes*i.e.* Acetaldehyde and Cinnamaldhydewould make them an excellent treatment for controlling postharvest diseases of strawberry fruits.

Key words : Strawberry fruits -Gray mold, - *Botrytis cinerea*- Acetaldehyde – Cinnamaldhyde – Benzaldehyde – Postharvest disease

Zagazig Presentations

Multi Center Study Of Combined Thrombo-Embolectomy And Intra-Operative Thrombolytic Therapy In Acute Lower Limb Ischaemia

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***BACKGROUND**: Acute lower extremity ischaemia is associated with significant limb loss and mortality despite advances in vascular surgery and over all improved critical care. Surgery has been the mainstay of treatment. However, Fogarty's balloon embolectomy and emergency reconstruction are associated with high incidence of perioperative and late morbidity. Selective intra-arterial perioperative thrombolysis has gained increasingly widespread acceptance as a first line therapy for acute limb ischaemia.*
***THE AIM OF THE WORK**: is to evaluate the effects of combined thrombo-embolectomy and intra-operative thrombolysis in management of acute lower limb ischaemia from Jan. 2007 to Jan. 2010.*
***PATIENTS AND METHODS**: 60 patients with acute lower limb ischaemia admitted to the vascular surgery units in, El-Houssein University Hospital and Zagazig University Hospital in the period from Jan. 2007 to Jan.2010. Emergency embolectomy and intra-operative intra-arterial thrombolysis was done using bolus intra-arterial thrombolysis in 40 patients, continuous intra-arterial infusion of urokinase in 17 patients and manual high-dose isolated limb perfusion in 3 patients.*
***RESULTS:** No intra-operative deaths occurred, there was a case of in-hospital death due to myocardial failure and there was a case of death after 2 months postoperatively (unknown sudden death).Among the survived patients, 1 patient had above knee amputation and 2 patients presented by neurological deficit (as they had neglected ischaemia with pre-operative neurological affection. There is one case of hypersensitivity to urokinase used in this study. Bleeding occurred post-operatively from the lytic agent in the form of wound haematoma in 2 patients; one of them required surgical evacuation. 5 patients needed fasciotomy*
***CONCLUSION:** The combined use of intra-operative thrombolysis following mechanical thromboembolectomy is safe and useful in patients with acute vascular occlusion. We recommend use of intra-operative intra-arterial thrombolysis as a routine for all patients that undergo balloon catheter thromboembolectomy followed by completion angiography. If multiple vessels are involved, we recommend a high-dose isolated limb perfusion technique.*

Women's Health in Ancient Egypt

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Egyptian women had a free life style , compared to their contemporaries in other lands. The Ancient Egyptian woman wasn't feminist, but she was quite liberated. She could hold down a job, or be a mother if she so choses. She could live by herself or with her family. She could buy and sell to her hearts content. She could follow the latest fashions, learn to read and write. She loved and laughed and ate and drank. She partied and got sick. She helped her husband. She ran her household. She could have power and position if she was in the right class. She lived a similar life to that of her mother and grandmother in accordance with, *maat.* She was an ancient Egyptian woman with hopes and dreams of her own. That is not too much different women of today.

Women's health was closely looked after by the ancient Egyptians. Physicians specialized in obstetrics and gynecology was available in ancient Egypt alongside health care provided by with midwives. Egyptians, at the time, liked to have large families partly because a numerous progeny reflected credit on the parents especially the father.Fertility in women was diagnosed by placing garlic in the vagina for one night. If the next day the woman can taste garlic in her mouth or smell it , she is considered fertile. This is based upon the connection between the genital parts and interior of the body. Such connection would be lost in a case of obstructed

fallopian tubes. In modern medicine, phenolphthalein injected in the uterus would appear in urine based similar principle. This is also known to gynecologists as Speck's test.

Of particular interest is that physicians of ancient Egypt understood that infertility/sterility could occur in both male and female partners. They also recognized the role of male ejaculate in pregnancy. These are additional signs of the advances in the practice and concepts of ancient Egyptian medicine as they pertain to women's health and fertility covered by this paper

An ecological definition of heath:
As a philosophical foundation for a comprehensive approach to public health in a new era

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In an invitational paper by the US President's Committee on Health Education, El-Ahraf and Hanson first presented a new definition of health known as the "Ecological Definition of Health". There was no shortage of definitions of health including that of the World Health Organization. And, there was, and still is, no scarcity of controversy on how to define health and why. Yet, the circumstances leading to an excellent definition of health at the conclusion of WWII have yielded to a new era characterized by a number of powerful ideas and forces requiring new responses or at least enhanced responses.

These included not only the greater recognition of the impact of the environment on health but, also the integral reciprocity of personal and environmental health akin to that of the relationship of a fetus and its womb where one cannot enjoy its own health without the health of the other. Additionally, a new health ideology spoke of heath promotion and not merely prevention and treatment of disease. Above all there has been the realization that the natural setting for conducting public health programs is that of human ecology. These, among other factors, have been behind the thinking of El-Ahraf and Hanson in the process of their development of a philosophical foundation for health in general and public health in particular. Such philosophical foundation that has been successfully tested in an urban human ecology setting, is the ecological definition of health discussed in this paper with its four dimensions of well being and its introduction of the issue of eco-pathology.

Rather than abrasively criticizing other definitions, we have given them thoughtful consideration and much appreciation for their authors' work that allowed us to build on past achievements particularly those made by the World Health Organization.

Differential effects of alprazolam & clonazepam on immune system and blood vessels in non-stressed and stressed adult male albino rats

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Benzodiazepines are one of the most commonly used groups of anxiolytic & anticonvulsant drugs in the world. For nearly all the current benzodiazepines, their toxic effects on different organs have not been fully described. The aim of the current work was to study the immunologic & vascular changes induced by short term chronic administration of alprazolam and clonazepam in stressed and unstressed adult male albino rats. Twenty four adult male albino rats were divided into 6 groups **(**I): (a) Negative control, (b): Positive control rats received distilled water, (II): Stressed rats, (III): Received daily oral dose of clonazepam (0.5mg/kg), (IV): Stressed rats received daily oral dose of clonazepam (0.5mg/kg),(V): Received daily oral dose of alprazolam (0.3mg/kg). (VI): Stressed rats received daily oral dose of alprazolam (0.3mg/kg). At the end of the 4th week the anti SRBC titer & the level of IL-2 were assessed, the thymus glands, lymph nodes, spleens and abdominal aortae were submitted to histopathological examination. It was found that alprazolam induced significant decrease in anti-SRBCs titer and IL-2 with severe depletion of white pulp splenic, thymal & nodal lymphocytes, extensive hemorrhage with congestion & eosinophilic vasculitis of all tested organs in comparison to clonazepam treated rats. It was concluded that immune system and blood vessels can be adversely affected by short term chronic administration of alprazolam to a greater extent than clonazepam, and these effects are aggravated by stress.

