The Best Theses Awards Cairo University

Academic Years 2008- 2009

Issue III

May 2010

Best Theses Awards

The strategy of the university aims to enhance its capabilities and potentialities through developing its human and financial resources, as well as to improve the academic abilities of its staff members and their assistants, in order to prepare them for the age of science and technological revolution. In this respect, the university has adopted unconventional methods to develop the system of academic research in order to meet the needs of society and research and to encourage its scholars and researchers. Among these means of encouragement are:

- Allocating an award for the best thesis (MSc – PhD) in each faculty or institute.
- Allocating an award for academic publishing in international periodicals, according to certain criteria.

- Financing academic proposals in different academic specializations within the framework of international research conferences held annually by the university.

This publication comprises the best theses (MScs – PhDs) for the academic year 2008-2009. The university will continue to periodically support its distinguished researchers, on both financial and moral levels.

Prof. Hussein Khaled

Vice - President for Post-graduate Studies and Research
Cairo University

Prof. Hossam Kamel

President
Cairo University

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Statistics

Faculty in Year 2009	Ph. D.	M. Sc.
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Agriculture	**2**	**2**
Veterinary Medicine	**1**	**1**
Institute of Statistical Studies and Research	**-**	**1**
Medical Sciences Sector	**10**	**11**
Medicine	**3**	**3**
Oral and Dental Medicine	**2**	**2**
Pharmacy	**1**	**1**
National Cancer Institute	**2**	**2**
Physiotherapy	**1**	**2**
Nursing	**1**	**1**
Engineering Sciences Sector	**3**	**4**
Engineering	**2**	**2**
Computers and Information	**1**	**1**
Urban Planning	**-**	**1**
Inter and Multi Disciplinary & Future Sciences Sector	**2**	**2**
African Studies Institute	**1**	**1**
National Laser Institute	**1**	**1**
Social Sciences Sector	**1**	**1**
Economics and Political Science	**1**	**1**
Humanity Educational Sector	**3**	**6**
Arts	**2**	**2**

Faculty in Year 2009	Ph. D.	M. Sc.
Archaeology	**1**	**1**
Dar El-Ulum	**1**	**1**
Educational Studies Institute	**1**	**1**
Kindergarten Education	**1**	**1**
Specific Education	**1**	**1**
Total	24	30

	2006-2007		2007-2008	
Faculty	**M. Sc.**	**Ph. D.**	**M. Sc.**	**Ph.D.**
Basic Sciences Sector	4	4	6	7
Medical Sciences Sector	5	7	10	12
Engineering Sciences Sector	4	3	4	2
Inter and Multi Disciplinary & Future Sciences Sector	3	2	4	1
Social Sciences Sector	3	4	2	4
Humanity Educational Sector	7	8	7	9
Total	26	28	33	35

Basic Science Sector

- Science
- Agriculture
- Veterinary Medicine
- Institute of Statistical Studies and Research

Name: Maher F. El-Kady

Faculty of Science

Dept.: Chemistry

Degree: M.Sc.

Title of Thesis: Electrochemical Sensor Modified Electrode Based on Hybrid Technology between Conducting Polymers and Nanostructured Materials

Supervisors:

Dr. Nada Farouk Atta

Abstract:

Conducting polymers were electrochemically prepared from commercially available monomers, namely, 3-methylthiophene, N-methylpyrrole and furan on platinum surface by electrochemical techniques. Pd or Pt was electrochemically deposited over these conducting polymer surfaces and the resulting hybrid material was used as an electrochemical sensor for the detection of some catecholamine neurotransmitters, some dihydroxy and polyhydroxy compounds of interest as well as a drug. Electrochemical investigation of the resulting films was achieved using cyclic voltammetry, chronocoulometry and electrochemical impedance spectroscopy. Several factors affecting the electrocatalytic activity of the hybrid material were studied. Some are related to the polymer such as film thickness, method of its formation and undoping the polymer film before loading metal particles, other factors are related to the metal particles such as type of metal deposited, method of its deposition, its amount and deposition voltage. The apparent diffusion coefficients of the compounds of study were calculated at the different electrodes and in some electrolytes. Different parameters relevant to sensors were considered such as the reproducibility, sensitivity, selectivity, stability of the redox signals as well as the detection limits. Sensory applications included the differential pulse voltammetric analysis of binary, tertiary and quaternary mixtures of the studied compounds. EDAX analysis was employed to confirm the loading of metal particles. SEM was used to study the surface morphology of the different films.

Keywords:
Conducting polymers; Nanoparticles; Sensor; Catecholamine neurotransmitters; Ascorbic acid; Acetaminophen; Diffusion coefficients; SEM; EDAX.

Name: Hassan M. H. AL-Maridi

Faculty of Science

Dept.: Physics

Degree: M.Sc.

Title of Thesis: Scattering of halo nuclei

Supervisors:

Dr. Mounir Youssef Mohamed, Dr. Ehab Hanafy Ismail and Dr. Mohamed Yehia Hussein

Abstract:

This thesis is concerned with the study of elastic scattering of one and two neutron halo nuclei. Two reactions have been considered, elastic scattering of ^{11}Li nucleus on a proton target and ^{11}Be+^{12}C elastic scattering taking into consideration break up effects.

^{11}Li+P elastic scattering data at three energies 62, 68.4 and 75 MeV/Nucleon, were analyzed with density-dependent M3Y and KH effective nucleon- nucleon (NN) interaction in the framework of the single folding model for the optical potential. The optical potentials calculated in the microscopic form using few parameters give good agreement with the data. The KH effective interaction successfully describes ^{11}Li+P elastic scattering as the popular M3Y interaction. The obtained results of the reaction cross-section were in good agreement with previous calculations.

^{11}Be+ ^{12}C elastic scattering data at 38.4 MeV/Nucleon has been analyzed using optical model. The optical potential is calculated in the framework of the double folding model using M3Y effective nucleon- nucleon interaction. The breakup effect is studied by introducing a complex dynamical polarization potential (DPP), which is added to the "bare" potential. The microscopic DPP that has been constructed from the derivative of the folding potential describes the breakup effect well.

Keywords:

Elastic scattering; Folding model; Halo nuclei.

Name: Rabea Mohammed M. Kershi

Faculty of Science

Dept.: Physics

Degree: Ph.D.

Title of Thesis: Effect of Rare Earth Ions Dilution on the Magnetic and Transport Properties of Hexagonal Ferrite

Supervisors:

Dr. Mohammed Ali Ahmed, Dr. Mona Kamal Ouf and Dr. Nagwa Okasha,

Abstract:

The investigated W-type hexagonal ferrites samples were prepared by the standard ceramic method and divided into three groups with different compositions as follow:

•A first group with the formula $BaCoZn_{1-x}Mg_xFe_{16}O_{27}$; $0 \leq x \leq 0.6$.

•A second group with formula $Ba_{1-y}La_yZn_{0.5}Mg_{0.5}CoFe_{16}O_{27}$; $0 \leq y \leq 0.07$

•A third group with formula $Ba_{0.95}R_{0.05}Mg_{0.5}Zn_{0.5}CoFe_{16}O_{27}$ where R= Y, Er, Ho, Sm, Nd, Gd, and Ce ions**.**

X-ray diffraction (XRD) patterns of the first group indicate that a W-type hexagonal ferrite single-phase structure. The lattice parameters were found to have average values of a = 5.94 oA and c = 32.84 oA.

The Curie temperature TC and the effective magnetic moment were obtained. The sample at x = 0.5 is considered as a critical concentration, where TC increases with increasing Mg content and give a hump at x = 0.5 after which TC decreases again. Also, the effective magnetic moment decreases with the Mg content up to x = 0.5, after that μeff. increases again. The samples are semiconductor like materials, where ac conductivity increases with increasing temperature. The results show that conduction mechanism and the peak value of dielectric constant depend on the Mg content (x).

X-ray diffraction (XRD) patterns of the second group showed that; for the samples with $y \leq 0.01$, the W-type hexagonal ferrite single phase is obtained.

For the samples with y > 0.01, the W-type phase in addition to LaFeO3 phase as a secondary phase are observed.

The IR spectra of $Ba_{1-y}La_yZn_{0.5}Mg_{0.5}CoFe_{16}O_{27}$ series have four characteristic transmission bands. υ_1 (577 – 586 cm^{-1}), υ_2 (429 – 434 cm^{-1}) and υ_4 (294 – 296 cm^{-1}) are assigned to tetrahedral, octahedral and pyramidal groups due to the vibration of Fe^{3+}–O^{2-} bond respectively and υ_3 (343 – 366 cm^{-1}) is due to the divalent–oxygen ion bond. The molar magnetic susceptibility measurements show the increase of T_C and $\mu_{eff.}$ with increasing La content (y) up to 0.05 after which T_C and $\mu_{eff.}$ decrease due to variation of Fe^{3+}–O distance and a valence change of Fe^{3+} to Fe^{2+} when replaced Ba^{2+} ions by La^{3+} ions. The values of dc electrical conductivity σ_{dc} at room temperature ranged between4.85×10^{-6} and 3.82×10^{-6} ($\Omega^{-1}.cm^{-1}$) and the values of the calculated activation energies E_{dc} ranged between 0.215 and 0.137 eV. The highest values of dielectric constant, electrical conductivity and Curie temperature are found at y = 0.05.

The XRD patterns of the $Ba_{0.95}R_{0.5}Mg_{0.5}Zn_{0.5}CoFe_{16}O_{27}$ at room temperature show the presence of $RFeO_3$ secondary phase with intensity increases with increasing ionic radius of the rare earth (RE) ions. The IR transmission spectra of the third group show four vibration frequency bands; υ_1 (575 – 582), υ_2 (429 – 434), υ_4 (268 – 288) are assigned to the vibration bands of the Fe^{3+}-O^{2-} bonds existing in tetrahedral, octahedral and pyramidal sites respectively and the υ_3 (338 – 367) is assigned to the vibration due to the divalent–oxygen ions bond vibration on octahedral sites.

The results of the magnetic susceptibility (χ_M) show that both the Curie temperature (T_C) and effective magnetic moments have highest value at Sm ion (r =1.04 °A). The dielectric constant έ, the dielectric loss factor ε″ and ac conductivity σ of the investigating samples have highest values in the case of Sm^{3+}.

The values of the calculated activation energy varied between (0.335 and 0.553 eV) and (0.106 and 0.232 eV), above and below the transition temperature respectively. The charge carrier's concentration n increases with slightly increasing RE ionic radius to ionic radius of Sm^{3+} (≈ 1.04 °A), after that n becomes nearly constant.

Keywords:

W hexa ferrite; Magnetic properties; Dielectric properties; Rare earth ions.

Name: Mohamad Ziad D. Fatayerji

Faculty of Science

Dept.: Chemistry

Degree: Ph.D.

Title of Thesis: Electrochemical and Corrosion Behavior of The Magnesium Alloy AZ91D in Aqueous Solutions

Supervisors:

Dr. Fakiha Mohamed El-Tayeb

Abstract:

Magnesium and its alloys have a high strength-to-weight ratio. The interest in their applications is continuously increasing where weight reduction is of great concern. Mg-Al alloys such as AZ91D, show large promise for the automotive industry. The present work explores systematically the electrochemical and corrosion behavior of AZ91D alloy in different aqueous solutions including phosphates ($Na3PO_4$, $Na2HPO_4$, NaH_2PO_4 and H_3PO_4), halides (NaF, NaCl, NaBr and Nal) and sulphate (Na_2SO_4). The electrochemical techniques used are open circuit potential (OCP), polarization and impedance (EIS) measurements. Also, surface analysis was performed using SEM, EDX and XRD techniques.

The potentiodynamic results allowed evaluating the corrosion parameters such as the corrosion potential, corrosion current density and breakdown potential, while the impedance data were simulated to pure electronic models that can enable the calculations of numerical values corresponding to the physical and/or chemical characteristics of the electrochemical system under investigation. The study extends our understanding about the various parameters that influence the passivation and corrosion traits of this important alloy in the above media.

Keywords:

Corrosion; Passivation; AZ91D magnesium alloy; Impedance; Polarization; Open-circuit potential; SEM; EDX; XRD; AAS; pH; Phosphates; Halides; Sulphate; Tafel plots; Equivalent circuit model.

Name: Ahmed Emam Abdel Mobdy

Faculty of Agriculture

Dept.: Dairy Science

Degree: M.Sc.

Title of Thesis: Conjugated Linoleic Acid (CLA) Isomers as Healthy Components in Milk and Milk Products

Supervisors:

Dr. Mohamed Najib Hassan, Dr. Mounir Mahmoud Ibrahim Al-Abd and Dr. Gamal Sayed Ali El-Barouti

Abstract:

Conjugated linoleic acids (CLA isomers) are fatty acids found in milk and dairy products. These fatty acids may have potential biological properties interesting for human health. It is well established that milk and milk products are one of the major dietary sources of CLA but no work has been conducted until now to assess the CLA content levels in different Egyptian milks and their dairy products. In the present study a survey of Egyptian milks and their fatty dairy products namely cream, butter and ghee was done. During the annual four seasons. Milk samples were collected from dairy farm of agriculture college Cairo University and were manufactured into fatty dairy products at the same time milk samples and some fatty dairy products were collected from Giza market. Fat % and CLA content were determined in both milks and dairy products. The study was conducted also to evaluate the influences of CLA isomers as antidiabetic agent in streprozotacin diabetic male adult albino rats. The obtained results revealed that there was no difference in fat content of cream from different animals, also in butter and ghee. The high polar capillary gas chromatography analysis detected six CLA isomers namely cis_9-$trans_{11}$, $trans_{10}$-cis_{12}, cis_9-cis_{11}, cis_{10}-cis_{12}, $trans_9$-$trans_{11}$, $trans_{10}$-$trans_{12}$. The six CLA isomers were detected only in goats milk, while five only were detected in sheep's milk and four CLA isomers only were detected in both buffaloes' and cows' milk. CLA isomers content was increased from winter to summer and then decreased during autumn season. CLA isomer c_9t_{11} recorded the highest isomer value market butter contained lower CLA isomers value when compared with farm butter, which indicate butter fat

adulteration with vegetable oil. Concerning the biological evaluation of CLA isomers, the obtained results revealed that CLA isomers resulted in a significant reduction of blood glucose level in the diabetic rat. Ingestion of CLA isomers reduced the injurious effect of diabetes, which improved the transaminases activity and protein fraction content.

CLA isomers treatment did not significantly change plasma insulin levels but significantly increased the adiponectin levels of diabetic rats.

CLA isomers as antidiabetic agent can be arranged in the following descending order as follow: glitazone > CLA mixture> CLA $trans_{10} – cis_{12}$> CLA $cis_9 – trans_{11}$.

Keywords:
CLA; Dairy fatty products; Streptozotacin; Glitazone; Adiponectin

Name: Shimaa Bahgat Ali Sayed

Faculty of Agriculture

Dept.: Biochemistry

Degree: M.Sc.