Keywords:*Benzodiazepines, Alprazolam, Clonazepam, Immune system, SRBCS & IL2.*

A New Ethical Dilemma For Hemodialysis Patients: Exposure To Diethyl Hexyl Phthalate

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Patients undergoing hemodialysis are exposed to medical devices containing diethylhexyl phthalate (DEHP). There is an ongoing discussion about the risks of DEHP exposure for the general population as well as for specific subgroups in various medical settings. Due to the widespread use of DEHP in polyvinyl chloride (PVC) medical devices and in life, this work is an essential step in such a way that the exposure amount of DEHP would be precisely determined in patients undergoing regular hemodialysis in order to evaluate its significance as an integral part of the assessment of the risk of DEHP to human liver. Thirty subjects were involved in this work. Ten of them were healthy volunteers (n=10) as the control group and twenty patients with end stage renal disease (ESRD) on regular hemodialysis (n=20), where they were sub-divided into patients undergoing dialysis for a duration of 6 months to 5 years (n=10) and the other group for a duration of 6 years to 10 years (n=10). Two samples were taken from all subjects, one prior to and one after the dialysis session, for measuring the serum levels of: alanine transaminase, aspartate transaminase and albumin, and the estimation of DEHP serum level. Significant increases ($p<0.001$) were detected in DEHP mean serum levels between postdialysis samples and control samples on one side, and predialysis samples on the other side. There is a continuous exposure to DEHP in hemodialysis patients, where they would be considered of the target vulnerable groups continuously exposed to DEHP in high amounts through renal dialysis. The shift towards safer PVC-free or DEHP-free alternatives should be evaluated and encouraged.

KEYWORDS: Bioethics, non-maleficence, DEHP, serum, HPLC, hemodialysis

A Study On Eruption Of Third Molar Of Libyan Individual And Its Comparison With The Egyptian

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The aim of the present investigation was to reconstruct the chronological age bases on third molar eruption and to compare between Libyan and Egyptian. A total of 200 cases both Libyan (100) and Egyptian (100) were assembled from the school and university of Libyan origin between 15 and 25 years of age. A strong agreement was found between eruptions time of third molar and chronological age. The statistical analysis revealed that earliest third molar eruption was in the female at 16 year which has completed at 24 years in both the sexes. It also erupted earlier in lower jaw in both the sexes. The spacesfor third molar **also appear earliest** in female at 15 year of age with early preponderance in lower jaw. This study has shown no differences in eruption between Libyan and Egyptian.
Key Words: Dental age estimation, third molar, chronological age, Forensic odontology.

Agent-Host-Environment Model Of Blunt Abdominal Trauma In Children: Five Year Experience & Preventive Inferences

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Background: Trauma is the leading cause of death in childhood. Among children aged from 1 to 14 year old, approximately 50% of mortality is related to accidents including trauma**.** Abdominal injuries account for approximately 10% of the trauma deaths in childhood. Injuries are often believed to be caused by unpredictable accidents (that affect an individual because of bad luck). In fact, many of these injuries are not accidents at all.

They are the result of a predictable set of risk factors. There are several models that help practitioners study and design preventive interventions against blunt injuries and deaths. Agent-host-environment model has long been used to describe the epidemiology of communicable diseases and can be adapted for understanding childhood injuries. The agent of injury is the form of energy that damages body tissues. The host or injured child can be described by age, sex, race, developmental level and behavior characteristics. Finally, the environment includes the physical situation in which injuries occur as well as the psycho-social environment.

The aim of this work: is to evaluate Zagazig University experience of blunt abdominal trauma in children in light of epidemiological model.

Patients and Methods: This prospective study has included 590 consecutive patients aged from 1 to 14 years, who were admitted to the Emergency Unit of General Surgery Department, Zagazig University Hospital, after exposure to blunt abdominal trauma; in the period from January 2006 to January 2010.

Results: The most vulnerable group was boys (68%) of 5-9 years old. The commonest mechanism of trauma was motor vehicle accidents (MVA), (55.8%). The commonest victims were pedestrians (67%). Blunt abdominal injuries occurred more in urban areas, (65%), and among children living in low socioeconomic states, (67%). 72.5% of cases had multisystem injuries.

Conclusion and recommendations

- Host-agent-environment model can be employed to study causative and contributing factors to trauma. It can be utilized to structure preventive interventions against blunt abdominal trauma in children
- According to our study, the most vulnerable children are boys, 5-9 years old, living in urban areas and low socio economic status.
- Multidisciplinary/Multicenteric study for Child Injury Model in Egypt is recommended as a prerequisite for National Child Injury Prevention Strategy.

Bacteriological aspects of raw milk in Zagazig city, Egypt

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One hundred random samples of raw milk were collected from different localities in Zagazig city, Egypt to determine their bacteriological aspects.

Zagazig Humanities, Education, Engineering

Hydrology Of Nile Delta In Ancient Times

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Zagazig University. Egypt

The Egyptian civilization was almost a civilization based on hydrology, episodes of growth in Egypt was made possible by improving irrigation organization which has impact on expansion and intensification of agriculture, increasing both labour force and national productivity and probably the population of Egypt.

Agriculture until New Kingdom was based on flood-basin irrigation that lacked the lift technology needed to cultivate the entire flood plain and guarantee a minimum of food during poor flood years.

Egypt especially the Nile Delta suffered several times from catastrophic Nile failtures that equally catastrophic high floods, such negative readjustment in Nile hydrology took place several times over the Ancient history of Egypt.

The Nile Delta was mostly under ecological stress as a result of Nile behavior, the ancient Egyptian records revealed many changes of the hydrology of Nile Delta specially in the number and distribution of Nile branches and its directions.

The changes of the Delta's hydrology can be explained by many factors such as: Environmental perturbation, poor or destructively high Nile Floods, insecurity due to political instability, political discontinuity, internal social evolution, demographic decline, poor leadership, foreign rule or invasion, politico economic collapse.

Such changes of the Delta's hydrology caused: the disappearance of the eastern branches of the Nile, desertification of the eastern part of the Delta, agriculture and vegetation deterioration, soil erosion, economic decline.

Zagazig University excavation at Tell Basta in 1998Discover a head of statue for King Amenhotep IV (Akhenaton) spotlight on Amarna art in ancient Egypt

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The remains of Tell Basta, east of modern Zagazig city continued to reserve some monuments which record the history of Per-Bast (Bubastis) and show the interesting of the Ancient Egyptian kings with the city.

Zagazig University excavation in 1998 discovered a head of statue for king Amenhotep the fourth at the temple of Bubastis. The head represents the face, chin, nose and lips of the king, it is missing some parts of lips and left side. It is made of light brown sandstone, max. length is 28c.m, max. width is 18c.m, max. thickness is 10 c.m.

It is close similar to an other face exhibited in Cairo Museum JE. 59289, and turns back to Amarna Period. It's height is 17c.m, made of Plaster as a mask of Portrait, and may be as a model of this kind of religious art familiar at the period of king Akhenaton.

This shows that the monument of Bubastis was made according to the model of the Egyptian Museum, and represent the character of Amarna period art, specially in the eyes, chin and lips and other face details. These couple are similar to other models exhibited at Berlin Museum.

The Monument of Zagazig University open a very important page in the history of Bubastis, and how far was the interest of Ancient Egyptian kings with the city and its Great Temple.

A Whole New Vision Going Forward With Education Reform K-12 In Egypt

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Most Egyptians agree that the workplace is changing and that the skills necessary for success in the 21st century college and workplace are different from those needed in the 20th century. *A Whole New Vision to prepare the new generation to* move from the Information Age to the Conceptual Age. The future belongs to a very different kind of person with a very different type of mind. Engineers and programmers will have to master different aptitudes, relying more on creativity than competence, more on tacit knowledge than technical manuals, and more on fashioning the big picture than sweating out the details.

The international workplace is changing as a result of three factors (1) Asia (2) abundance, (3) automation. To become competitive at the international level our work force will need new skills. in the Conceptual Age, a *whole* new vision which requires a major paradigm shift in our thinking process, one that incorporates both right brain and left brain directed aptitudes where the left brain is sequential, logical, and analytical, the right brain is nonlinear, intuitive, and holistic. Defining skills of the previous era are necessary, but no longer sufficient. Instead the "right brain qualities of inventiveness, empathy, joyfulness, and meaning increasingly will determine who flourishes and who flounders.

Education process should focus on creating skills rather than injecting information and create walking libraries. Current Egyptian education process is a true indicator that today's students are not prepared to compete internationally. Education and business leaders have also begun to question whether current assessments focus too much on measuring students' ability to recall discrete facts at the cost of not adequately measuring students' ability to think critically and solve problems. As a result, a widening gap has formed between the knowledge and skills students are acquiring in schools and the knowledge and skills needed to succeed in the increasingly global, technology infused 21st century workplace. As a first step toward bridging this gap, every student should be technologically literate by the time the student finishes the eighth grade, regardless of the student's gender, family income, or disability. Ministry of Education should establish an eighth-grade technology literacy requirement, the requirement is not a full statement of knowledge and skills students need nor does it include a mechanism for ensuring accountability. Ministry should develop policy and frameworks describing the need to improve children's higher-level technology-related skills and attempting to define those skills.

While many different terms have been used to describe what students need, such as digital literacy, technological literacy, and 21st century skills, education leaders, should come together around a new common definition of what students need to know, Information and Communication Technology Literacy. Literacy reflects the need for students to develop learning skills that enable them to think critically, analyze information, communicate, collaborate, and

problem-solve, and the essential role that technology plays in realizing these learning skills in today's knowledge-based society.

Enhancement Of Self -Purification Process Of Drains In Egypt

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The drainage water in Egypt is pumped or flows by gravity back to either the Nile River and/or the Northern Lakes or the sea. Bilbeas drain is one of the polluted streams in Egypt. The concentration of organic matter (COD) ranged between 187 – 261 mg/L, and at the same time the concentration of the dissolved oxygen (DO) ranged between 0 - 0.5 mg/L; which finally affects the stream self-purification capacity. Several methods were proposed and tested to enhance the drain self-purification capacity (submerged biofilter SB, Self rotating discs and cascade aeration). Three separate studies were carried out during (2006-2008) by using pilot streams to examine the efficiency of each method. Results of the first study showed that, using submerged biofilters in the organic polluted streams increases the COD removal efficiency from 1.4 -18.4 % (in case of natural removal) to 14.0 – 58.0% when using plastic media as SB. The performance of SB was affected by the organic and hydraulic loadings, type of media used and its specifications. Results of the second study showed that, using self-RBC discs in the drain's water increases the COD removal efficiency from 3.8% - 16.5% (in case of natural removal) to 34.1% - 65.32% when using the self-RBC discs, and the performance of self-RBC was affected by the composition of the self-RBC model, number of used stages and distance between stages. The third study was carried out at El-Gabal El Asfar WWTP using different cascade heights and flow rates; briefly, the 75 cm cascade height caused DO to increase from 30-46 %, the 60 cm cascade height caused DO to increase from 12-37 %, and the 45 cm cascade height caused DO to increase from 30-46 % highest levels of DO in wastewater followed by the 60 cm then the 45 cm cascade height.

Key words - *biofilters, biological media, cascade aeration, COD removal, drain, RBC, self-purification, water pollution*

Fully Balanced Digitally Programmable Switched-MOFET FIR Filter for Low-Voltage Applications

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In this paper we describe a 20MHz sample rate switched-Mosfet Finite Impulse Response (FIR) filter, suitable for equalizer architectures. The basic cell of the FIR filter is the fully balanced switched-Mosfet (SM) sample-and-hold (S/H) circuit proposed in [1], appropriate for low voltage operation. The programmability of the FIR filter structure is achieved via MOSFET-Only Current Dividers (MOCD) [2]. The FIR filter has been designed and implemented using the AMS 0.8mm CMOS process. The total power consumption of the designed chip is 60mW at ±1.5V power supply.

Analysis and Design of RF CMOS MixerFor Low Voltage Application

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This paper presents a CMOS low-voltage down conversion mixer with 20-MHz local oscillator signal input and 60-MHz RF signal input. Simulation results show that the conversion gain is 0 dB with a 1.8-V supply voltage. The mixer's linearity analyses, layout technique to maximize RF performance and minimize noise performance are presented in this paper

CMOS Two-Stage Amplifier Design Methodology forAutomatic Analog Circuit Design

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This paper presents a methodology for optimizing andautomating the design of a CMOS two-stage operational amplifier asa basic analog building block. The design methodology offers anefficient, reliable, and fast way to implement high-performanceanalog integrated circuits without need for the deep knowledge of anexperienced analog-circuit designer. A key feature of the proposedmethodology is a tradeoff between normalized total Current ExcessFactor (CEF) and Area Excess Factor (AEF) of the circuit topology.
The proposed design approach is based on the ACM model, which isdedicated for analog circuit design. This work is based on 0.13 µmIBMCMOS process parameters.

Behavior Of FRP-Reinforced Concrete Beams Under Combined And Torsion Flexure

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Concrete structures reinforced with normal steel bars has questionable durability in aggressive environments.They suffer corrosion, cracking, spalling and deterioration that require expensive repair and continuous maintenance. Moreover, due to its high demand, the row steel abundance is decreasing year after year. Therefore, researchers have been looking for a corrosion resistant alternative to replace steel reinforcing bars with comparable competence. Reinforcing bars manufactured from composite materials made of resin impregnated fibers (FRP) promise a reasonable substitute to conventional steel bars in concrete structures in aggressive environments. The behavior of concrete beam reinforced with FRP bars under torsion is not will understood, and researches in the subject are needed to help designers and structural code officials. The objectives of this study are: (1)Study the behavior of FRP-reinforced concrete beams under combined torsion and flexure. (2)Highlight the behavior weaknesses, and devising techniques to improve it. (3)Provide recommendations and guidelines for design engineers and code officials. The current paper introduces an analytical as will as experimental investigation of the torsional behavior of FRP-reinforced concrete beams. Eighteen test beams reinforced by FRP and normal steel bars were constructed and tested under combined torsion and flexure. Results indicate that longitudinal FRP bars are as effective as steel in resisting torsion, but FRP stirrups are inferior to steel stirrups.