Title of Thesis: Biochemical studies on tissue culture application for production of faba bean

Supervisors:

Dr. Omar Abd Al-Aziz Ahmed Osman and Dr. Hany Abd Al-Aziz El-Shimi

Abstract:

A reliable regeneration system for faba bean has been difficult to establish and therefore, the genetic improvement of *Vicia faba* L. was delayed. This study describes a method of somatic embryo induction in callus of *V. faba*.

Three Egyptian faba bean cultivars 'Giza 2', 'Giza 40' and '24 Hyto' were used. Callus was induced from epicotyls and shoot tips cultured on MS or Gamborg medium supplemented with 3% sucrose and 0.025% (w/v) for each of ascorbic and citric acid, 0.8% agar and different concentrations of 10 mg /l BAP, 0.5 mg/l of each NAA and 2,4-D (M1) and 1mg /l BAP and 0.5 mg/l NAA (M2) .

The media with BAP, NAA and 2,4-D (M1) were optimal for embryogenic callus induction. Somatic embryos developed after transfer of the callus to 1/2 B5 medium with no plant growth regulators. There were various stages of somatic embryo development present including globular, heart-shaped, torpedo stages and cotyledonary stage. Embryos developed into plantlets and plants were regenerated.

RAPD analyses were performed to investigate the genetic stability of the regenerated plants obtained via somatic embryogenesis from different treatments and different explants. The cultivar Giza 2 exhibited more genetic stability than cultivar 24 Hyto. The cultivar Giza 2 showed the highest percentage of similarity coefficient (90.9 %), while cv. 24 Hyto showed the lowest percentage of similarity coefficient (78 %) between the control and the developed plantlets from somatic embryos.

In this study SDS-PAGE was performed to investigate the genetic variations among faba bean cultivars, results showed few variations among faba bean cultivars which may reflect the different responses of each cultivar to in vitro regeneration.

Keywords:
Faba bean; *In vitro* regeneration system; Somatic embryogenesis; RAPD analyses; SDS-PAGE.

Name: Zeinab Mohamed Abd El-Naby

Faculty of Agriculture

Dept.: Agronomy

Degree: Ph.D.

Title of Thesis: Inbreeding, Selection, Fertility and Flower Structure in the Egyptian clover (*Trifolium alexandrinum*)

Supervisors:

Dr. Mazhar Mohamed Fawzy Abdalla , Dr. Adel Abd El-Moniem Hoballah and Dr. Ahmed Monged Soliman

Abstract:

These studies were conducted during four growing seasons (2003/4 to 2006/7) at the Faculty of Agriculture, Cairo University (FACU) and the Agriculture Research Center (ARC). The two multi-cut Egyptian clover (berseem) Miskawi varieties S 79 and Ahaly were used. Selection was practiced in both varieties in different inbreeding generations for self-fertility (SF) expressed as percentage of seed set per 100 florets.

Selection for SF resulted improvement of MT in different MT generations (Io: I7) also improvement in OP and showed good vegetative growth and yield. Fertility and selection was assumed that the species is self–compatible but cross-fertilized and needs tripping to self- seed set. Improvement occurred in seed set, flowering (characters and structure), more pollen grains and better composition of florets extraction will encourage insect visitation and improve seed set whether selfed or outcrossed. RAPD profiles showed absence of fragment that could be used as finger print selfed plants.

Crosses between high MT and crosses between intermediate MT were close to parents in fertility.

Keywords:

Berseem clover; Trifolinm alexandrinum; Fertility; Tripping; Compatibility; Selection; Sterility; Incompatibility.

Name: Emad Ahmed Ahmed Shalaby

Faculty of Agriculture

Dept.: Biochemistry

Degree: Ph.D.

Title of Thesis: Biochemical and Biotechnological Studies on Some Marine Algae

Supervisors:

Dr. Gamal Sayed Ali El-Baroty, Dr. Magdy Abd El-Aleim Shallan, Dr. Mohamed Youssef Moussa and Dr. Mohamed Ahmed Ali

Abstract:

The aim of the current work was to evaluate the potentialities of 5 macroalgae species collected from Mediterranean Sea as a new source of bioactive substances. Thus, the chemical and biochemical investigation of these algae were carried out and isolation and characterization of an antioxidant principle was performed. It is also aimed to cultivation of there algae under the laboratory conditions.

The effect of these extracts on tumor cells (EACC) was studied and the results showed that, the most algal extracts exhibited high anticancer activity and it's gave 100% dead cells. The DPPH scavenging activity of the Asparagopsis sp, Sargassum-1 and 2 was found to be over than positive control silymarin (68.8%). Thus, antioxidant activity of the most extracts from Asparagopsis sp had the greatest antioxidant activity and these activities were reached to 98.5% in ethyl acetate extracts. The IC50 of DPPH radical scavenging of ethyl acetate Asparagopsis sp was 7.5 µg/g. A further antioxidant bioguided fraction of the hexane extract of Asparagopsis sp on silica gel TLC led to 3 active substances (each has one spot). This was firstly evaluated for DPPH and ABTS radical scavenging activity then analyzed by HPLC, LC-MS and GC/MS. And identification by 1HNMR and FTIR and compared with published data. The results indicated that those compounds showed a markedly higher ability to scavenge ABTS radicals than DPPH.

Disk zone technique was used to evaluate the effect of algal successive extracts on antimicrobial activities against bacteria, fungi and algae and the

obtained results showed that all Asparagopsis sp extracts showed activity against Yarsinia and Listeria sp bacteria but non-polar extracts from Enteromorpha sp showed the highest anti-algal activity against Microcystis sp. Morever, the extracts from algal species showed high anti-fungal activity against Fusarium oxysporium mor than Fusarium moniliforme. The effects of successive extracts on H5N1 virus were determined using plaque reduction assay and the results showed that pet.ether extract from the most algae showed high antiviral activity >99.9% and the mode of action of this extract was determined in this study.

The results indicated that the algal species had high ability to remediation the heavy metals after short times (0.5hr) by 100%. The other results indicated that the powdered algae using as organic fertilizer improved the vegetative character as well as structural characteristics of Vicia faba plants subsequently yield character in comparison with untreated and chemically fertilized plants.

Keywords:

Marine macroalgae; Chemical composition; Biological activities; Bioactive compounds.

Name: Gina M. M. Abdel Hamid

Faculty of Veterinary Medicine

Dept.: Microbiology

Degree: M.Sc.

Title of Thesis: Using molecular techniques for detection, characterization and typing of *Escherichia coli* isolated from water sources

Supervisors: Dr. Jakeen Kamal Abdel-Haleem EI-Jakee and Dr. Ehab Ibrahim Moussa

Abstract:

Failure to understand the importance of water quality exposes animals and human to the risk of diseases. Microbial contamination reminds a critical risk factor in drinking water in many parts of the world. Fifty water samples were investigated to detect the occurrence of coliforms. All *E. coli* isolates were serotyped and screened for virulence genes (*hly, fliCh7*, *stx1, stx2* and *eae* genes). The results showed that 90 % of the collected water samples were positive for coliforms.

The highest coliforms detection rate was recorded among water samples collected from canals followed by drinking underground water, River Nile, agricultural drain, untreated sewage water, treated sewage water and well samples respectively. The predominant *E. coli* serotype isolated from the examined water samples was O128:K67 followed by O157: K-, O111:K58 and O55:K59 respectively. *E. coli* strains isolated from water sources were characterized by PCR and showed that 8 isolates carried *stx1* gene (verocytotoxin 1) and 4 possessed *stx2* gene (verocytotoxin 2). Intimin *(eae)*, chromosomal flagellin type H7 of *E. coli* (*fliCh7)* and enterohemolysin *(hly),* virulence genes were detected in 21.4, 21.4 and 28.6 % of the isolates respectively. It could be concluded that water may be an important reservoir for *E. coli* infection and the risks of contracting enterotoxigenic (ETEC) and or enterohemorrhagic *E. coli* (EHEC) infections from contaminated water have been clearly established.

Keywords:

E. coli; Water; O157; Virulence genes; PCR.

Name: Marwa Ibrahim A. Ahmed

Faculty of Veterinary Medicine

Dept.: Biochemistry and Chemistry of Nutrition

Degree: Ph.D.

Title of Thesis: Characterization of Mitochondrial Large Conductance Calcium Activated Potassium Channel (Mito BKCa) Gene In Cardiomyocytes

Supervisors: Dr. Hassan Abdel Halim Hassan Amer, Dr. Mohamad Ali Warda, Dr. Eman M. Gouda and Dr. Jin Han

Abstract:

Calcium activated potassium channels are a family of potassium selective ion channels activated in response to the increase in intracellular calcium concentration and voltage.

The current study was carried out to isolate the mito BKCa-α gene in mouse cardiomyocytes, characterize this gene and determine its role in cardioprotection. RACE PCR was used to determine the cDNA of this gene. Mito BKCa cDNA was cloned and chanracterized.

Keywords:

Calcium activated potassium channel; Mitochondrial gene; RACE PCR; Characterization; Cardioprotection.

Name: Mohamed Reda S. Mohamed

Institute of Statistical Studies and Research

Dept.: Applied Statistics

Degree: M.Sc.

Title of Thesis: Some Properties of Random Coefficients Regression Estimators

Supervisors:

Dr. Amany Mousa Mohamed and Dr. Ahmed Hassen Youssof

Abstract:

An important assumption of the General Linear Model (GLM) is that the vector of regression coefficients is fixed vector, so the model will be called "Fixed Model". But when we assumed that the regression coefficients are random variables, so the model will be called "Random Coefficient Regression (RCR) Model" examined by Swamy in several publications (Swamy 1970, 1971, 1973, and 1974). And if the regression coefficients in model contain both random and fixed coefficients, so the model will be called "Mixed Random Coefficient Regression (Mixed RCR) model".

In this thesis, we studied the properties of RCR and Mixed RCR models. And also we studied the Swamy's estimator (RCR estimator) for RCR model in panel data, and we proposed the alternative estimators for RCR model, such as unit by unit OLS, Mean Group (MG), Classical Pooling (CP), and Stein-rule estimators.

In this thesis, we used the Monte Carlo simulation to study the behavior of the Swamy's estimator in small, medium and large samples in panel data.

The parameters were set at several values, to allow the study of estimators under several situations, to know when the RCR model will be properly and improperly.

This simulation provides some insight into how well the RCR estimator performs in different samples size. Also, we used the Mote Carlo simulation again for comparison between the behavior of RCR, CP, and MG estimators in three models (RCR, fixed, and Mixed RCR models). And we used the R language to conduct the Monte Carlo simulation study.

Engineering Sector

- **Engineering**
- **Urban Planning**
- **Computers and Information**

Name: Ayman S. Aboud

Faculty of Engineering

Dept.: Electrical Power and Machines

Degree: M.Sc.

Title of Thesis: Probabilistically Based Risk of Exposure to Power Line Magnetic Fields

Supervisors:

Dr. Hussien Ibrahim Anees and Mahmoud Magdy Bahgat

Abstract:

Guidelines of exposure to power line magnetic fields are usually designed on a deterministic basis, making their validity and adequacy somewhat questionable. Based on an overall probabilistic approach, a method for risk assessment of exposure to overhead power line magnetic fields is presented.

There are advantages to the probabilistic approach over conventional methods of developing the risk of exposure to overhead power line magnetic fields. In this article, a model is constructed to predict the randomness in power line magnetic fields, taking into account-in addition to line loading-the random nature of the parameters contributing to the temperature of the power line conductors, which in turn, influences the resulting conductor sag.

Those parameters include line loading, ambient temperature, solar irradiation, and wind speed.

The correlative nature of those parameters is also considered.

The model accounts for the likelihood of the effects of those various operational and weather parameters (or variables), thus avoiding inflated risk estimates produced by compounding single-point worst-case values of the input variables and, consequently, leads to an improved risk assessment.

Keywords:

Power lines; Magnetic fields; Risk assessment; Probabilistic modeling.

Name: Mohamed Khairy Farahat

Faculty of Engineering

Dept.: Electrical Power and Machines

Degree: M.Sc.

Title of Thesis: Fuzzy Predictive control: Analysis, Design and Implementation

Supervisors:

Dr. Abdul Latif El-Shafei and Dr. Hassan Rashad Emara

Abstract:

This dissertation focuses on fuzzy predictive control of constrained nonlinear systems. It includes four main points. First, the use of fuzzy logic in predictive control is studied. The dissertation shows the advantages of using fuzzy predictive control, and presents a comparative study on a number of fuzzy predictive control algorithms. Also, a simulation study is presented to show the advantages and disadvantages of these algorithms.

The second point is the stability study of fuzzy predictive control. An overview of the existing stability methods in fuzzy predictive control is presented. Then, a novel stability method is proposed to overcome some disadvantages in the existing stability methods. The proposed method guarantees exponential stability of the closed loop system, can be used for unstable open loop systems, doesn't need an auxiliary controller to stabilize the system, and can stabilize the system for any feasible selection of the prediction and control horizons. Furthermore, an algorithm is proposed to achieve exponential stability with' a fast decay rate.

Simulation studies are given to confirm the advantages of the proposed method over the existing stability methods, and study some issues related to the proposed design.

The third point is an extension of the proposed stability method to observer based feedback case. A fuzzy observer is used to estimate the system states. Two cases are studied in this dissertation. In the first case, the premise variables depend only on the measured outputs. An algorithm is suggested for this case. In the second case, the premise variables depend on the estimated

states. This results in a complex design problem. Another algorithm is suggested for this case. Three simulation examples are given to test the two proposed algorithms. In these examples, the proposed algorithms succeed to stabilize the systems.

The fourth point is the implementation of adaptive-fuzzy predictive controllers. In this case, the parameters of the fuzzy model are obtained online using a IV recursive least-squares (RLS) algorithm. This adaptive algorithm is based on certainty equivalence (CE) principle. The results obtained using this adaptive algorithm is not satisfactory during the learning period, and following the large sudden changes in the system parameters. As a result, two adaptive dual- fuzzy predictive control algorithms are proposed. In the first adaptive dual algorithm, the Bicriterial Algorithm, which has been commonly used to implement linear adaptive dual predictive control, is extended to adaptive-fuzzy predictive control.

In the second adaptive dual algorithm, some modifications are proposed in the Bicriterial Algorithm to make the controller tuning easier and enhance its performance. A simulation study is given to confirm the advantages of using adaptive dual-fuzzy predictive control algorithms. Also, it shows the advantages of the proposed modifications in the Bicriterial Algorithm.

Keywords:

Predictive control; Fuzzy control; Dual control.

Name: Tamer Ahmed Abassy

Faculty of Engineering

Dept.: Mathematics and Engineering Physics

Degree: Ph.D.