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Behavior Of Reinforced RCA Beams

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Coarse recycled aggregates recovered from demolished concrete has been used for non-structural purposes such as pavement construction. Recycled aggregate concrete (RAC) is produced by crushing concrete waste into specified sizes. The recycling process is currently gaining momentum as it helps getting rid of unwanted solid wastes facing limited areas of disposal. Moreover it saves natural aggregate resources. The use of RAC concrete for structural purposes is very limited due to lack of knowledge about its behavior under loads, as well as its long term performance. Research on structural concrete made with RCA is needed in order to help code officials to reach recommendations regarding it use for structural reinforced concrete. The objective of the current research is to investigate the flexural behavior of RCA reinforced concrete beams. Fourteen beam specimens were constructed and tested under four point load test on the MTS machine of the concrete lab at Zagazig University, Egypt. Measurements and the load – deflection curves drawn by the MTS machine are presented, along with comments and observations on the shown behavior trends. Among the many conclusions, it found that RAC beams have similar strength as natural aggregate concrete beams. Also, RAC beams, higher flexural stiffness and lower flexural ductility.

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A Novel Analog MOS Four Quadrant Multiplier

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In this paper, a novel MOS four-quadrant analog multiplier circuit is presented. The analog multiplier is implemented by using four MOS transistors only. The fully differential balanced operation achieves good noise minimization ability. The proposed multiplier circuit has been designed and simulated using a standard 0.13 mm CMOS technology. The multiplier is suitable for a wide range of analog signal processing applications.

Key words: analog multiplier, RF mixer

Plenary Talks

E-learning in engineering education – general challenges and the Egyptian experience

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E-learning or web-based instruction is being rapidly embraced by most universities across the world as such media of instruction are economical, convenient and disbursable to a larger audience. Various disciplines of engineering are receiving diverse models based on e-learning, where current technologies are redefining the concept of distance learning and the delivery of engineering education content. In Egypt, the use of e-learning in higher education including engineering disciplines is becoming more attractive in view of declining costs of computers and increasing access to the Internet. This is coupled by the aspiration to find –through the use of e-learning- a practical solution to public university over-crowding.

This paper discusses the challenges, which e-learning-based engineering education is generally facing. These challenges are then reviewed from an Egyptian perspective, where particular local impediments are highlighted with their impact on both continuing education of graduate engineers as well as degree-seeking engineering students. The requirements of an e-learning system as applied to engineering education are outlined, with special emphasis on the issue of laboratories. Accreditation and certification of e-learning-based engineering education are also covered and the impact of adopting such mode of education in Egypt is discussed.

Finally, some Egyptian efforts –probably exemplifying most developing countries- are described and assessed.

Potential Use Of Adoptive Transfer Of Immune Cells In Anti-Cancer Therapy

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Effective anti-tumor immunity requires the generation and persistence of functional tumor-specific effector and memory T cells with high avidity. Among the critical factors that often control this response is the activation and differentiation state of the relevant effector T-cells. One approach to induce an optimal T cell response is by priming the antigen-reactive T cells *in vivo* with the proper antigens along with a potent adjuvant. Several forms of antigens and adjuvant systems have been used. The use of peptide-based vaccination has been found to be a promising means of antigen delivery. A simple form of peptide-based vaccination depends on the injection of the peptide itself along with an adjuvant. Given the central role of dendritic cells (DCs) in shaping the quantity and quality of the anti-tumor immunity, DC-based peptide delivery is a potential approach since it acts as a delivery vehicle as well as a potent adjuvant. DCs in the tumor bearing host, however, are often deficient in activation and antigen presentation. Therefore, generation of autologous DCs from bone marrow or peripheral blood of a tumor-bearing host, activating them in vitro, and infusing them back to the same host could be an effective means to deliver a single or multiple tumor peptides *in vivo*. We have recently reported the use of DCs as a means for peptide delivery, and how this approach can be more efficacious toward cancer immunotherapy.

Bedsides DC-based immunotherapy as an effective immunotherapeutic approach, adoptive transfer of autologous tumor-reactive T cells holds promise as a cancer immunotherapy. In this approach, T cells are harvested from a tumor bearing host, expanded *in vitro* and infused back to the same host. Conditioning of the recipient host with a lymphodepletion regimen of chemotherapy or radiotherapy before adoptive T cell transfer has been shown to substantially improve survival and anti-tumor responses of the transferred cells. These effects are further enhanced when the adoptive T cell transfer is followed by vaccination with tumor antigens in combination with a potent immune adjuvant. Although significant progress has been made towards an understanding of the reasons underlying the beneficial effects of lymphodepletion to T cell adoptive therapy, the precise mechanisms remain poorly understood. Recent studies, including ours, would indicate a more central role for antigen presenting cells; in particular DCs. Unraveling the exact role of these important cells in mediation of the beneficial effects of lymphodepletion could provide novel pathways towards the rational design of more effective anti-cancer immunotherapy. We have reported recently how the frequency, phenotype, and functions of DCs are altered during the lymphopenic and recovery phases post induction of lymphodepletion, and how they impact the anti-tumor responses of adoptively transferred T cells. We do believe that combination of the adoptive transfer of tumor antigen-loaded DCs and in vitro activated tumor-reactive T cells can significantly induce effective anti-tumor responses, resulting in eradication of established tumor. Having the establishment of the use of bone marrow transplantation in anti-cancer treatment in several cancer clinics and the ongoing stem

cell-based therapy in several clinical trials in Egypt, it is highly possible to apply the technology of the dual transfer of both antigen-loaded DCs and in vitro activated T cells in Egypt. This would open new avenue for successful treatment of cancer patients independent of chemotherapy.

رؤية مستقبلية لتطوير التعليم الهندسى والبحث العلمى بالجامعات المصرية

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من الثابت أن التقدم العلمى والتكنولوجى الذى يشهده العالم اليوم يملى على الأمم واجبات كثيرة ويدفعها إلى المبادرة واستخدام أقصى ما يمكن أن يتاح من الأساليب التكنولوجية المعاصرة وبالتالى تطوير أساليب الدراسة والبحث العلمى بحيث تتخلص من النظم التعليمية النمطية التقليدية من أجل مواكبة التطور ومسايرة روح العصر، عصر الانفجار المعرفى والتقدم التكنولوجى. ولقد أصبح من الواضح أن العلم والتكنولوجيا يشكلان عصب تقدم الأمم وازدهارها وأنهما الوسيلة الوحيدة إلى دفع عجلة التقدم وخدمة أغراض التنمية فى البلاد فضلاً عن أنه لابد منهما معاً لحل المشكلات التى تعترض سبل التقدم والنهوض.

وما من شك أن تطوير الدراسة بالجامعات والبحوث العلمية هى قضية محورية تتعلق بالإنسان وهو العنصر الحاكم فى قضايا التنمية الاقتصادية والاجتماعية والسياسية، فالأنسان مبتدأ عملية التنمية بمفهومها الشامل ومنتهاها وهو المحور والوسيلة والغاية معاً لاستمرار تطور الحياة على هذه الأرض. حيث أن الجامعات لها دور هام فى إيجاد جيل مثقف على دراية بالأساليب والتكنولوجيات الحديثة التى تواجه مجتمعاتنا حالياً بالإضافة إلى التحديات التكنولوجية التى ستظهر فى المستقبل المنظور. وما لم تتفاعل هذه المجتمعات مع تلك التحديات فستظهر فجوة تكنولوجية كبيرة سيكون لها آثارها السلبية على تقدم ورفاهية مجتمعاتنا.

وفى هذه الدراسة نهيب أن يتم التعليم الهندسى باستخدام التقنيات الحديثة والتقدم التكنولوجى السريع مع التخطيط للتنمية البشرية والاقتصادية والاجتماعية وذلك بتوجيه الموارد والطاقات نحو الاستثمار الأفضل فى إعداد الإنسان المصرى المعاصر لمواجهة التحديات الحضارية ولتلبية حاجات قطاعات الإنتاج والخدمات وإيجاد خطة استراتيجية لخريجى الجامعات والبحث العلمى بها من أجل التوصل إلى أفضل الوسائل لربط خطط الدراسة والبحوث بخطط التنمية سواء على المدى القريب أو البعيد وذلك باستثمار الطاقات البشرية والموارد الطبيعية.

مما تقدم تتضح الحاجة إلى تطوير المقررات الدراسية والبحوث تطوراً جذرياً يشمل الأهداف والمناهج والخطط الدراسية وحتى طرق التدريس وبرامج التدريب العملية وذلك لمسايرة أحدث التطورات العلمية والتكنولوجية، ومن جهة أخرى علينا أن نحسم توجهنا العام نحو التغيير باختيار نوع التعليم العالى والبحث العلمى التى نريدها وبالتالى علينا أن نبدأ بنقد ما هو قائم نقداً موضوعياً من ناحية الإنفاق والمناهج وأسلوب البحث والدراسة ومنهجية الدراسة ومستوى الأستاذ والباحث مع إيجاد البدائل بخطوات بناءه مدروسة بدقة وعناية.

فى هذه الدراسة نقدم المحاور الرئيسية لتقدم وتطوير الدراسة الهندسية بالجامعات والبحث العلمى ومدى علاقة ذلك بالتنمية والمجتمع فإن أى بحث علمى أو تكنولوجى إنما يصوغه المجتمع الذى يولد فيه. ولا يفوتنا أن نبين أن التنمية ما هى إلا عملية شمولية مجتمعة تهدف إلى تحولات فى البناء الاقتصادى والاجتماعى والثقافى والسياسى. إن وسيلة التنمية هى امتلاك القدرة العلمية والتكنولوجية. ونتناول أيضاً معوقات التعليم العالى بالجامعات وعوامل التخلف التى تعوق عدم الإسراع فى إيجاد البيئة العلمية التكنولوجية المناسبة، كما نلقى الضوء على طرق نقل المعرفة والتكنولوجيا لتطوير القابليات الوطنية على الإبداع وإتمام عملية التطوير والتطويع لهذه التكنولوجيا بما يناسب مجتمعنا ومعايير اختيار هذه التكنولوجيات بما يسهل تطبيقها مع أهمية التقييم والتنبؤ التكنولوجى فى مجال الصناعة والتركيز على المجال العسكرى كما نرى فى البحرية والطيران البريطانى وخلافهم مثلاً والصناعات الاستراتيجية الأخرى، ولما كان التعليم العالى هو القلب النابض لنظام التعليم والذى بدونه يتوقف التعليم عن العطاء وعن الحياة والتجدد ومع ثورة المعلومات والاتصالات لابد من إيجاد نظام دراسة وبحث علمى متفتح متطور بالعقلية والمعرفة والوسائل اللازمة لفهم ومواكبة عالم يسير أجهزته وآلته على سطح المريخ. ولو لم ينشأ لدينا تعليم عالى متطور وبحث علمى حديث مواكب لكل ما هو جديد لأصبحنا نعلم فى جامعاتنا علوماً بائدة ونظريات بالية ومعارف أثرية. فأى مجتمع يتطلع إلى مسايرة القرن القادم لابد له من دراسات متطورة وليس أدل على ذلك من إحصائيات منظمة اليونسكو التى تكشف عن أن قدر الإنفاق على التعليم العالى والبحث العلمى وعدد العاملين بمجالاته المختلفة هما مؤشر صادق لمدى تقدم هذه الدولة.

ولا ينكر أحد أن الدراسة بالجامعات فى مصر تعانى حالة من الهزال العام بسبب فقر الإمكانيات وضعف الجهود المبذولة ونقص المال ويجب أن نؤكد هنا أن مستوى الباحثين المصريين وقدراتهم ليست جزءاً من المشكلة فمصر والحمد لله مليئة بالكفاءات العلمية ولا تخلو جامعة فى أى بقعة من بقاع العالم من عدد من الباحثين والأساتذة المصريين الذين هم محل احترام المجتمع الدولى لتفوقهم العلمى المرموق وفى كل المحافل الدولية يشاد بما يتوافر لمصر من كفاءات علمية مقتدرة تتطلب فقط التنظيم والتعبئة لاختراق العوائق التى تحول دون انطلاقاتهم العلمية والتكنولوجية وما أن تنفك القيود عن الباحث المصرى حتى ينطلق ويبدع ويبتكر فى أى مكان يذهب إليه ويصبح من الأوائل والبارزين والأمثلة على ذلك كثيرة.

وتتركز محاور التقدم فى الجامعات والدراسة الجامعية على محاور عدة نوجز منها ما يلى:

<u>(أولاً) الإمكانيات المادية، وتشمل:</u>

1. **الأجهزة العلمية الحديثة والمتقدمة والمتطورة وعمل Database لها حتى لا تتبدد الأموال ويتكرر الشراء بقصد تحقيق العائد الأكبر من الأموال المرصودة لشراء الأجهزة والمعدات، وحتى يمكن تحقيق أقصى استفادة ممكنة من هذه المعدات لأكبر عدد من الباحثين وذلك بتطبيق نظام الأقسام العلمية لخدمة الجامعة.**
2. **إنشاء المكتبات المتكاملة للدوريات رفيعة المستوى وبالشكل الذى يحقق للباحث إمكانيات عالية فى الحصول على المراجع والأبحاث والرسائل وإمكانية الكشف عن أى موضوع علمى يراه مطلوباً، وأيضاً كتب ومراجع متوافرة ليجد بها الطلاب مرادهم.**
3. **إمكانيات المعامل البحثية والمواد اللازمة لإجراء التجارب من حيوانات تجارب وكيماويات وخلافه.**
4. **زيادة الإمكانات المادية للباحثين والأساتذة وخلق مناخ علمى متميز بالجامعات ومعاهد البحوث وتطبيق قاعدة الثواب والعقاب للعلماء والباحثين وعدم لجوء الأساتذة للبحث عن مصادر مادية أخرى بل التمركز والاستقرار فى معاملهم وحجرات علمهم.**
5. **ترشيد مجانية التعليم سواء فى المرحلة الجامعية أو الدراسات العليا وذلك ينعكس على جودة التعليم والعنصر المادى ليكون حصيلة يمكن منها التمويل الذاتى، وفى صورة إجمالية فإن جودة التعليم العلمى ترتبط ارتباطاً مباشراً بتوافر عاملين أساسيين أولهما القدرة على التمويل وثانيهما القدرة على إدارة هذا التمويل لصالح منهج جيد وأستاذ جيد وإدارة جيدة. وفى ظنى أنه يمكن تدبير الأمر وأنه لا معوق أمامنا فالتمويل ممكن من خلال الجهود الذاتية لأفراد هذه الأمة حينما يهبون لنجدة الجامعة والبحوث العلمية لو علموا بالجدية والاهتمام ورأوا أن هذه الأبحاث وتعليم أبنائهم تنعكس على حل المشكلات ورفع لواء هذه الأمة وتقليل الاستيراد وزيادة الصادرات وأحسوا بالتحسن العام وإنعكاس الأبحاث التطبيقية مباشرة على متطلبات الناس.**

<u>(ثانياً) القوى البشرية:</u>

وهذا البند يشكل العمود الفقرى لنهضة الدراسة بالجامعات ولو صح التعبير لقلنا أنه العنصر الحاكم للأمور ويشمل:

1. **تأهيل الخريج علمياً وهذا يرتبط بسياسة التعليم كلها فمدخلات التعليم الجامعى من التعليم الثانوى ومدخلات الدراسات العليا من خريجى الجامعة.**
2. **تأهيل كبار الباحثين والعلماء وأعضاء هيئة التدريس وذلك عن طريق عقد الدورات والندوات لهم فى المجالات الحديثة وإنشاء مركز تأهيل مهنى ينمى إمكانيات الباحث فى مجال أبحاثه.**
3. **رفع مستوى الباحث والعلماء من خلال المشاركة فى المحافل الدولية والمؤتمرات العلمية العالمية والتى تعطى للباحث فرصة لتوجيه أبحاثه لتساير التطورات العالمية كما وأنه فرصة للباحث لتسويق أبحاثه والحصول على تمويل لمشروعاته محلياً وعالمياً، وفى هذه المؤتمرات يمكن الاستفادة من العلماء المصريين فى الخارج للمشاركة ودعوة أصدقائهم وزملائهم فى الخارج لكى يحضروا إلى مصر ويساهموا بفكرهم وعلمهم والمشاركة فى مدارسنا العلمية بما يعود بالنفع والتقدم.**

4 - عمل دوريات مصرية مختلفة رفيعة المستوى فى جميع المجالات العلمية والتخصصات حتى يستطيع الباحثين المصريين نشر أبحاثهم فيما يتعلق بالمجتمع المصرى على أن تكون على أعلى مستوى من التحكيم بحافز مادى مجزى ومحاولة تسجيل هذه الدوريات على المستوى العالمى بما يعطى لها السمعة والصيت بين الدوريات العالمية وبما ينشر فكرنا العلمى ويفتح لنا آفاق النقد البناء على المستوى العالمى وتطوير هذه الدراسات والأبحاث.

5 - الاستفادة من شيوخ الأساتذة والعلماء الحائزين على جوائز الدولة التقديرية والتشجيعية والجوائز العالمية الأخرى ووضع كيان لهم حتى يمكن الاستفادة العظمى من هؤلاء الرواد والذين يتوقون إلى تأدية ما يطلب منهم من خدمات دون مقابل من أجل رفعة هذا الوطن.

6 - عمل حوافز مادية ومعنوية مجزية للأساتذة المبدعين بما يحفز الهمم ويقود إلى أبحاث تطبيقية متميزة.

7 - أن تكون بحوث الترقيات ذات أصالة علمية وتسهم فى تطوير العلم فى هذا المجال وأن يكون لها انعكاس على مشكلة صناعية أو مجتمعية قائمة وأن نضمن جودة التدريس والتوصيل.

8 - ربط الأبحاث فى الترقى بمدة يقضيها الباحث فى الصناعة ولتكن لمدة ثلاثة شهور سنوياً ولا تقل عن مرتين مثلاً طيلة فترة الترقى من درجة إلى أخرى وهذا سوف ينعكس على اختياره للأبحاث.

9 - الابتعاد عن الأبحاث النظرية والأكاديمية قدر الإمكان وضرورة الاعتماد والتركيز على الأبحاث التطبيقية والصناعية.

(ثالثاً) خلق جو علمى وبحثى للجامعات:

1 - تشكيل فرق ومجموعات فى كل تخصص علمى فى المجالات المختلفة حتى تستطيع عزف سيمفونية كاملة بواسطة فرقة أوركسترا بمختلف آلاتها ويتولاها قواد مبدعين – أى فرق علمية وبحثية لا أبحاث فردية فلابد من وجود سمة الفريق فى كل الأعمال وعدم الفردية فى كل شئ.

2 - ربط البحث العلمى بالصناعة وإنشاء مراكز بحثية بكل مصنع وتمويل هذه البحوث من خلال هذه الصناعات مثل ما هو موجود فى الصين واليابان وأمريكا وبريطانيا وخلافها.

3 - محاولة الاستفادة من العلماء المصريين الموجودين بالخارج واستضافتهم للتدريس بالجامعات المصرية وربط المدارس البحثية فى مصر بالمدارس البحثية لهؤلاء العلماء بالخارج وحتى نخفف من عبء الميزانية يجب أن يكون ذلك بمساعدات من هؤلاء العلماء لبلدهم مصر وليس من ميزانية الدولة كما يحدث فى جميع دول العالم والاستفادة بما يمكن أن يتبرعوا به من أجهزة أو معدات أو حتى كتب تكون معفية من الجمارك، وبهذا لا نرهق ميزانيات الدولة والتعليم العالى.

4 - إعطاء الحافز المادى المجزى لمن يعكف دراساته ووقته على التدريس والبحث العلمى ومحاسبته وتقييم أعمال الباحثين سنوياً وذلك بعمل Annual Report لكل جامعة يقدم ما توصلت إليه الجامعة ويبين درجة مشاركة الأساتذة فى الأبحاث التى نشرها فى دوريات ومحافل دولية ذات سمعة طيبة، ومقدار ما سجل من براءات اختراع ومساهمات فى الصناعة ومدى ما حصل عليه باحثوه من مشاريع ذات تمويل خارجى وخلافه.

5 - تكريم النابهين والمتفوقين من الطلاب والأساتذة والعلماء الموجودين فى مصر فى حالة حصول أى منهم على جائزة علمية عالمية أو المشاركة ببحوثه ذات المستوى الرفيع فى المحافل الدولية بالاشتراك مع وسائل الإعلام المختلفة لإعلاء كلمته وإظهار جهده ونبوغه.