Title of Thesis: A new treatment for solving a certain type of nonlinear partial differential equations

Supervisors:

Dr. Magdy A. El-Tawil and Dr. Hanafy El-Zoheiry

Abstract:

In this thesis, the modified variational iteration method is introduced as an effective method for solving some types of nonlinear partial differential equations, mainly the solitary and compacton wave equations. This method is a modification of Ji-Huan He's variational iteration method which overcomes some disadvantages in the conventional method. Some enhancements are used to get better results, mainly the use of Pade technique and Laplace transform. The use of Pade technique enlarges the domain of convergence while the use of Laplace transform together with Pade technique enables getting the exact solution of some cases. The K(n,n) equations are solved using two finite difference algorithms, one of them is an iterative algorithm and the other is a non-iterative algorithm. The used algorithms are based on linearization and applying finite difference schemes for time and space derivatives.

Keywords:

Nonlinear partial differential equations; Modified variational iteration method (mVIM); Pade approximation; Implicit finite difference method; Solitary wave equations; Comacton equations.

Name: Sherif Farouk Mohamed Farid

Faculty of Engineering

Dept.: Mechanical Engineering

Degree: Ph.D.

Title of Thesis: Buckling Analysis and Optimization of Y and T Stiffeners in Double- Skin Ship Structures

Supervisors: Dr. Sayed M. Metwalli and Dr. Ashraf O. Nassef

Abstract:

The volume of oil transported by tankers has largely increased in the last few decades. Consequently, each year thousands of tons of crude oil and petroleum products are spilled into the marine environment as a result of ship collisions, groundings, and other accidents. Suitable oil spill response techniques must be carried out immediately after an oil spill occurs to recover as much as possible of the spilled oil and to mitigate the ensuring damage to the environment at a very expensive cost. Although the cost of cleaning a spill depends on the size of tankers; the amount and type of oil spilled; and the geographical location, it is estimated that 1000 tones of oil spill costs $1,000,000 [7]. So, as part of the overall effort to promote maritime safety and environmental protection, naval architects aim to design ship structures which are strong enough and capable of absorbing impact energy. Then, prevent or minimize significant damages such as rupture of the outer plating and accordingly minimize the probability of rupture of inner plating which may cause pollution, total loss of ship and lives on board. Since, stiffened plates are fundamental building blocks in ships, many researchers have contributed to ship plating using conventional stiffeners which support the plate. This dissertation presents in four parts the buckling analysis and optimization of a novel stiffened panel, namely Y stiffener plate combination.

In the first part, the local instability (buckling) of Y stiffeners in stiffened panels under the action of uniaxial compressive loads is characterized. The mathematical derivations have been carried out to find the elastic buckling coefficient for the web of the T-part of the Y stiffener under suitable boundary conditions. The critical buckling stress is calculated. Then, the critical value of the buckling stress has been calculated. Using the value of the critical stress

and the assumption of uniform stress distribution the buckling load is calculated for the Y stiffener-plate combination model. Using curve fitting of the analytically obtained results, approximate expressions for calculation of the elastic buckling coefficient of the T-part of the Y stiffener are obtained. These approximate expressions enable designers to calculate easily the elastic buckling coefficient from which the critical buckling stress of the T-part is obtained.

In the second part of the dissertation, a comparison between the buckling strength of the T and Y stiffened panels for the same area of ship plating under the action of uniformly distributed compressive loads is presented. Two different groups of boundary conditions are considered for both T and Y stiffeners and the elastic buckling coefficient is obtained. The critical buckling stress is calculated. Then, the critical buckling loads are calculated. The obtained results showed that the critical buckling loads for Y stiffener is larger than that for equivalent T stiffener by 41% for the first group of boundary conditions. The second group showed that the Y stiffener plate combination is five times larger than the equivalent T stiffener.

In the third part of the dissertation, the effect of the sheet panel in addition to the stiffeners is studied. The finite elements analysis of multiple stiffeners placed on a panel and subjected to uniform axial compressive load. If the stiffeners are very apart then local buckling will take place in the sheet panel beneath them but if the stiffeners are extremely close then local buckling will take place in the weakest point in the stiffeners. Since there is no closed form solution for such interaction between the plates and the stiffeners, finite elements analysis is used to analyze the panel along with the stiffeners for 243 sets on Y-stiffener dimensions, with certain range for each of the five independent design variables. The effects of independent design variables on the ultimate buckling load and the volume per unit area for Y stiffener plate combination were studied and discussed.

In the fourth part of the dissertation, an optimum Y-stiffener plate combination using multi-objective optimization with real coded genetic algorithms is designed. Five of the Y-stiffened panel dimensions were selected to be the independent design variables of the optimization problem. The objective functions are the ultimate buckling load and the volume per unit area of the Y-stiffener plate combination. Because of the high processing time of the finite elements analysis, a surrogate function which approximates the results of finite elements analysis is proposed to reduce the processing time. The surrogate model is then employed in an evolutionary multi-objective optimization algorithm which maximizes the buckling strength of the stiffener in addition to the minimization of the volume per unit area. The new surrogate

function is validated using the values of the ultimate buckling loads calculated using nonlinear finite element analysis.

The proposed surrogate function is valid only in the specific ranges of the design variables. The Pareto optimal sets were calculated using an evolutionary multi-objective optimization technique and the optimum set of the independent design variables which is associated with the optimal geometric dimensions of the Y-stiffened panel was selected as the set which has the maximum ultimate buckling load to volume per unit area ratio. The optimum set was tested and validated using sensitivity analysis technique.

The ultimate buckling load of the optimum set of design variables was calculated using nonlinear finite element analysis to verify the result of the surrogate function. Also, to signify the choice of Y-stiffener plate combination as a stiffener, the dimension of an equivalent T-stiffener plate combination were calculated using equivalence equations assumption. The ultimate buckling load of the equivalent T-stiffener plate combination was calculated using nonlinear finite element analysis and it was found that the ultimate buckling load of the Y-stiffener plate combination is higher than the equivalent T-stiffener plate combination. Also, the volume per unit area of the Y-stiffener plate combination is lower than the equivalent T-stiffener plate combination because the girder of the T-section is bigger than the girder of the Y-section which are included in the calculation of the volume per unit area of the stiffeners, keeping in mind that the Y and T section have the same cross-section area.

Keywords:

Critical buckling stress; Buckling coefficient; *Y*- stiffener; Stiffened panel; Ship plating.

Name: Taher Abdel- Salam

Faculty of Urban Planning

Dept. : Urban Planning

Degree: M.Sc.

Title of Thesis: Dynamic change of land use impact of information technology and communications

Supervisors:

Dr. Ahmed M. Yousry and Dr. Ahmed R. Radwan

Abstract:

The research discusses one of the contemporary issues that study the impact of information and communications technology on land-uses change. The research is considered to be an attempt to monitor and analyze the changes that occur in land use patterns and related human activities as the result of the use of information and communications technology.

The main research question addresses how the use of information and communications technology applications would change the basic elements of the activities matrix and the land-uses (in terms of types and functional relationships).

The research aims to determine the changes that may occur on the type and the ifinctional relationships of land-uses (through the change of factors and standards affecting them) as an impact of information and communications technology applications. This is studied by understanding the transformation in the quality and nature of the activities and land uses, as well as the impact of this transformation on current change in land uses and their functional interrelationships.

To reach the objectives, the research uses analytical and descdptive methodologies to identify the variables of information and communications technology, land use classifications (types of uses and their relations), and proceeds in systematic steps to determine the components of the activities system, which will be used in the interpretation of the changes that occur in the land uses. A deductive methodology is used in concluding the changes that occur on activities and uses by the impact of information and communications

technology. The rcscarch also outlines possible future changes expected to occur on activities and land uses,

The research is organized as follows. The first section of the study (Chapter one) presents a literature review that illustrates different manifestations of the emergence and development of information and communications technology, and also presenting the planning ideas that have changed by the appearance of such technology. The historical evolution of information and communications technology and its impact on urban land uses are also reviewed.

The second phase (Chapter Two and Three) emphasizes various land-uses and related activity classifications, and propose a bases for land use and activity classifications that may reflect the expected changes in land-uses and activities resulting from the development of information and communications technology.

Finally, the third phase of the study (Chapter Four and Five) articulates anticipated changes that may occur on land uses and activities as a result of the impact of information and communications technology. The research proposes a suggested structure in which information and communications technology influences both current and anticipated change for activities and ‘and uses, as well as details the circumstances and requirements of its application.

Name: Nedaa Mohamed Ezzat

Faculty of Computers and Information

Dept.: Decision Support

Degree: M.Sc.

Title of Thesis: Exploiting Machine Learning in Generating Future Scenarios for the Tourism Industry in Egypt

Supervisors: Mohamed H. Rasmey, Mohamed M. Saleh and Mohamed A. El-Beltagy

Abstract:

Decision makers in governments corporations and institutions all need to forecast the future, Usually, traditional quantitative forecasting techniques are applied for this purpose. But the limitation of such methods is well known since all quantitative methods that are built solely on historical data (whether time-series or causal methods) produce forecasts by extrapolating such data into the future ignoring the effects of unprecedented future events that could cause deviation from the original surprise-free forecast if they were to occur. In the meanwhile, pure qualitative methods that don`t utilize historical data miss its sound foundation. In the field of futures studies, attempts are often made to combine quantitative and qualitative approaches using various hybrid methods such as Trend Impact Analysis (TIA). This thesis introduces an advanced algorithm to enhance Trend Impact Analysis that adds other levels of sophistication to the current algorithm. This advanced algorithm is developed in two phases. The first takes into account not only the impact of unprecedented future events occurrences on the future trend, but also the different severity degrees with which the event might occur. The 5econd phase enhances the prediction process of TIA by utilizing the power of neural networks in generating a slop by step forecast that takes into account the previous occurrences of unprecedented future events. These two ideas are novel and beyond the state of the art. Their implementation s the main contribution of this thesis.

Name : Emad El-din Hussein Hassan

Faculty of Computers and Information

Dept.: Decision Support

Degree: M.Sc.

Title of Thesis: A Comprehensive study for the emergency locations problem with three possible routs

Supervisors: Dr. Mohamed H. Rasmey and Asem A. Tharwat

Abstract:

The thesis is concerning with the problem of finding the best possible locations can be assigned to the emergency facilities like ambulance, fire stations, military suppliers and even home delivery services.

The thesis first introduce a survey for the emergency location problems, after that the thesis concentrate in solving the emergency locations problem in the case of existing three possible routes from each customer to each service center.

The thesis treats the problem in the cases of either deterministic or stochastic data is given.

Also the cases of penalized routes are covered, finally the case of empty solution set is treated.

Keywords:

Locations; Emergency; Optimization.

Medical Sector

- Medicine
- Oral and Dental Medicine
- Pharmacy
- National Cancer Institute
- Physiotherapy
- Nursing

Name : Afaf Sayed Othman Hassan

Faculty of Medicine

Dept. : Pharmacology

Degree : Ph. D.

Title of Thesis: The Potential Pharmacological Preconditioning Effect of Monophosphoryl Lipid A in Induced Myocardial Ischemia in Rats

Supervisors : Dr. Amal Anwar Mishriki, Dr. Ebtissam Abd El-Ghafar and Amani Nabil Shafik

Abstract :

Myocardial ischemia/reperfusion is a common event that followed revasculization of the ischemic myocardium. As the population of patients with ischemic heart disease has increased, there is a considerable interest in the development of new strategies to reduce ischemia/reperfusion injury. We intended to demonstrate the protective effects of ischemic and pharmacological preconditioning by monophosphoryl lipid A (MPL) against myocardial injuries induced by ischemia/reperfusion, in both standard fed and atherosclerotic rats, and also to detect the effect of the used dose of MPL on the liver and kidney function as well as its effect on the endothelial dysfunction induced by atherosclerosis. We classified our albino rats into standard-fed and atherosclerotic groups. We induced myocardial ischemia/reperfusion in anesthetized rats by left anterior descending artery (LAD) ligation for 40 minutes; this was followed by reperfusion of the ischemic myocardium for three hours. During this period, continuous recording to the electrocardiogram changes was carried. After the end of the reperfusion period, histopathological examination for the heart and serum level of creatine kinase-MB isoenzyme (CK-MB) was done.

Aorta, isolated from standard-fed and atherosclerotic rats, was used to detect the vasoconstrictor response to increasing doses of phenylephrine as well to detect the relaxant effect of cumulative doses of nitroglycerine on the submaximal dose of phenylephrine. Early ischemic preconditioning was done by three subsequent cycles of ischemia/reperfusion immediately before induction of myocardial ischemia/reperfusion. Late pharmacological preconditioning was done by injection of MPL intraperitoneal in rats 24 hours before induction of myocardial ischemia/reperfusion. Both types of

preconditioning was produced nearly equally significant improvement in the ST-segment elevation, percent of occurrence of arrhythmia, size of myocardial infarction and elevation of the serum level of CK-MB induced by myocardial ischemia/reperfusion in standard fed and atherosclerotic rats. This improvement was significantly increased by combination of both preconditioning. The vasoconstrictor response for isolated aortic strip to increasing doses of phenylephrine and the relaxant dose of nitroglycerine was higher in atherosclerotic rats compares to standard fed rats. MPL failed to cause significant change of the vasoconstrictor response of isolated aortas in both standard fed and atherosclerotic rats.

On other side, MPL can significantly lower the dose of nitroglycerine needed to relax the submaximal contraction of phenylephrine by 50% and 100% in standard fed rats. In atherosclerotic rats, MPL can only cause significant lowering in the dose of nitroglycerine needed to relax the submaximal contraction of phenylephrine by 100%.

The examined dose of MPL did not show any effect on liver and kidney functions.

Keywords:

Myocardial ischemia/reperfusion; Preconditioning; Monophosphoryl lipid A (MPL); Rats; Isolated aortic strip.

Name : Mohamed Faisal Ibraheem

Faculty of Medicine

Dept. : Pathology

Degree : Ph. D

Title of Thesis: Immunohistochemical Study of Estrogen Receptors-ß Expression in Prostatic Adenocarcinoma

Supervisors : Dr. Fahima Mohamed Habib, Dr. Samia Mohamed Gabal and Dr. Dina Omar Helmy

Abstract :

A total of sixty retrospective randomly selected specimens: Thirty five specimens of Prostatic adenocarcinoma, ten specimens of benign prostatic hyperplasia, and fifteen specimens of PIN were retrospectively viewed in this study. Specimens were obtained from the Department of Pathology-Cairo University and from other private laboratories in the period from September 2005 up to August 2007. For all specimens, some clinical data were available on the computer files including clinical, operative and lab findings as age, PSA level and extent of tumour.

All specimens were formalin fixed, routinely processed and embedded in paraffin. Two (5 microns thick) sections were prepared from each tissue block, one of them stained by Haematoxylin and Eosin (H&E) for re-evaluation; including the tumour was classified according to Gleason's grading system (1992).Patterns of tumour growth were numbered in order of increasing malignancy, grades 1 to 5. In each case, a predominant and a secondary pattern grade were also recorded .

The sum of the two grades yielded a Gleason's score that ranged from 2 to 10.In this study we classified the cases of prostatic adenocarcinoma according to Weidner et al., (1993) into well differentiated (Gleason's up to 5), moderately differentiated (Gleason's 6 or 7), and poorly differentiated (Gleason's 8, 9 and 10) The PIN cases were classified into low grade (PIN 1) and high grade (PIN 2) according to Bostwick (1996).