6 - سرعة اتخاذ القرارات وتقليل الخطوات البيروقراطية الجامعية والتى تتحكم فى حركة النشاط الجامعى وضرورة إزاحة عوامل الهدر فى الجهد والزمن فمن المعروف أن رأس مال الباحث هو وقته، وذلك لن يتم إلا من اللامركزية وحرية الأقسام العلمية المباشرة ومحاسبتهم بعد ذلك وتطبيق مبدأ الثواب والعقاب تطبيقاً علمياً صارماً بالشد على يد المحسن والضرب على يد المسيء.

(رابعاً) تخطيط نظام التعليم العالى والبحث العلمى:

ويكون ذلك بعمل خطتين:

1 - خطة عاجلة المدى لإصلاح الخلل القائم الآن لتؤتى ثماره سريعاً وتدفع عجلة التقدم والتطوير.
2 - خطة طويلة المدى

- **عمل استراتيجية لكل جامعة فى خدمة البيئة المحيطة بها حتى لا تكون الجامعات كلها نسخة واحدة وعدم التكرار بالمنطقة الواحدة بل التنوع.**
- **كل ذلك بعمل قاعدة بيانات على مستوى الدولة كلها لما يدور بالجامعات المختلفة للأبحاث القائمة والتى انتهت بالمراكز البحثية المختلفة حتى لا تتكرر الأبحاث ويكون هناك هدر فى المال والوقت.**
- **إرسال البعثات والمهمات العلمية فى المجالات الحديثة والغير موجودة فى المراكز البحثية المحلية وضرورة إرسال هذه البعثات إلى الأماكن المشهورة وذات السمعة فى هذا الصدد، وعلى العكس تشجيع عمل الماجستير والدكتوراه بالوطن وعمل الحوافز للدارسين على ذلك.**
- **بناء معامل مركزية بكل جامعة يوضع بها الأجهزة الثمينة والعامة التى يستفيد منها أكثر من باحث فى كليات الجامعة المختلفة وبذلك نوفر أموالاً كثيرة.**
- **وضع التكامل بين المراكز البحثية المختلفة بحيث يمكن إنتاج بحث علمى متكامل وحل مشكلة صناعية متكاملة.**
- **نتيجة لهذه البحوث النوعية سوف تتميز مراكز ببحوث نوعية معينة بل ويكون لها السبق والتقدم فى هذا المجال وبعمق كبير بدلاً من التشتت بين الموضوعات المختلفة وبسطحية بسيطة لا ترقى إلى مستوى البحث العلمى الرفيع.**
- **تنقية المناهج الدراسية من التكرار والحشو ومسايرة الأنظمة العالمية ويا حبذا لو تم تطوير هذه المناهج كل ثلاثة سنوات بما يتلائم مع روح العصر وظروف المجتمع.**
- **تكريس الدبلومات العليا للموضوعات الحيوية المناسبة لظروف المجتمع الحالية والاتجاه بها نحو التطبيقات والبعد عن الأساسيات النمطية والنظرية مما يرضى متطلبات سوق العمل والمجتمع وأن تتميز بالديناميكية والتغيير المستمر وليس الجمود فى الشكل والمضمون وأن يتم تقييمها وتطويرها كل ثلاث سنوات أيضاً لتقييم التجربة وإصلاح الخطأ.**
- **ربط الخطة فى التعليم العالى والدراسات العليا والبحوث بجمعيات رجال الأعمال واستثمار أموالهم فيما يعود على الاقتصاد القومى بالنفع وتشجيع التمويل الذاتى للبحوث.**
- **تشجيع الجمعيات العلمية المتخصصة فى مصر على المشاركة فى تحديث وتطوير الدراسة والبحوث وتوجيه أنشطتها فى هذا الصدد.**
- **الاهتمام والتركيز على موضوعات الهندسة العكسية فى المشاريع والصناعة كبدايات مفيدة.**
- **تخطيط نظام المعيدين والدارسين حسب حاجة الأقسام والخطة المستقبلية المدروسة.**

- **<u>مقترحات لتطوير التعليم الهندسى بالجامعات</u>**

1 - زيادة الميزانية والدعم الحكومى للجامعات وفتح جامعات حكومية جديدة ذات صبغة معينة لأن تدنى الإنفاق على العملية التعليمية يفسدها ويقود إلى تدنى توعية الخريج.
2 - تقليل الكثافة الطلابية بالجامعات الحكومية وبذلك نرقى بمستوى التعليم. الحقيقة أننا نريد جيلاً متعلماً وليس كماً هائلاً من أنصاف المتعلمين فإذا أمكن تأهيل الطالب الجامعى إلى كيف يتعلم مهارة التعليم والسماح له بالتفكير الشخصى وحب المجال الذى يعمل فيه ويبدع فيه ويؤدى دوره.
3 - تحسين حالة المعامل بالجامعات ودعم البحث العلمى وذلك بربط الأبحاث العلمية بمتطلبات المجتمع والنهضة التكنولوجية العالمية بما يساير التطور والتنمية المجتمعية المطلوبة.
4 - إنشاء معامل مركزية بالجامعات تتجمع فيها الأجهزة ذات الطبيعة الواحدة من جميع الأقسام المتشابهة فى الكليات المختلفة وبهذا تقل المصروفات ويمكن إنشاء معامل عالمية إذا استخدمنا هذه الطريقة.

5 - العمل فى الجامعة بنظام الأقسام العلمية فمثلاً قسم الكيمياء يخدم كلية العلوم والهندسة وحتى الزراعة ومعامل البيولوجى ممكن أن تخدم كليات الطب والعلوم والأسنان والصيدلة والزراعة. ومعامل التحكم فى كلية الهندسة تخدم أقسام الكهرباء والميكانيكا والحاسوب وحتى الكيمياء وخلافه.

6 - تمويل الأبحاث التى تشمل أكبر عدد من الباحثين أى التى تشمل عدد كبير من التخصصات ويا حبذا من الكليات المختلفة Multidiscipline.

7 - جعل التخصصات بالأقسام عريضه وذلك حتى نساير متطلبات سوق العمل فمثلاً أقسام الكهرباء والإلكترونيات والتحكم والحاسوب تكون كلها فى قسم واحد ولكن يكون التشعيب من السنة الثالثة كما كان فى السابق على أن يكون التخصص الدقيق فى درجات الدبلومات الهندسية أو الماجستيرات والدراسات العليا.

8 - تحسين وضع المكتبات العلمية وتزويدها بالكتب اللازمة مثل Text Book وزيادة فرصة الإنترنت للطلاب ووسائل التصوير والاسطوانات المدمجة CD وتطويراتها لتسهيل نقل المعلومات.

9 - تحسين وضع المدخلات إلى الجامعة من الثانوية العامة حيث تردى مستوى الطلاب بشكل ملحوظ عن سابقه رغم ما نسمع عنه من مجاميع عالية للثانوية العامة وضرورة إعادة النظر فى معادلة الشهادات وخاصة الدبلومة الأمريكية، وقد يتطلب الأمر عمل Aptitude Tests للقطاعات المختلفة من التعليم.

10 - تحسين وضع عضو هيئة التدريس من الناحية المادية والاجتماعية والصحية والمعنوية حتى يعيش فى جو من الصفاء الذهنى والتنافسى فى البحث العلمى ونشر الأبحاث كما هو الحال فى جميع جامعات العالم خاصة وأننا نعلم أن الشعب المصرى تزداد همته بالتنافس الشريف. وضرورة إبعاد فكر الأساتذة المصريين عن التنافس لنيل مركز زائل فى القيادات الجامعية التى يزهد فيها الأساتذة بالخارج بل يعتبرون أن المدة التى يقضوها فى عمادة الكلية أو رئاسة الجامعة سوف تؤثر بالسلب على مسيرة أبحاثه والمنح التى تحصل عليها مجموعته العلمية من الأبحاث التى تخدم الصناعة. حقيقة الأمر أن عضو هيئة التدريس مثقل بالعديد من الهموم .. هموم تعليم أولاده ودروسهم الخصوصية .. هموم الصحة .. هموم المظهر الطيب والصورة المتكاملة فى المجتمع بالإضافة إلى هموم الترقية لصغار أعضاء هيئة التدريس، حتى أننا نرى فى هذه الأيام أعداداً كثيرة منهم يصل إلى المعاش ولم يترقى فى سلم الأستاذية. الحقيقة أصبحت الجامعة طاردة على جميع المستويات وليست جاذبة كما كنا فى السابق والآن الكثير من المعيدين والباحثين الشبان يتركون الجامعة إلى سوق العمل ومجال الصناعة لكى يحصل على مآربه وبغيته بأسرع وقت ممكن بحجة أن الجامعة طريقها طويل وبريقها أصبح قليل.

11 - حتى البحث العلمى الآن يعانى أشد المعاناة من شح الموارد وعدم وجود أجهزة أو معدات علمية حديثة ودقيقة تعين الباحث على إجراء أبحاثه بدقة وبأجهزة علمية معايرة لصورة قياسية ولهذا نرى أن معظم الأبحاث الآن هى فى المحاكاة والنمذجة واستخدام الحاسوب Modeling and Simulation فى الحصول على النتائج التى لا تعنى أى شئ عملى أو تطبيقى أو واقعى ومن هذا المنطلق فلا يمكن نشر هذه الأبحاث فى الدوريات العالمية ذات السمعة والصيت العالى وكلنا يعرف ما لهذا النشر من أهمية فى سمعة كل جامعة لذا يلزم تدعيم البحث العلمى بصورة واقعية.

12 - لابد أن يكون لكل قسم علمى رسالة Mission ويكون للكلية نفسها رؤية ورسالة Vision and Mission وعليه تصمم المناهج لكى ترضى جميع الأطراف ألا وهى سوق العمل – الخريج – رب العمل Stakeholder وأن تكون هذه المناهج من النوع الذى يركز على التفكير العقلانى والإبداع العلمى Intellectual and Initiative وأن يحتوى المقرر على العديد من التجارب العملية الحديثة على أن تراعى التكاملية فيما بينها Integrity.

13 - الاهتمام أو الإلزام بالسيمينارات على مستوى الأقسام العلمية وحبذا أن تشمل المناهج مما يساهم فى إعداد الطلاب والخريج للقدرة فى التعبير عن نفسه.

14 - الاهتمام بالتدريب الصيفى والتأهيل الهندسى وذلك من خلال المتابعة والممارسة للتدريب بالمصانع والهيئات الهندسية بصورة علمية ومدروسة ويتم التقييم بدقة ولا يسمح التخرج إلا إذا أدى الطالب تدريباً معيناً.

15 - يتم تصميم المقررات بحيث يكون عدد الساعات الأسبوعية متناسباً مع إمكانيات وقدرات الطلاب وأن يكون بينها المتسع لكى يمارس الطلاب الأنشطة الثقافية والاجتماعية اللازمة لصقل موهبة الطلاب وإبداعاتهم حتى نوعية الاختبارات والامتحانات يجب أن تصمم لهذا الغرض.

16 - إعادة النظر فى موضوع الجامعات الأهلية والمعاهد العليا الخاصة من حيث نوعية الدراسة وما يدور داخلها فعلياً وليس بما تقدم من مقررات مكتوبة العبرة بما يتم تنفيذه ومستوى من يقوم بالتدريس فى هذه الجامعات .. ونوعية الخريجين وأنها لم تأخذ الترخيص بالعمل لحل مشكلة أعداد الثانوية العامة والتكالب على التعليم

العالى والشهادات وحسب. وظنى أن دور هيئات الاعتماد ومن يمنح الترخيص هنا يحتاج إلى نوعية معينة ومقاييس ومعايير دقيقة. فالتجربة حتى الآن لم تثبت كفاءة هذه الجامعات .. ولا يمكن أن ننفى تدخل رأس المال فى سياسة هذه الجامعات خاصة أنها جامعات ذات نفع مادى لصاحب هذه الجامعة فقط. وأرجو ألا تخدعنا التجربة فى أمريكا والتى تحتوى على حوالى 4000 جامعة ليس منها ما يمكن الاعتراف به واحترامه إلا ما يقرب من 150 جامعة فقط. وهذا النظام غير معمول به فى بريطانيا أو كندا أو ألمانيا أو حتى الدول الإسكندنافية أو حتى الدول السوفيتية أو دول البلقان.

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Service systems are effective forms of personnel, technology and techniques, organizations, and shared data that add value for customers and service providers and other officials. They represent a large part of the global economy and become a center for the mechanism of action of the business sector and governments, families and individuals. And increasing use of the term "innovation" with respect to systems and services, which was limited in its application in the past to the modern technology.

There are several trends to the individual knowledge and expertise associated with systems of services, but they are usually unrelated and fragmented. This is no longer reflects the reality of an interconnected and overlapping economic activities that, for example, believes that manufacturers of engineering products follow-oriented business models for services and health care providers.

Thus the resulting information services as an area distinct. And looks forward them to the discovery of the basic logic of complex service systems and find a common language and common frameworks for service innovation. So, we are in favor of the portal interface for scientific research and education in the field of services.

Services industry leads the progress of modern societies, and an analytical view of the economies of the giant in the world, we find that the service industry in various incarnations and applications become a more than 70% of the size of those economies, and in Egypt represent the services industry, approximately 50% of the size of the economy has led the telecommunications sector and information technology services to occupy the position the largest and accounts for approximately half the size of the Egyptian economy.

As a result of this growth has become necessary to the preparation of cadres has a different set of skills, have the ability to work and innovation in services and from this standpoint, the Supreme Council of Universities (SCU) signed a memorandum of understanding with the Organization of information technology Development (ITIDA) and IBM

As a result of cooperation between SCU, IBM and ITIDA we start a pilot program implemented in selected Universities at the Faculties of Engineering, Information Technology and Business about 980 students joined the program, and received the introductory course of Service Science Management and Engineering. We are preparing now phase 2 of the program to rich our goal and distribute the culture of service industries.