The other section was mounted on poly-L-lysine-coated slides (Superfrost slides) and subjected to estrogen receptor β immunohistochemical staining.

The primary analysis was based on a cut off of ≥5%, and classified as positive if ≥5% of cell nuclei were immunoreactive. ER ß scores expressed as the percentage of cells demonstrating ER ß nuclear immunoreactivity in 5 scores as 0, 1–4, 5–10, 11–20, >20 (Lisa G. et al., 2001). The highest frequency of BPH cases in this study (80%) occurs between 50-70 years. Also, the highest frequency of PIN cases and adenocarcinoma cases in this study (80%) occurs between 50-70 years.

Most of PIN cases in this study (60%) were high grade and almost half of prostatic adenocarcinoma cases showed high Gleason's grade, which constitute 48% of all studied cases. In this work most of BPH cases (60%) presented with PSA level (< 10 ng/ml) while more than half of adenocarcinoma cases in this study (56%) presented with (PSA) level >30 ng/ml.

Nine (90%) of BPH cases, 7 (47%) of PIN cases in this study showed positive ER-ß expression, while 6 (17.2%) of prostatic adenocarcinoma cases were positive for ER-ß expression with highly significant difference.

As regard the scores of ER-ß expression in this work, half of the cases of BPH showed score > 20, 4 (27%) of PIN cases were 5-10 and no cases were > 20.

25 (71%) of the studied carcinoma cases showed 0 score and 5 (14.2%) showed

score 5-10 with statistically significant difference.

These results pointed to:

- ER-ß may protect normal prostate epithelial from undergoing unscheduled cell proliferation, neoplastic transformation, and from oxidative injuries
- ER-ß expression is related tumorogenesis and prognostic factors in prostatic carcinoma.

Keywords :

Estrogen; Receptors; Prostatic; Adenocarcinoma

Name : Tarek Mahmoud Shoukry Megahed

Faculty of Medicine

Dept. : Physiology

Degree : Ph.D

Title of Thesis: Impact of sleep deprivation on metabolic and endocrine functions in adult and aged male rats

Supervisors : Dr. Nagat Younan Mina, Dr. Mohammed Hany Gamal El-Din and Dr. Wafaa Abdel Hamid Mattar

Abstract :

Objective: Sleep loss represents an increasingly common condition in industrialized societies. So, we studied the effect of total and partial sleep deprivation on both metabolic and endocrine functions in adult and old aged male rats. **Methods:** we induced sleep deprivation by random alarming light and sound on 40 adult and 40 old aged male rats. Then we measured, body weight, BMI, rectal temperature, T3,T4,TSH, PRL, corticosterone, insulin, and FBG before and after TSD and PSD [for one night, one week, and two weeks]. Results: A decrease in body weight. BMI, R. temperature, insulin and FBG, thyroid hormones with normal or even low TSH was noticed. An increase of corticosterone level was found especially after TSD in old aged rats. **Conclusion:** A state of hypercatabolism, hypothyroid state, and altered resiliency of HP A axis was noticed after sleep deprivation (mainly after TSD) with minimal effect of age difference.

Keywords:
Sleep deprivation; Metabolic; Endocrinal function; Male rats.

Name : Seham Ahmed El-Tobshy

Faculty of Medicine

Dept. : Dermatology

Degree : M. Sc.

Title of Thesis: High concentration TCA versus Subcision for treatment of Acne Scars

Supervisors : Shahira Abdel Rahman Ramadan , Mohamed Hussien El-Komy and Dalia Ahmed Bassuny

Abstract :

Background: Facial acne scarring has been treated with multiple methods with varying degrees of improvement. Although acne scars are recalcitrant to many therapeutic interventions, subcision is a technique that had been reported to provide significant longterm improvement in treating rolling acne scars. 100%TCA CROSS also had appeared to be valuable in treating atrophic acne scars. **Objective:** To compare the efficacy of 100%TCA CROSS method and subcision as different therapeutic modalities in treatment of rolling acne scars.

Methods: Twenty patients with facial rolling acne scars were treated with 100%TCA CROSS on left side of the face and subcision on right side.

They received 1-3 sessions at intervals ranging from 1-4 months and were followed up for up to 10 months. **Results:** Subcision showed better response regarding improvement of size and depth in comparison to 100%TCA CROSS which was statistically significant, (p<0.001) and (p=0.001) respectively. Mean percentage of improvement according to blinded physicians was 81% for subcision side and 64% for 100%TCA CROSS side. Mean percentage of improvement according to patients was 81% for subcision side and 69% for 100%TCACROSS side. Minimal, transient side effects occurred in both techniques with slightlyhigher frequency on TCA side. **Conclusion:** Both subcision and 100%TCA CROSS can improve the appearance of facial rolling acne scars; however subcision was found to be superior in its results with fewer side effects.

Keywords:

Rolling acne Scars; 100% TCA CROSS; Subcision.

Name : Mohammad Ibrahim Y. Elshami

Faculty of Medicine

Dept. : Psychiatry

Degree : M. Sc.

Title of Thesis: The attitude of medical staff and students towards psychiatry

Supervisors : Dr. Mostafa Omar Shaheen , Dr. Noha Ahmed Sabry and Dr. Dalal Abd Allah Amer

Abstract :

Aim of work: To assess the attitudes of medical students towards psychiatry and the impact of psychiatric education on changing it and the attitudes of medical staff towards psychiatry and its change through the years of clinical experience. **Subjects:** 414 first year students in the medical school, 434 sixth year students, 100 junior doctors (less than 5 years of clinical experience) and 100 senior doctors (more than 15 years of clinical experience). **Tools:** A specially designed questionnaire for this study was distributed among the subjects. **Setting:** Faculty of Medicine Cairo University. **Results:** The students' attitudes towards psychiatry had minimal improvement after their clinical psychiatric round, while medical staff had more positive attitudes towards psychiatry than students, becoming more positive with the increaser of their clinical experience. **Conclusion:** The undergraduate psychiatric education should be improved in order to change the tomorrow's doctor's negative attitudes towards psychiatry. The medical staff in different specialties should get continuous psychiatric education.

Keywords:

Attitude; Psychiatry; Stigma; Students; Staff.

Name : Shereen Abd El Alem M. Kbeel

Faculty of Medicine

Dept. : Tropical medicine

Degree : M. Sc.

Title of Thesis: Autologous haematopoietic stem cell transplantation in End stage liver disease

Supervisors : Dr. Hosny Mohamed Salama , Dr. Eman Medhat Hassan and Dr. Abdel -Rahman Zekri

Abstract :

Hepatic cirrhosis is the end-stage of chronic liver diseases. Liver transplantation has been the most effective treatment for these patients. Since liver transplantation is critically limited by the shortage of available donor livers searching for an effective alternative therapy has attracted great interest in preclinical studies.

The transplantation of autologous bone marrow-derived stem cells holds great potential for treating hepatic cirrhosis.

Bone marrow stem cell therapy may be considered a novel treatment for patients with decompensated LC.

Keywords:

Autologous; Hematopoietic stem cells; End Stage liver disease.

Name : Shaimaa Omar Zayed

Faculty of Oral and Dental Medicine

Dept. : Oral Pathology

Degree : M. Sc.

Title of Thesis: the infleuence of garlic as an anticarcinogenic agent on apoptotic potential during oral carcinogenesis in albino rats

Supervisors : Dr. Naglaa Mohamed El-Hosarry and Dr. Samia Mostafa El-Azab

Abstract :

This study was performed to investigate the apoptotic potential of garlic as an anticarcinogenic agent on DMBA induced oral carcinogenesis in albino rats.

A total of 75 male albino rats weighing 180-200 grams each were used in the present study. The animals were randomized into five experimental and control groups; 15 animals each as follows:

Group 1(control): the animals received no treatment.

Group 2: the animals received 7,12-DMBA for 22 weeks in the form of pellets implanted under the palatal mucosa then followed by topical application of DMBA painting.

Group 3: the animals received intra-gastric administration of aqueous garlic extract three times\week (250 mg/kg body weight) for 22 weeks.

Group 4: the animals received aqueous garlic extract as in group 3 for two weeks earlier before induction of DMBA for 22 weeks as in group 2 parallel with garlic administration, one day for each.

Group5: the animals received DMBA as in group 2 for 22 weeks then started garlic administration as in group 3 for eight weeks. Summary 97 Animal sacrifice for all groups was done after 22 weeks from the beginning of the experiment, except for group 5 where scarification was made after 30 weeks.

The whole palatal soft tissue was separated from the maxillary bone and put directly in 10% formalin. Paraffin blocks of the specimens were prepared.

Three μm thick sections were cut on a rotary microtome to obtain heamatoxylin and eosin, PAS and immunohistochemical sections.

The stained sections were assessed by ordinary light microscope and image analyzer computer system using the software Leica Qwin. All the obtained data were statistically evaluated using Student t-test and ANOVA test. Heamatoxylin and eosin stained sections for group 1, revealed normal orthokeratinized stratified squamous epithelium. While, Group 2, that received topical application of 7,12-DMBA alone for 22 weeks resulted in carcinoma that was preceded by hyperplasia then dysplasia. In addition, Group 3 which received garlic extract alone, revealed normal orthokeratinized stratified squamous epithelium, but it was noticed that, the thickness of the keratin layer was slightly increased.

group 4 which received garlic extract parallel with 7,12-DMBA revealed normal orthokeratinized stratified squamous epithelium. Some areas of the epithelium were hyperplastic but, no signs of dysplasia were detected. While Group 5 that received 7,12-DMBA for 22 weeks then garlic administration, revealed that 58% of the rats have developed Summary 98 carcinoma, while 42% of the rats revealed hyperplasia and hyperkeratosis with absence of dysplasia .

The p53 expression in group 2 was the highest among all the experimental groups with a highly significant difference, denoting that 7,12-DMBA induced neoplastic transformation and cancer development in group 2, while p53 expression in group 1, 3 and 4 was in a very low level denoting absence of dysplasia. P53 expression in group 5 was in a moderate level, denoting decreased rate of dysplastic transformation.

The Bax expression in group 4 was the highest among all the experimental groups with a highly significant difference denoting that garlic extract exerts its chemopreventive effect by inducing apoptosis especially when administered during the initiation phase of cancer induction.

The Bax expression in group 5 was in a moderate level with a highly significant difference in comparison to group 2, denoting that garlic may exert some antitumor activity even when administered in the later stages of cancer induction.

Based on the previous findings, garlic may represent one of the future chemopreventive agents that may inhibit, retard or block the process of carcinogenesis through induction of apoptosis. Healthy well balanced phytochemical diet could be followed to reduce the risk of cancer.

Conclusion : Application of 7,12-DMBA to the palatal tissue of albino rats can induce squamous cell carcinoma that is preceded by hyperpiasi- dysplasia -early carcinoma similar to human leucoplakia Increase in the incidence of p53 mutation with progression from mild, moderate, sever oral dysplasia and early squamous cell carcinoma. Aqueous garlic extract was effective in suppressing

the development of dysplastic features induced by DMBA. This may provide evidence of the anticarcinogenic effect of garlic extract Aqueous garlic extract promotes apoptosis by inducing Sax formation which in turn provide an evidence for the increased expression of the wild type p53 in the nuclei of cells to promote Bax formation.

Key words:

Oral cancer; P53; Bax expression; Garlic

Name : Dalia Adel Mohamoud Kaisarly

Faculty of Oral and Dental Medicine

Dept. : Biomaterials

Degree : M. Sc.

Title of Thesis: Mechanical Assessment of Restored Compromised Enamel

Supervisors : Dr. Taheya Ahmed Moussa and Dr. Azza Abdel-Zaher Hashem

Abstract :

This study was conducted to test the efficiency of different restorative materials on the support and fracture resistance of the compromised enamel, to compare two different forms of specimen preparation to detect which form is of clinical relevance simulating the natural system of tooth structure in addition to determine the stresses and displacements in the different structures (enamel, dentin and restorations) in relation to compromised enamel by three-dimensional finite element analysis method.

Three commercially available types of resin composite restorative materials (Filtek Z250, Filtek Supreme and Filtek Silorane) and their recommended adhesive systems (Adper Single Bond 2 and Silorane System Adhesive) were used to restore compromised enamel. One hundred teeth were divided into two groups according to two specimen forms, 50 teeth each group. Each group was furtherly subdivided into five subgroups, 10 teeth each: a positive control group, a negative control group and three restored groups according to the three restorative materials. Specimen form A was a premolar with its normal anatomic form and contour, while specimen form B was a premolar with its lingual cusp removed and buccal cusp tip flattened.

The prepared cavity in specimen form A was a Class I cavity with buccal compromised enamel, while in specimen form B the buccal enamel was compromised by the round cavity that was prepared from the lingual aspect. Static load testing was performed with a universal testing machine, Instron 5500R. In group A, load was applied by a steel ball 4 mm in diameter on the cusp inclines of the premolar at a crosshead speed of 0.5 mm /min, while in

group B, it was applied by a rectangular metal rod 3 mm x 8 mm on the flattened buccal cusp tip until failure occurred.

The modes of failure and fracture patterns were examined for all specimens For the three dimensional finite element analysis, slices of a prepared premolar of specimen form A were three dimensional modeled using ANSYS 5.4 (ANSYS Technical Profile 1997), a finite element analysis software.

The model resembled the restored tooth with its different components (enamel, dentin, pulp), the restoration and the supporting acrylic resin block and the applied load. Material properties of all tooth components as well as all tested restorative materials were entered as isotropic material. Young's modulus and Poisson's ratio are the material properties that were used and a working load of 200 N was applied. In group A, the positive control group showed the statistically significantly highest mean load value and the negative control group showed the statistically significantly lowest mean value. In the restored groups Filtek Z250 group had highest mean load value.

There was no statistically significant difference between Filtek Supreme and Filtek Silorane groups which showed lower values.

These results were confirmed by the stress analysis and it revealed the absence of tensile stresses in the restorations in relation to compromised enamel.

In group B, Filtek Z250 group showed the statistically significantly highest mean load value, while the negative control group showed the statistically significantly lowest mean value.

There was no statistically significant difference between positive control and Filtek Supreme groups which showed lower values. This was followed by Filtek Silorane group. Locations of greatest tensile and compressive stresses in enamel in model B were mostly associated with the outlines of the specimen form preparation.

Fracture patterns were examined and assisted by the finite element analysis. The most favorable fracture pattern regarding its behavior compared to the natural sound tooth was obtained by Filtek Z250.

Conclusions: Under the circumstances of this investigation and putting into consideration the different uncontrollable variables inherent in the tooth fracture resistance test the following conclusions could be drawn:

1- Cavity preparation in maxillary premolars dramatically decreases the tooth resistance to fracture.

2- Resin composite restorations provide sufficient strength needed for the support of compromised enamel.

3- Fracture resistance of restored teeth intimately related to the filler particle size, type of matrix phase and corresponding adhesive systems of resin composite restorations.

4- The specimen with its normal anatomic form proved to be more clinically relevant rather than the prepared specimen form reported in previous in vitro studies when testing the fracture resistance and examining the magnitude and location of stresses.

5- The data provided by the three-dimensional finite element stress analysis elucidated the results obtained from the mechanical testing showing the absence of tensile stresses in direct relation to the compromised enamel, thus, encouraging the practice of restoring compromised enamel by a resin composite restoration.

Name : Nermine Raouf Amin

Faculty of Oral and Dental Medicine

Dept. : Oral Pathology

Degree : Ph. D.

Title of Thesis: the anti-cancer effect of epigallocatechin-3-gallate (a major component of green tea) alone or in combination with chemotherapy on squamous cell carcinoma cell culture

Supervisors : Dr. Sawsan Naguib Abdel Bary , Dr. Dalia Hussein El Rouby and Dr. Abeer Ahmad Bahnassy

Abstract :

SCC is the most common malignant tumor of oral tissues, the tongue being more frequently affected than other oral sites.

It is a devastating illness having a severe impact on function and on the cosmetic appearance of the affected individuals. A cell culture of tongue carcinoma cells (SCC15 cell line) was utilized to conduct this study. Stock solutions of the selected doses of EGCG, Taxol and a combination were applied to the culture media. In addition, carcinoma cells were subjected to 6Gy radiotherapy alone or following treatment with EGCG. All steps were carried out under strict aseptic conditions in a laminar flow hood. Results of the viability assay showed that the viability of tongue carcinoma cells was significantly decreased after treatment with EGCG, Taxol, EGCG and Taxol either simultaneously or sequentially, 6Gy and EGCG followed by 6Gy when compared with the control group. It was also noticed that EGCG mainly induced apoptosis, while Taxol mainly inhibited mitosis. Moreover, applying EGCG to Taxol did not significantly enhance its ability to inhibit mitosis, but was able to significantly enhance apoptosis especially if applied sequentially. Similarly, it was found that EGCG enhanced the ability of radiotherapy to induce apoptosis rather than to inhibit mitosis.

The colony assay declared the ability of carcinoma cells to proliferate and form colonies which appeared to be as least as possible after treatment with EGCG followed by 63y or followed by Taxol which confirms the ability of EGCG to enhance the effect of Taxol and radiotherapy to inhibit mitosis. The

occurrence of apoptosis was confirmed by the DNA ladder assay which showed that EGCG induced the cells to undergo apoptosis, while Taxol induced necrosis. EGCG followed by Taxol was able to enhance the effect of Taxol to induce apoptosis, but if followed by 6Gy necrosis superseded. Conclusion: Immunohistochemical analysis showed decreased expression of cyclin D in cultures treated with Taxol, EGCG followed by Taxol or 6Gy which showed a strong ability to inhibit proliferation of carcinoma cells. On the other hand, Fas overexpression denoting the occurrence of apoptosis was noticed in cultured treated with EGCG alone or followed by Taxol or radiotherapy.

Keyword:

Squamous cell carcinoma; EGCG; RADIOTHERAPY; TAXOL

Name : Heba Ahmed Abdel Wanis El-Deeb

Faculty of Oral and Dental Medicine

Dept. : Operative Dentistry

Degree : Ph. D.

Title of Thesis: Effect of Aging under Intrapulpal Pressure Simulation on Microtensile Bond Strength and Hybridization of Different Dentin Bonding Systems

Supervisors : Dr. Mai Mahmoud Yousry Hassan , Dr. Enas Hussein Mobarak and Dr. Dalia Ibrahim El Korashi

Abstract :

This study was carried out to evaluate the effect of aging under *in vivo* simulating conditions (artificial saliva, intraoral temperature 37^{o}C) with or without hydrostatic intrapulpal pressure on bond strength and hybridization of three contemporary bonding systems. A total of 216 sound human molars were ground flat till mid-dentin. The teeth were divided into three equal groups according to the aging condition applied; distilled water (control), artificial saliva, or aging under intrapulpal pressure simulating condition. Each group was divided into three subgroups according to the adhesive system utilized; Adper^{TM} Scotchbond Multi-Purpose (SMP), Clearfil SE Bond (CSE), or AdheSE One (ASE1). Each subgroup was further subdivided into four classes according to the aging period; 24 hours (baseline), one month, three months or six months. Resin composite specimens of all classes were prepared and incubated at 37^{o}C. Specimens were subjected to (μTBS) testing and (SEM) analysis. Data were analyzed using three-way ANOVA and post hoc tests. **Conclusions:** Aging under intrapulpal pressure/artificial saliva is a viable method for testing durability of adhesives. Despite of lower bond strength values of ASE1 with modified monomers, it might have more stable performance under aging.

Keywords:

Micro-tensile bond strength; Aging; Intrapulpal pressure; Bond durability; Dentin adhesive systems.

Name : Lamiaa Ahmed Attia Shams El-Din

Faculty of Pharmacy

Dept. : Pharmacology and Toxicology

Degree : MSc

Title of Thesis: Pharmacological Study of the Possible Cardioprotective Effects of Certain Agents in Ischemia/Reperfusion Injury in Rats

Supervisors : Dr. Mostafa E. El-Sayed , Dr. Amina S. Attia and Dr. Hesham A. Salem

Abstract :

The present study was directed to investigate the possible cardioprotective effects of a certain calcium channel blocker (amlodipine) and some antioxidants (CoQ and quercetin) against myocardial I/R-induced electrophysiological, biochemical and histological changes. Pretreatments with amlodipine (15 mg/kg), CoQ (200 mg/kg) and quercetin (5 mg/kg) were done by oral administration of these drugs daily for one week either when given separately or as combination of amlodipine with CoQ or quercetin. Rats were then subjected to myocardial I/R by ligation of left descending coronary artery for 35 min followed by reperfusion for 10 min. Myocardial I/R was found to dramatically affect the electrophysiological function of the heart as evidenced by ventricular arrhythmias. Myocardial damage was indicated by elevation of plasma CK activity. A shift from aerobic to anaerobic metabolism was shown by accumulation of lactate and reduction of ATP myocardial contents. I/R injury was also characterized by a state of oxidative stress as manifested by increased myocardial TBARS and decreased GSH contents. This state of oxidative stress was augmented by leukocytic infilteration as demonstrated by increased MPO activity and elevated NO_x. Pretreatment with each of the used drugs separately or combination of amlodipine with CoQ or quercetin significantly decreased the incidence and severity of ventricular arrhythmias. The cardioprotective effect of amlodipine seems to rely on reduction of both cell membrane.

damage and oxidative stress, improvement of aerobic metabolism and attenuation of leukocytic infilteration. On the other hand, both CoQ and quercetin effectively improved myocardial aerobic metabolism, completely

counteracted the state of oxidative stress and improved cell viability. The combined therapy particularly amlodipine and quercetin seems to be more effective than the use of individual drugs in ameliorating the electrophysiological, biochemical and histological changes associated with I/R. Finally, clinical trials are required to establish the beneficial effectiveness of the use of these cardioprotective agents as adjunctive therapies in patients at risk of myocardial I/R .

Keywords:

Amlodipine; Arrhythmias; Coenzyme Q; Ischemia; Quercetin; Reperfusion.

Name : Mamdouh Reda Rezk Yousef

Faculty of Pharmacy

Dept. : Analytical Chemistry

Degree : PhD

Title of Thesis: Stability and its-indication of certain carbapenems

Supervisors : Dr. Ezzat Mohamed Abdel-Moety, Dr. Nariman Abdel-Ghany Elragehy and Dr. Nagiba Yehia Mohamed Hassan

Abstract :

The scientific work in this thesis was planned to concern with the investigation of the stability of model carbapenems, namely, ertapenem, imipenem and meropenem.

The aim of the present work was to clarify some important analytical methods for the determination of the studied drugs in raw material and in pharmaceutical formulations.

All the developed methods can be applied as stability-indicating ones for the determination of the drugs in presence of their degradants that will be formed on hydrolysis or during the storage conditions. Kinetic studies for the studied drugs were investigated and evaluated.

The experimental conditions for each of the developed methods were optimized and described in details.

Analytical applications on pharmaceutical formulations have been undertaken. Among the analyzed samples containing the studied drugs are vials (Invanz®, TienamTM and MeronemTM).

The quantification of the named drugs has been carried out by adopting a variety of analytical techniques. Among those techniques are first derivative (1D) spectrophotometry, first derivative of ratio spectra (1DD), bivariate method, coupled TLC-separation with light densitometric scanning as well as high performance liquid chromatography (HPLC).

Keywords:

Analytical methods; Carbapenems; Ertapenem; Imipenem; Meropenem; Stability.

Name : Mosaad Mahmoud El Gammal

National Cancer Institute

Dept. : Medical Oncology

Degree : Ph.D

Title of Thesis: The Prognostic Significance of Minimal Residual Disease in Adult Patients with Acute Lymphoblastic Leukemia

Supervisors : Dr. Hossam Mohamed Kamel, Dr. Nahla Mohamed El-Sharkawy and Dr. Mohamed Abdel Mooti Mohamed

Abstract :

The results of the large prospective MRD studies in childhood ALL indicate that MRD analysis gives highly significant prognostic information superior to other standard criteria (age, sex, and WBC) in distinguishing patients at high, intermediate, and low risk of relapse. **Aims**; was to determine whether MRD investigation is valuable in predicting outcome in adult ALL patients (except mature B phenotype). **Design and Methods**: MRD was assessed in 57 adult ALL patients by 4-color flowcytometry on bone marrow samples collected during three time points in the first 24 months of treatment.

The relationship between MRD status and clinical outcome was investigated and compared with age, sex, immunophenotype, and initial TLC. *Results*: Disease free survival (DFS) rates for MRD-positive and MRD-negative patients and log-rank testing established that MRD positivity was associated with increased risk of relapse at all time points ($p < .05$) but was most significant after induction. **Conclusion:** The association of MRD results and DFS was independent of and greater than other standard predictors of outcome and is therefore important in determining treatment for individual patients.

Flowcytometric immunophenotyping is the method of choice for detection of MRD in our institution especially post-induction.

Keywords:

Adult ALL; Minimal residual disease; Flowcytometry.

Name : Haytham Waheed Yousry Gareer

National Cancer Institute

Dept. : Surgical Oncology

Degree : M. Sc.

Title of Thesis: Short and Long Term Follow up of Laparoscopic Resection For colorectal Cancer: NCI Experience

Supervisors : Dr. Medhat Khafagy , Dr. Mohammed Hani El-naggar and Dr. Ashraf Saad Zaghlool

Abstract :

Laparoscopic resection for colorectal cancer does not change the oncologic surgical principles, including en-bloc resection, proximal lymph-vascular ligation, complete lymphadenectomy, wound protection and adequate resection margins. The short-term and long-term follow up of our cases outlines the potential of establishing this approach as a gold standard for surgical treatment of colorectal surgery at our institute.

By retrospective meta-analysis of the relatively large series of 119 patients, who underwent elective resection of primary colon and rectal cancer from January 2000 to January 2005 at our surgical department in the NCI, results compare well to most international trails.

Keywords:

Colon- rectum; Laparoscopic resection; Laparoscopy; Colorectal cancer.

Name : Hatem Hamdy Abdel Azim

National Cancer Institute

Dept. : Medical Oncology

Degree : M. Sc.

Title of Thesis: Soluble Mesothelin-Related Protein in Malignant Pleural Mesothelioma: A Clinico-Pathological Correlation.

Supervisors : Dr. Rabab M. Gaafar, Dr. Ibrahim M. Abdel Salam and Dr. Ola M. Khorshid

Abstract :

Background and Aim: MPM is an aggressive tumor that arises from the mesothelial cells of the pleura. It is uncommon, yet the incidence is rising due to the widespread exposure to asbestos in the past decades. Building-up evidences showed that SMRP carry a diagnostic and a prognostic value in MPM. Egypt suffers endemic asbestosis and thus this study was conducted to evaluate the value of using SMRP in diagnosing patients with MPM. Correlation was made with known clinico-pathological prognostic factors. **Methods**: In the period from January 2006 till March 2008, Serum samples were obtained from patients attending to the outpatient clinic and stored at -80°C till use. Eligible patients were those with complete pathological review, had complete laboratory staging workup. Serum sample were provided from patients with breast cancer and from healthy individuals with to function as healthy controls. SMRP was assayed by ELISA using MESOMARK® and correlations were made with different clinico-pathological prognostic parameters. Comparisons between the two groups of cases and controls were done using the Kruskal-Wallis test while comparisons between patients according to different prognostic factors were performed using Mann-Witney test. Results: 83 patients (50 IVIPM, 33 breast cancer) and 22 healthy individuals were examined in this study. Serum SMIRP levels were not different between patients with breast cancer and healthy controls (p>O.O5). However, there was a significant difference between MPM patients and the other two groups (p<O.0001). ROC analysis showed an AUC 0.765 for differentiating between the control (healthy and malignant) and MPM with a

best statistical cut-off of 7.22 nMIL (sensitivity = 66%, specificity = 70.9%). Mean SMRP concentrations were significantly higher in patients with advanced disease (p=0.038), poor performance status (p=O.Ol7) and high alkaline phosphatase (pO.Ol 5). Mean SMRP concentrations were also higher in males, elderly patients, asbestos-exposed patients, epithelioid subtypes and patients with high platelet and leucocytic counts. However, these differences did not reach statistical significance. Conclusion: This study shows that SMRP can differentiate MPM patients from those with breast cancer. Patients with high tumor burden seem to have higher serum levels of SMRP.

Name : Ekramy Mansour Abdelghafar

National Cancer Institute

Dept. : Anaesthesia and Pain Relief

Degree : M. Sc.

Title of Thesis: Anatomical, Radiological and clinical study of paravertebral analgesia in thoracic surgery.

Supervisors : Dr. Samia Yahia Akle, Dr. Magdi Ramzi Iskander, Dr. Magda Shokry Azer and Dr. Ayman Ali Ghoniem

Abstract :

Post-thoracotomy pain has long been recognized as a cause of post-operative morbidity, resulting n inadequate ventilation, and coughing which in turn leads to a teleecstasis, mucous plugging, hypoxia and pulmonary infection. The aim of this work is to study the paravertebral space anatomically, radiographically and clinically.

Methodology: They study was conducted in National cancer institute on 80 patients of both sexes and was divided into two stages, stage I done on 40 patients having chronic thoracic pain stage II done on 40 patients after thoracotomy. Stage I: the 40 patient was randomly allocated into 2 groups.

Resultes: The study showed in stageI for radiographic imaging of the intercostals space, the dye was confined to the intercostals space without any vertical spread, where in paravertebral space spread of the dye was to 2-4 spaces with both epidural and contralateral spread. . Stage II; the results of the study, showed that immediate analgesic effect in epidural group was significantly higher early after recovery but there was no difference afterwards throughout the period of study.

The use of rescue morphine was more in the paravertebral group.

There was no difference between the two groups in post-operative pulmonary functions.

Epidural technique was associated with hypotension. There was no difference in heart rate between the two groups.

There was no difference between the two groups in pre-and post-operative blood glucose and plasma cortisol. Pulmonary catheter complications were recorded in paravertebral but not in epidural technique.

Keywords:

Thoracotomy; Paravertebral; Intercostals; Epidural; Pain; PEFR.

Name : Moataz Mohamed T. El Semary

Faculty of Physical Therapy

Dept. : Physical Therapy for Neuromuscular

Degree : M. Sc.

Title of Thesis: Biomechanical Analysis Of Sit-To-Walk Movement In Parkinson's Patients

Supervisors : Dr. Nawal Abd El-Raouf Abou Shady, Dr. Mohamed El Said Al Awaady and Dr. Hayam Mahmoud Sayed

Abstract :

The aim of this study was to evaluate the ankle-knee-hip interaction during sit-to-walk (STW) movement and clinical functional abilities of the lower limbs in Parkinson′s patients. **Methods:** Twenty male patients, ages ranged from 55 to 70 years, stage II & III according to modified Hoehn and Yahr (1997) classification of disabilities and ten male healthy elderly subjects, ages ranged from 55 to 70 years ,participated in this study. All subjects were assessed for; clinical functinal abilities of the lower limbs, ground reaction force (GRF) & spatiotemporal data and range of motion (ROM) of hip, knee and ankle joints during STW movement. **The results** showed very significant differences in the GRF among the normal subjects and Parkinson′s patients during STW movement. There was significant differences in hip, knee and ankle joints ROM during STW. There was significant differences in spatiotemporal findings during STW movement. The Parkinson's disease patients did not merge the two tasks of STW while the elderly subjects merged it. There was an impairment in clinical functional abilities of the lower limbs in Parkinson′s patients. **Conclusion:** A continuum of STW performance and clinical functional abilities whereby the healthy elderly people performed the task more efficiently than PD patients.

Keywords:

Parkinson's disease; GRF; 3-D motion analysis; Joints interaction; STW; Spatiotemporal parameters.

Name : Marwa Mohamed Ibrahim Hafez

Faculty of Physical Therapy

Dept. : Physical Therapy for growth and development disorders in children and its surgery

Degree : Ph. D.

Title of Thesis: Response of Aerobic Capacity to Treadmill Versus Bicycle Ergometer in Juvenile Rheumatoid Arthritis

Supervisors : Dr. Elham El -Sayed Salem and Dr. Hala Salah El-Din Mohamed Talaat

Abstract :

The purpose of this study was to compare between the effect of treadmill and bicycle ergometer exercises on the aerobic capacity in female children with polyarticular juvenile rheumatoid arthritis.

The study was conducted on thirty female children with polyarticular juvenile rheumatoid arthritis; ranging in age from 11 to 16 years old (13.45± 1.66). They were classified randomly into two study groups equal in number (A & B).Both groups participated in a successive 3-months, 3- times weekly selected physical therapy program consisting of infrared, stretching exercises, range of motion exercises, strengthening exercises for 55 minutes. In addition, Group A received treadmill training, while Group B received bicycle ergometer training, each for 15-25 minutes.

All subjects underwent exercise testing measuring maximal O_2 consumption (VO_2 max) via Bruce test at the beginning and at the end of the program. The results of this study revealed statistically significant improvement of the aerobic capacity in both groups (A &B) (**P<** 0.05) when comparing the pre and post treatment results. Also significant difference was recorded when comparing the post treatment results of both groups (P< 0.05) in favor of group A as VO2 max was higher in group A by 22% than in group B. Correlation coefficient and regression analysis were performed. Analyses revealed a significant positive relationship between VO2 max and Body Surface Area and between VO2 max and body mass (P< 0.05).

From the obtained results of this study, it can be concluded that, aerobic exercises are very effective and should be used as an adjunct to the traditional

physical therapy program in order to improve the aerobic capacity in children with polyarticular juvenile rheumatoid arthritis.

Keywords:

Juvenile rheumatoid arthritis; Aerobic capacity; Aerobic exercises; Exercise testing.

Name : Mohammed Ali Mohammed

Faculty of Physical Therapy

Dept. : Physical Therapy for Musculoskeletal

Degree : M. Sc.

Title of Thesis: The Combined Effect of Mobilization and Therapeutic Exercises Versus Therapeutic Exercises in Treatment of Shoulder Impingement Syndrome

Supervisors : Dr. Ibrahim Magdy Elnaggar, Dr. Samir Elsayed Seleem and Hatem Mohammed Elazizi

Abstract :

Purpose: This study investigated the combined effect of mobilization and therapeutic exercises in treatment of shoulder impingement syndrome**.** **Subjects**: Thirty patients diagnosed as shoulder impingement syndrome due to mechanical causes stage II Neer classification. **Methods:** Patients were distributed randomly into two groups. The first experimental group (A) consisted of 15 patients with a mean age 36.47(±6.68) years; they received infrared radiation followed by a program of therapeutic exercises. The second group experimental group (B) which consisted of 15 patients with a mean age 36.26(±6.54) years; they received infrared radiation followed by a combined program of mobilization techniques and therapeutic exercises identical to those applied to the first group. Treatment was given 3 times per week, each other day, for 4 consecutive weeks. Patients were evaluated pretreatment and posttreatment for shoulder pain severity, shoulder functional disability, shoulder flexion, abduction, internal rotation, motions, and shoulder acromiohumeral distance in adduction and abduction using ultrasonography. **Results:** Patients show significant improvement in the all measured variables in both groups. But between groups difference the second group show a significant improvement than the first group in all measured variables. **Conclusion:** Both of the therapeutic exercises and the combination of therapeutic exercises and mobilization had a significant effect on shoulder pain severity, shoulder functional disability, shoulder flexion, abduction, internal rotation motions, and (AHD) both in adduction and abduction. However, the

combination of mobilization and therapeutic exercises were more effective than the therapeutic exercises alone in the treatment of shoulder impingement syndrome patients.

Keywords:

Impingement syndrome; Therapeutic exercises; Joint mobilization; Acromiohumeral distance.

Name : Nesreen Sayed Mohammed Bahnsayi

Faculty of Nursing

Dept. : Pediatric Nursing

Degree : PhD

Title of Thesis: Impact of Supportive Care for Mothers of Children with Brain Tumor on Their Coping in Pediatric Surgical Unit at Cairo University Specialized Pediatric

Supervisors : Dr. Mirret Darwish, Dr. khaled Bassim Aly and Dr. Gehan A. El- Samman

Abstract :

Parents dealing with childhood brain tumors face many different stressors throughout the course of their child's illness.
The responsibility is often on mothers. So, the aim of this study was to evaluate the impact of supportive care for mothers of children with brain tumors on their coping at pediatric surgical unit in Cairo University Specialized Pediatric Hospital.

A sample of Convenience of 60 mothers of children with brain tumors (30 mothers for study group and 30 for control group). Data were collected by using questionnaire sheet (pre- post- test) to assess informational needs. Observation checklists (shunt and fever care) to assess practical needs, anxiety- depression scale and coping scales to assess emotional and psychological needs. The results of this study revealed that less than half of mothers were illiterate. Regarding to mothers' knowledge, less than two thirds of mothers in study group gained satisfactory scores after intervention.

There is statistically significant difference between pre and post tests regarding to knowledge after intervention among the study group. Most of mothers before supportive care experienced mild anxiety compared to half of them after intervention.

Regarding to emotional-focused coping before intervention the highest mean score was helplessness, the minority of mothers felt acceptance in study group and control groups. However after intervention, wishful thinking was the highest mean score in study group, while helplessness was the highest mean score in control group. In relation to problem-focused coping before and

after intervention the highest mean score was positive reinterpretation, the lowest mean scores were denial for study group and control group.

It can be concluded that mothers who received supportive care showed understanding toward the health care situation, providing physical care to their children, experiencing less level of anxiety and coping with stressful events during children illness than those who did not.

Multidisciplinary team should be involved in teaching and helping the mothers and their brain tumor children to be managed from an apparently common sequence of physical and emotional reactions and to help them all live with the cancer.

Keywords:

Supportive care; Brain tumors; Stress and coping.

Name : Wessam Farouk Ali Hussein

Faculty of Nursing

Dept. : Dermatology

Degree : M. Sc.

Title of Thesis: Sexual Knowledge and Psychosocial Problems Among First Year Female Students at Faculties of Cairo University

Supervisors : Dr. Nelly Ahmed Mahgoub and Dr. Nefissa Mohammed Abdel- Kader

Abstract :

This study aims to assess the relationship between lack of attainment of sexual knowledge and the development of psychosocial problems among first year females' students in as a representative sample from all Faculties of Cairo University, Egypt. A randomized stratified sample consist of 500 young adolescent females' students in their fresh first academic year were included in the study. A descriptive correlational design was used for this study as a research methodology. The study was conducted at facilities of Cairo University. Quantitative methods were used in this study through using three tools of data collection. The researcher developed the first two tools, while the last one was a ready standardized tool. Sociodemographic data sheet, Assessment questionnaire for sexual knowledge, resource, and psychosocial problems for females' adolescents, and Eysenck personality Questionnaire "E.P.Q.". Results of this study revealed that females' student's demographic data were 91.6% of the sample was less than 19 years old, 68% study in theoretical faculties, the female student's general attitude toward sex education was positive toward sex education , female students' perception of elements of appropriate sexual information was positive about sexual information that should be received at their age , 69.2% of female students gain their sexual information from their mates colleague, while 62% gained information from their mothers, The females' students had highly rate of negative feelings related to their information about sexuality, negative self esteem toward themselves, negative gender identity toward themselves, there ware a statistically significance relation between sample perception of elements of appropriate sexual information according to age and their marital status, their

residence, their studying type, and their gender identity. This study recommended that integrated bio-psychosocial assessment as essential element for caring healthy and non healthy adolescents including assessment of their sexual needs, sexual problems and their sexual questions to increase their awareness about their sexuality.

Keywords:

Female adolescents; Sexual knowledge; Psychosocial problems.

Inter/Multidisciplinary and Future Science Sector

- African Studies Institute
- National Laser Institute

Name : Wesam Ahmed Taha Mansur

Faculty of African Research and Studies

Dept. : History

Degree : Ph. D.

Title of Thesis: The Administration System in Darfur (1916- 1936)

Supervisors : Dr. El-Sayed Felaifel

Abstract :

After the First World war, Darfur was considered by the British as a laboratory for administrative, innovation, aiming at a certain delegation of judicial and administrative powers to the local ruling elite, or tribal establishment In the Sudanese capital, Khartoum.

After the First World War, a policy of Indirect Rule was initiated. The ideas behind this were not entirely new in the Sudan or in the British African Empire as a whole. In the Sudan a policy of delegating power to native agencies was first begun in" the' province of Kordofan, before the First World War, under the District Inspector, E. N. Corbyn. In Nigeria a policy of Indirect Rule, that was delegating authority "to local leaders, was employed early in the century under Lord Lugard The publication of his book; The Dual. Mandate in British Tropical Africa in 1922 won the minds of a generation of British administrators in Africa.

When the' "Milner Mission" was sent to Egypt in 1920, two members were' sent to the Sudan to inquire into and propose administrative developments for the country. This had an important impact on the application of the policy of Indirect Rule. This commission, to which further" reference to "will be given in the thesis, recommended a" certain delegation of executive judicial power to local tribal authorities aiming first to lessen the burden that the hearing of a large number of petty disputes, like camel or cattle theft, represented for the British administrators. The implementation of the "Powers of Nomad Sheikhs Ordinance" "in 1922 was in line with these suggestions.

This was the beginning of the policy of "Indirect Rule" (also called Devolution) in the Sudan, implying that this policy involved the delegation of power from the central level, Khartoum, via the province capital to local agencies of different kinds.

Keywords:

Darfur; Administration system the Sudan; Direct administration indirect administration; History of the sudan.

Name : Kholoud Mohamed A. Mohamed

Faculty of African Research and Studies

Dept. : Natural Resources

Degree : M. Sc.

Title of Thesis: Geology of some Pan African Gold Sites: Case study Al-Fawakhir Gold mine, Eastern Desert, Egypt.

Supervisors : Dr. El-Sayed Ibrahim Gaber, Dr. Abbas Mohamed Sharaky

Abstract :

Al-Fawakhir area constitutes a part of the Pan-African belt. It lies in the Eastern Desert of Egypt between latitudes 25°57′00″ and 26°00′00″ N and longitudes 33°35′00″ and 33°38′30″ E. Two gold mines exploited for gold since the Pharaonic times are located in the study area. These two mines are Al-Fawakhir, and El-Sid gold mines.

Using satellite imagery and aerial photographs, the area is mapped through comprehensive field work. A geologic map (scale 1:40000) is given the field relations, structural elements and startigraphic lithology are described and have been discussed during the present work. Based on lithostratigraphical correlation the gold deposits of Al-Fawakhir area, represents a Late- Event in the Neoproterozoic Era. Geologic mapping reveal that the area is dominantly covered by metamorphic peridotites (serpentinite), metagabbros, granitic rocks, Dokhan Volcanics and forcefully intruded by doleritic dykes and gold bearing quartz veins.

Petrographic examinations as well as modal analyses for the granitic rocks are given.

The granitic complex consists of three phases of intrusions; the syenogranites, monzogranites, and alkali feldspar granites. All samples of these phases plot in the field of granitoides formed by crustal fusion, on the Q-A-P diagram. Hybrid rocks between the granites and the metagabbros are also examined. Geochemical analyses, petrochemical calculations, and plotting on the international binary and ternary diagrams reveal that the metamorphic peridotite (serpentinites) belongs to the metamorphic dunite, and lherzolite associated with ophiolites.

The metagabbros are of tholeiitic nature and are of the cumulate type. The granitic rocks are of subalkaline to alkaline nature. None of the granitic samples are oceanic plagiogranite Al-Fawakhir granites are post oroginic, rift-related, and continental collision, intruded within a thick crust (20-30 km).

Keywords:

Al-Fawakhir Pan; African Gold Mines Geology.

Name : Zienab Abdel Fattah Mohamed

National Institute of Laser Enhanced Sciences

Dept. : Application of laser in Meteorology, Photochemistry and Agriculture

Degree : Ph. D.

Title of Thesis: Determination of calcified tissues surface hardness and its application on eggshell of broiler breeder

Supervisors : Dr. Mohamed Abdel Harith Mohamed, Dr. Ala Eldien Mohamed Abdo

Abstract :

A remarkable correlation exists between the surface hardness of solid targets and the ionic to atomic spectral lines intensity ratios in LIPS spectra. This phenomenon has been investigated in details using three different calcified tissues, namely human teeth enamel, shells and eggshell. The results are interpreted in view of the repulsive force of the laser induced shockwaves and have been proved experimentally[1]. The experimental parameters effects on the surface hardness estimation of three calcified tissues via LKIBS have been studied.

The investigated experimental conditions were the laser pulse duration (nanosecond and picosecond), and the experimental arrangements, namely single and double pulse LIBS setups.

A detailed dissection of the experimental results revealed that the ratio between the intensity of ionic to atomic spectral lines and the surface hardness depends on the laser pulse duration as well as the experimental arrangements (double or single pulse setup) This technique has been applied successfully for the estimation of the broiler breeder age according to the relevant eggshell hardness[2].

Keywords:

LIBS; Calcified tissues; Hardness

Name : Galal Khames Galal Mabrouk

National Institute of Laser Enhanced Sciences

Dept. : Laser Applications in Metrology, Photochemistry and Agriculture

Degree : M. Sc.

Title of Thesis:. Applications of laser microbeam cell surgery and *Agrobacterium*- Mediated gene transformation systems in melon *(Cucumis melo L.)*

Supervisors : Dr. Mona A. Aziz Mohamed and Dr. Atef Shoukry Sadik

Abstract :

In the current investigation, the applications of laser microbeam cell surgery based on visible laser at 441.5 nm, focused to less than 1 µm as a new transformation system in melon (*Cucumis melo* L.) has been studied and compared with transformation system *via Agrobacterium tumefaciens* as well as a combine of laser microbeam cell surgery and *A. tumefaciens* treatment.

The three transformation treatments have been carried out on the hypocotyls proximal zone explants of melon cv. Shahd El-Dokki with the plasmid pISV2456 that harboring *gus*-intron and *bar* genes.

The treated explants were regenerated on shoot regeneration medium MSBA1 composed of MS supplemented with BA at concentration of 1 mg/L and 250 µg/L bialaphos. The obtained shoots were transferred to the elongation medium then, to the rooting medium. This study aimed to estimate the frequency of transformation using *Agrobacterium*-mediated transformation system as a successful common method for gene transfer in melon, establish transformation system by laser microbeam cell surgery as a new technology for gene transfer in melon, where it facilitates the incorporation of exogenous DNA into cells of hypocotyls through puncturing holes in the cell wall and cell membrane, estimate the frequency of transformation by using a combined treatment between Agrobacterium-mediated transformation system and laser microbeam cell surgery to study the efficiency of this method in the transformation in melon, compare the regeneration process and the transformation frequency of the three methods and confirm the presence of the transgenes in the putatively transgenic plants by molecular analysis in each

treatment. Melon transformation was carried out using A. tumefaciens strain LBA4404/pISV2678. In the case of laser mediated gene transfer in melon, the laser pulse were enough to puncture a tiny submicrometer self-healing holes, momentarily made in the cell wall and membrane. After the holing process of the cell wall and membrane of the plasmolized cells, the exogenous DNA enters the cell rapidly. In the case of the combined treatment, the explants cultivated with Agrobacterium after treating with laser. Results showed that there was no significant difference of shoot regeneration between Agrobacterium and laser microbeam transformation techniques. Histochmical GUS assay and molecular analysis proved the existence and the expression of the gus-intron gene. Besides, the presence of the bar gene has been detected by the molecular analysis. PCR was also performed to confirm the presence of the transgenes.

All the three transformation treatments showed PCR-positive with different percentages, indicating that the two genes were successfully transferred to the explants during the three methods. Results obtained from the Agrobacterium treatments revealed 20% PCR-positive for gus gene as 6 out of 30 tested shoots, while 16.6% PCR-positive as 5 out of 30 tested shoots PCR positive.

The combined treatment represents 13.3% PCR-positive as 4 out of 30 tested shoots were positive. On the other hand the Agrobacterium treatments revealed that 16.6 % PCR-positive for bar gene as 5 out of 30 tested shoots were 20% PCR positive as 6 out of 30 tested shoots in the laser treatment.

The combined treatment represents 13.3% PCR-positive as 4 out of 30 tested shoots were positive.

Keywords:

Melon; Agrobacterium-mediated transformation; Laser microbeam; Proximal zone, Hypocotyl; Bar gene; Gus gene.

Social Sector

- **Economics and Political Science**

Name : Zeinab Mohamed S. Elsayed

Faculty of Economics and Political Sciences

Dept. : Business

Degree : Ph.D

Title of Thesis: Achieving Competitive Advantage's Requirements In The Egyptian Maritime Sector: With The Application on The Development of Egyptian Ports .

Supervisors : Dr. Khalil Tawfik Darwish and Dr. Laila Ahmad El Khawaga

Abstract :

Achieving Competitive Advantage's Requirements In The Egyptian Maritime Sector: With The Application On The Development Of Egyptian Ports .Port sector had tremendously changed over the past two centuries.

Most ports today are competing with one another on a global scale. This has generated a drive to improve port efficiency and integrate port services with other components of the global distribution network. Within this context of research, The dissertation in hand arises from the importance of the institutional reform process in managerial styles and practices to achieve the requirements of the competitive advantage in ports' management.

The leaning curve of such needed reforms is underlined by the globalization moves and the rising of international trade.

Although Egyptian ports enjoy a considerable number of comparative advantages as the supreme strategic location between three continents , and the presence of Suez canal linking east to the west, there is a wide lack of competing advantage standards that are enjoyed among its rivals. The competitive advantage approach within this context comes a solving managerial solution through the reorganization and the re-regulation of port structures transferring Egyptian ports from just a gate of cargo delivery to a commercial service center that contributes in the economic welfare of the maritime sector as a whole . Moreover, the dissertation focuses on that there are several organizational and administrative arrangements creating a strategic shifts to face the competitive pressures affecting the port sector. And Egypt , being at the center of such arrangements, took the responsibility towards the modernization of its ports through the acknowledgment of financial and

operational benefits of private participation in port service . In addition, the research puts in focus that the managing approach through achieving competitive advantage requirements is the core solution towards the development of ports . The research also tackled the port of Sokhna and Adabiya as two examples of two different styles of management to compare the degree of efficiency of each port delivery services.
The dissertation concludes that the improvement of external trade competitiveness by improving port efficiency and easing the financial burden on national budget's by transferring part of port investments and operating costs to private-public partnership is an inevitable solution .

Key words

Competitive Advantage Competitive Advantage's ; Requirements for the development of Ports Comparative Advantage; Maritime Sector The Egyptian Ports ,The Economies of maritime sector; Logistics of maritime sector; Multi – Modal Transport; Containers; Transhipment; Private – Public Partnership; B.O.T.; Sokhna Port; Adabiya Port; Global Port Management Development.

Name : Dalia Reda Hassan Abou El Ela

Faculty of Economics and Political Sciences

Dept. : Economics

Degree : M. Sc.

Title of Thesis: After the pricing of medicine to the health service in Egypt

Supervisors : Dr. Heba Ahmed Nassar and Dr. Mona Mostafa El Baradei

Abstract :

this research aims to study the impact of pharmaceutical pricing policies on health care services in Egypt through three chapters.
the first chapter studied the policies of pharmaceutical pricing applicable in both developed and developing countries.
Then, the second chapter dealt with analyzing the pharmaceutical pricing policies in Egypt, and analyzing the weaknesses, strengths and challenges confronting the local pharmaceutical industry, The third chapter dealt with the most significant reasons behind the deterioration of the health care services along the recent years, that led to increasing financial burden on citizens, paiticulariv. low income ones, which led to asignificant increase in their expenditure on health care services. Finally, the third chapter dealth analyzing the effect of pharmaceutical prices on the supply of health care service in its main sources; Ministry of Health and Population, Hlealth Insurance Authority & Pharmacies, then analyzing the effect of pharmaceutical prices on the demand of the health care services and at last we submitted group of conclusions and recommendations for the study.

Keywords:

Generic Drugs; me too Drugs; Breathrough Drugs; New Drugs; Price Discrimination; Reference Price System; Cost Containment Policy; Reimbursement System.

Humanity Educational Sector

- **Arts**
- **Dar El-Ulum**
- **Archaeology**
- **Educational Studies Institute**
- **Kindergarten Education**
- **Specific Education**

Name: Hanan Mohamed Hafez

Faculty of Art

Dept.: Sociology

Degree : Ph. D

Title of Thesis: The Local Administration System and the Tribal Political Organization: A Field Study in Marsa Matroh Governorate

Supervisors: Dr. Mohamed Mahmud El- Gawhary

Abstract:

The current study is represented the nature of the argumentation relationship of the relationship between the tribal political organization (traditional leaders) and the local administration system (local leaders), and how it reflected the extent of integration of the tribal members of the community (especially youth) in the framework of the national society.

This has resulted in the two cases raise the question about the complementary basis to the study in the formulation of the theoretical framework and analysis of the results: the mechanisms of the tribal political organization and the relationship between the tribe and the state.

The village has been chosen the village “Ras El Hikma" (belonging to the Marsa Matrouh centre), to represent the village, which has the effective role played by the local unit. On the other hand, has been chosen as the village El Katrani (belonging to Sidi Barrani centre), to represent the village, which lacks an effective role of the local unit.

The study has depended-in addition to the comparative method- upon the anthropological method, which was the basis of which a number of methodological tools informants, photography, observation, and group discussion and depth interviews with members of the community sample study of different types.

The study was divided into two parts containing eight chapters; the first Part, entitled "the tribal political organization: theoretical trends" four chapters, the first systematic framework for the study, while the second chapter has tried to exhibit the theoretical inheritance and the empirical for the study.

As for the third chapter, it has discussed the relationship of the state to the nomads within the framework of a historical constructive vision. The fourth chapter came to illustrate the effect of the applying for the local administration system upon the mechanisms of the tribal political organization, till the holding of the local election in 1997.

As for the second part, it has included four chapters each of them is trying to make close observation for the relation of the local administration institution to the tribal political organization at the Matrouh Governorate, applying the two villages "Ras El Hikma, and El Katrani, while the fifth chapter tried to have a general view upon the two societies of the study.

As for the sixth chapter, it has discussed what the mechanisms of the tribal political organization do for the roles of these two communities.

The seventh chapter has exhibited the position of the two villages of study from the angle of the relationship between their tribal political organization and the local administration institution. Finally the eighth chapter has aimed at the crystallization of a future vision for the tribal organization at the Governorate of Marsa Matrouh as a whole.

Name: Emad Ali Abdul Latif

Faculty of Art

Dept.: Arabic

Degree: Ph. D

Title of Thesis: An analysis of political rhetoric in speeches by Anwar Sadat (1970-1981)

Supervisors: Dr. Abdul Hakeem Radi

Abstract:

This thesis tackles political rhetoric in selected speeches by the late President Muhammad Anwar Sadat.

The thesis tackles two main questions: (1) Do Sadat's speeches perform any political acts? If so, what are these acts? (2) How does his language perform these acts? In order to answer such questions, the present research conducts linguistic analysis of the speeches, benefitting from methods of political rhetoric and discourse analysis.The introduction addresses the research problem, questions, methodology and challenges of the research.

The theoretical part comprises two chapters, the first of which is concerned with putting forward a critical review of the literature on Arabic political rhetoric as well as the gaps that it may fill.

The second explains two approaches that have contributed to the formulation of this research orientation and its analytical procedures.

These two approaches are critical discourse analysis and addressee's rhetoric.

There is a discussion of the theoretical foundations of these two approaches and the analytical procedures therein, and how they could be employed in the study of language in politics in general and Arabic political speeches in particular.

The analysis is divided into two chapters.

The first is divided into two parts.

The first part is concerned with the 'EGYPT IS A FAMILY' metaphor in a corpus of Sadat's speeches. In this chapter, the researcher has undertaken the following: (1) finding out the ways of constructing the 'EGYPT IS A FAMILY' metaphor and its comprehension using the two theories of

Conceptual Metaphor and Conceptual Blending in addition to the concept of Neo-patriarchy; (2) exploring the nature of power relations in traditional rural Egyptian families as introduced into Sadat's speeches using the 'EGYPT IS A FAMILY' metaphor, with a focus on the discursive practices of patriarchal power; (3) studying the instantiations of the 'EGYPT IS A FAMILY' FAMILY' metaphor and its functions and practical mechanisms; (4) defining the features of the 'EGYPT IS A FAMILY' metaphor in the patriarchal rhetoric of Sadat; (5) defining the characteristics of his patriarchal discourse and the role of the 'EGYPT IS A The second part of this chapter is devoted to the most important metaphorical concepts that have been used in framing the topic of 'pre-revolution Egypt' as instantiated in Sadat's speeches drawing upon a corpus of more than 30,000 words.

The corpus includes phrases and clauses that describe, praise or criticise aspects of the political, social or cultural life in pre-revolution Egypt. To start, the researcher points out the contexts wherein pre-revolution Egypt is the discourse topic in speeches and the features of the history-making element in this period.

Also, the metaphorical analysis involves the demarcation of the metaphorical macro concepts which were used in reference to pre-revolution Egypt as well as the construction of such metaphorical concepts, their functions and effects. metaphor in its shaping; and (6) studying some of the actual responses made by the target addressees and attempting to formulate alternative metaphors that may be at odds with the family metaphor.

The second part of this chapter is devoted to the most important metaphorical concepts that have been used in framing the topic of 'pre-revolution Egypt' as instantiated in Sadat's speeches drawing upon a corpus of more than 30,000 words. The corpus includes phrases and clauses that describe, praise or criticise aspects of the political, social or cultural life in pre-revolution Egypt. To start, the researcher points out the contexts wherein pre-revolution Egypt is the discourse topic in speeches and the features of the history-making element in this period. Also, the metaphorical analysis involves the demarcation of the metaphorical macro concepts which were used in reference to pre-revolution Egypt as well as the construction of such metaphorical concepts, their functions and effects.

Chapter two discusses interdiscursivity between religion and politics in Sadat's speeches. It sets out to present some of the historical dimensions of using religious language in Arab political discourse and review the writings concerned with studying the religious nature of Sadat's political discourse. This is followed by a definition of the research problem, its context and its rationale. A detailed analysis of interdiscursivity is conducted between the

political and religious discourses in two speeches (5 February, 1977 and 4 October, 1978). The analysis focuses on: (1) specifying the determinants and limitations of the addressees' responses to both political and religious discourses in the Egyptian social context; (2) discussing the signs/symbols that Sadat used in constructing his image, with a view to facilitating interdiscursivity between the two discourse types, religious and political; (3) tracing changes in the citizens' responses to the political discourse that presents itself as a semi-religious discourse through interdiscursivity with religious discourse; (4) explaining how the use of Quranic verses in the speeches results in setting restrictions on critiquing them or resisting their performed acts, and how other linguistic and rhetorical phenomena cooperate with interdiscursivity towards the fulfilment of such a purpose.

The concluding chapter outlines the general findings with respect to the interrelation between language and politics in general and political rhetoric and political acts in particular. This is followed by a list of suggested topics for future studies and related recommendations.

Name : Aly Ibrahim Aly Al-Rifaei

Faculty of Arts

Dept.: Semitic Language and its Literature

Branch of the Semitic languages and literature

Degree: M. Sc.

Title of Thesis: Branch of the Semitic languages and literature

Supervisors : Dr. Ahmed Mahmoud Hewedy

Abstract:

The books of the Old Treatment, in their current version, do not provide a clear vision about Jewish eschatological beliefs or concepts.

The historical and political events that the Israelis had experienced made this vision vague or even led to its absence. Moreover, this vision was affected by the complex and mythological beliefs of other nations that surrounded Israel as opposed to clear and direct religious concepts.

That is why; the references to eschatological concepts came in the form of general statements which do not have any clear indications.

This is clear in the books of the Torah (Pentateuch) which focused on ideas related to the near future of the Israelis such as the promise of owning the land of Palestine, and the blessing of an infinite number of children whereas they did not develop any ideas related to the afterlife. Israeli prophets take the credit for developing a new vision about the future and what will happen during the end of days by referring to the concept of reward and punishment as well as the concept of "The Day of the Lord" which developed by prophets to become the day when everybody whether Israeli or not will be equally judged. This paved the way to the emergence of the idea of heaven and hell in Jewish eschatological beliefs during the 4th century BC as in Tirto- Isaiah. One of the results of the Babylonian Captivity (586 BC) is the appearance of new trends in post-captivity Judaism developed by Apocalypse writers (Apocalyptic Literature) which were against priestly power.

As a result of this, they called for abandoning their previous expectations (Promise and Election) as well as historical facts about the world. This led to

the development of the concept of resurrection which did not appear until the late 2nd century BC as in the book of Daniel.

As a result of this, they called for abandoning their previous expectations (Promise and Election) as well as historical facts about the world. This led to the development of the concept of resurrection

which did not appear until the late 2nd century BC as in the book of Daniel.

Name : Noah Mohamed Ahmed El Said

Faculty of Art

Dept.: Sociology

Degree: M. Sc.

Title of Thesis: Human Development and Social Security (Field Study in Tow Villages in Fayoum GOV)

Supervisors: Dr. Aly Mekawy , Dr. Kamal Tabaay

Abstract:

This study includes, introduction in methodology of study and its main branches and then the first part and finally the second one.
The first part include five chapter and they're; ch1. (Intellectual and historical roots of social security), ch2. (The theoretical framework of human development and social security), ch3. [Human development (development of concept and centers of interests)] ch4. [Social security (co-factores, obstacles and mechanisms)], ch5. (critical view over some previous studies in analysis of the relation between human development and social security). Part two, represents the imperical aspects of study; it includes two chapter, ch6. (General view over the research study), ch7. (Human development in two villages : Garfes & El-Gomhoria in El-Fayoum government) then the presentation of all the Arabic & foreign references and finally the index.

1- The significance of the study:

The importance of this study returns back to the role of the plans & programmes of human development a generally in development of societies, and its special role in stability, peace and security of humanity on the universal, national and local levels.

2- Aims of the study:

a) Presentation of some imperical studies that deal with the issue of human development and it's relations with the different variables (education, economy … etc).
b) Demonstration the intellectual and historical roots concerning the issue of social security.
c) Presentation the co-factores, obstacles and mechanism of social security & centres of human development.

3- Intellectual view over the study:

The study upon three theoretical perspectives. They are:

a) Structural and functional perspective.
b) Perspective of the human development.
c) The theory of social capital.

4- Concepts of the study:

They are two concepts: Human development and social security.

5- Hypotheses of the study:

a) Making of a high standard of human development might lead to establishment of social security.
b) Lowering the standard of the human development may lead to spread of obstacles against social security.

6- Unit of the study:

The unit of the study is the family.

The questionnaire was done with the mother or the father.

7- Method of the study:

The study depend on the experimental and the historical methods.

8- Methods and tools of the research used in this study:

The study depends on the statistical method and the method of case study open interviews observation (simple observation), the questionnaire.

9- Method of analysis and explanation :

This study involves the method of Qualitive and Quantitive analysis. They are two complement complementary method for demonstration and presentation of the impreical data in the view of aims of the study and its hypotheses.

10- The result of the study:

It refer to a general conclusion; there is appositive relationship between the human development and social security

Name : Al Hussein Abdel Fattah Gado

Faculty of Dar Al Ulum

Dept. : Islamic Philosophy

Degree :. Ph. D

Title of Thesis: The Inferential method In Prophetic Tradition (Sunnah)

Supervisors : Dr . Mohamed Al-Algelind and Dr. Ahmed Youssef Soliman

Abstract :

This research is concerned with studying the inferential method in prophetic tradition. It was divided into an introduction, approach, three parts and conclusion.

The introduction addresses the reasons of choosing the subject, methodology, and a brief review of parts of the study

The approach is concerned with clarifying the prophetic tradition status and importance in the process of reference and certainty, and of rebutting suspicion in this regard.

The first part: knowledge regarding the prophetic traditions and the means of certainty in the inference methodology.

The second part: inference in the prophetic tradition (forms – rules – ends) Part three: applications and critical studying with clarifying the inference method in prophetic tradition. Conclusion Concludes the most important results of research and the how to utilize followed by sources and references used by the researcher.

Name: Yousof Mohammad Yousof Al Said

Faculty of Dar Al 'Ulum

Dept. : Islamic Shari'a

Degree: M. Sc

Title of Thesis: Ordinances of prudence in Islamic Jurisdiction "A jurist study compared with the Egyptian criminal law"

Supervisors: Dr. Ahmed Yousef Suleiman Shahin

Abstract:

This research contains an introduction and three chapters:

In the first I pointed out the concept of prudence, then I discussed the sayings of jurists in putting the prudence as a condition in the robbery followed by punishment, then I pointed out the vision of Egyptian law in this point,.

In the second chapter, I pointed out the classification of jurist for prudence, then the conditions of prudences, then I pointed out some different types of prudences, then I discussed the case of stealing a part of the prudence or damaging it .

In the third chapter, I studied the case of losing a condition of the prudence, then its effect on the crime and punishment, then I answered a very important question in which I explained the convenience between the crime and punishment in case of the existence or absence of the prudence.

Key words:

Islamic jurisdiction; criminal jurisdiction; crime and punishment

Name : Sayed Mohamed Hamida

Faculty of Archaeology

Dept. : Restoration

Degree : Ph. D

Title of Thesis: Pathology Assessment And Protection Of Archaeological Sites In Seismic Region, Application On Some Greek-Roman Monuments In Alexandria, Egypt.

Supervisors : Dr. Kyriazis Pitilak, Dr. Stavros Bandis and Dr. Ioanna Papyiani

Abstract :

The thesis presents the geotechnical, geophysical investigations and the numerical static and seismic analysis of selected archaeological sites in Alexandria, Egypt i.e. the Catacombs of Kom El-Shoqafa, El-Shatbi Necropolis, the Necropolis of Mustafa Kamil, Amod El-Sawari and Kom El-Dikaa archaeological sites. Modern underground structures (i.e. tunnels) are considered less vulnerable to seismic actions than above ground structures. However underground monuments like tombs and catacombs, present certain construction and geometrical particularities that make them quite vulnerable. The analysis of the static stability and the behavior of these complex monuments under strong seismic loading, together with other factors due to unfavorable site conditions affecting the material strength, (Rising water level, aging, weathering and latter lack of preservation), are the key factors for the efficient restoration and retrofitting of these underground monumental structures. In the present thesis, we present in a first phase a comprehensive geotechnical survey undertaken in the five archaeological sites, comprising geophysical ambient noise measurements (microtremors and seismometers arrays), as well as field and short & long-term laboratory experiments and tests, in order to define the physical, mechanical and dynamic properties of the soils and soft rock materials within which the historical monuments are excavated or constructed above. In the second phase, we present the main results of the detailed static and seismic numerical analysis of these monumental structures. The seismic analysis is performed applying different seismic scenarios corresponding to the seismotectonic features of Alexandria. Advanced soil-rock elastoplastic modeling has been used through out the different phases of

the numerical finite element analysis. The aim of the analysis is twofold: (a) to investigate the safety margins of the existing monuments, under their present conditions, against environmental (i.e. weathering) and extreme seismic loads and (b) to investigate the potential improvement of their global behavior applying specific retrofitting techniques.In general, the present study may be considered as a preliminary pilot study to assess the pathology and protection of these monumental structures, more precisely the catacombs and other underground structures, in a particularly unfavorable environment, exposed to considerable weathering, aging, human and seismic activity. An efficient restoration and retrofitting of these historical monuments must be based on a well documented and constrained assessment of the pathology.

Keywords

Underground monuments; Archaeological sites in Alexandria; Geotechnical investigation; 2D-3D static analysis; Seismic response analysis; Microtremors; Seismic protection of monuments.

Name : Dalia Ali Hasan El Zayat

Faculty of Archaeology

Dept. : Conservation

Degree : M. Sc

Title of Thesis: Experimental and Applied Study for Restoration and Conservation of Archaeological Wooden Stained Glass with Application on the Selected Examples

Supervisors: Dr. Salwa Jad al-Karim, Dr. Ramadan Awad and Dr. Nasrin Hadidi

Abstract :

Glass artworks are varied and diversified from glassware, museum collections are full of, to etched glass windows which we find in many castles, mosques and churches.

They are between plaster etched windows which are considered an essential effects of the Islamic architecture, lead etched glass windows which are considered an essential effects of the European architecture, and wooden etched glass windows which link between the two previous types, so that its historical rush and roots go back to the Orient and the extension of such roots goes back to some European effects.

Key words

Stained glass; Glass loadings; Wooden frame; Dovetailing wood; Painting Corrosion; Wooden knots; Deformation Assembling Completion.

Name : Mahmoud Hassane Said Hassan

Faculty of Educational Studies

Dept. : Adult Education

Degree : Ph. D

Title of Thesis: a proposed strategy for the professional development of faculty members teaching participating in open distance learning in Egyptian Universities

Supervisors : Dr. Mamoud Ezz-Eldin Abdel Hady and Dr. Sami Mohamed Nassar

Abstract :

It may contribute to promoting and enriching adult education in general, and the field of (ODL) in particular, which supports the national project for establishing the university of (ODL) in Egypt.

It may be useful for the designers of professional development programmes for the teachers of adult in general, and in the field of (ODL) in particular. It may contribute to dealing with the defects and defaults in the professional preparation for the higher education professors in Egypt, which increases the efficiency of (ODL) programmes offered to adult learners.

The study may contribute to developing programmes of preparing the higher education professor and the supreme committee for planning the open learning by offering the proposed strategy for the professional development of faculty members in (ODL) at Egyptian universities.

Keywords:

A Proposed Strategy for the Professional Development; Faculty Members Teaching; Open Distance Learning.

Name : Doaa Ahmed Mohammed Haridy

Institute of Educational Studies

Dept. : Section of the Educational Psychology

Degree : M. Sc

Title of Thesis: The factors of the constructive thinking and their relation to the academic competence for the university students (Factorial predictive study)

Supervisors : Dr. Gaber Abdel Hamied Gaber and Dr. Nadia Mahmoud Sherif

Abstract :

The current study aimed to determine the factorial structure of the constructive thinking within the cultural framework of the Egyptian society for the university students, and to explore the constructive thinking factors predictive capability of the academic competence following dimension (effective study skill, time management skill, academic strains management skill and the total degree of the academic competence) for the university students.

Keywords:

The Constructive Thinking; The Academic Competence; The University Students.

Name : Fatma Hassan Aly Kable

Faculty of Kindergarten

Dept. : Basic Sciences

Degree : M. Sc

Title of Thesis: Integrated Activities Program for Developing some Effective Habits for the Personality of Kindergarten Children

Supervisors : Dr. Kamal El Din Hussein and Dr. Ebtehag Mahmoud Tolba

Abstract :

The Present study aims at getting acquainted with the effectiveness of using Integrated activities program for developing some effective habits for the personality of kindergarten children, and Identifying the effective habits suitable for building kindergarten child personality, the research student employed the experimental method, and the study sample comprised eighty child from second level children whose ages ranged between (5-6) years in Loli private school which appertaining to El-omraneya directorate, This sample was divided into two equal groups (experimental – controlling), each one comprised forty child, the research student employed all of the intelligence test, Effective habits for the personality of kindergarten child scale, and the Integrated activities program which was applied on the experimental group subjects over (100) hours at (5) days in week.

The results demonstrated that practicing Integrated activities program with the kindergarten children has a positive impact in developing some effective habits for the personality of kindergarten children, which leads to reexamination programs planning of kindergarten child, for arriving at the best level of mastery which child abilities arrive at it.

Name : Eman Saeed Abdel Hamid Mahmoud

Faculty of Kindergarten

Dept. : Psychological Sciences

Degree : M. Sc

Title of Thesis: A program for color perceptive concepts development and its relation with creativeness by blind child

Supervisors : Dr. Suheir Kamel Ahmed

Abstract :

The study problem is defined in the question: How effective k the proposed program in developing the color perceptive concepts and its relation with creative development by the blind child?

The. semi experimental methodology had been used, and the sample had been consisted of 12 children (7 males, 5 females) in Al Nour kindergarten, at the Model Center for Blind Care and Guidance, in Cairo. The researcher had used the following toots: Stanford scale- intelligence structure, forth image- prepared by Louise Kamel MIaika 1998، Creative thinking test for children i977, translated by Mohamed Sabet, 1982, Torance Color perceptive concepts scale by Paul Torance for children (prepared by the researcher) Color perceptive concepts by kindergarten blind child scale (prepared by the researcher) Color perceptive concepts by Torance for children program (prepared by the researcher) the researcher arrived at the following findings: the success of the proposed program in development of Color perceptive concepts by blind child, which had resulted in development of creativeness by him. The program effect had also continued into the follow up measurement, and the findings had confirmed that there are statistically significant difference between the post and follow up measurement in favor of follow up measurement in both of color perceptive concepts and creative thinking test except for the fluency dimension, which the findings had confirmed that there is no statistically significant difference between the average degrees of the study sample children n post and follow up application.

A program of Color perceptive concepts development; Creativeness; Blind child.

Name : Samar Saad EL-Din Ahmed

Faculty of Specific Education

Dept. : Music Education

Degree : Ph. D

Title of Thesis: The Role of Electronic Academic Music Library and the Facilities Provided for Research Students

Supervisors : Dr. Hossam El Din Mostafa Amin, Dr. Mohamed Fathy Mahmoud and Dr. Mohamed Abd El Raouf Ibrahim

Abstract :

The study discussed the electronic music academic libraries and its role to help and serve the needs of scientific research students. It aimed to describe the major music libraries in Egypt and identify potential that could be available in the building of an electronic music library.

The study used the field survey to obtain information through the questioners and check list. Finally, the study come with some important results in order to available the human, material and technical resources to provide electronic academic music library services to avoid the existing problems of the current music libraries. Also, the study presented some recommendations and future studies.

Key words:

Academic music libraries; Electronic libraries; Music library; services.

Name : Sally Naim Habib Habashy

Faculty of Specific Education

Dept. : Art Education

Degree : M. Sc

Title of Thesis: Suggested Program Depended on Arrangement of Colors and Numbers of Threads to Enrich Weave Surface

Supervisors : Dr. Tarek Mostafa El-Shafeey and Dr. Gomaa Heusseun Abd El-Gawad

Abstract :

This study handled the weaving colors effects, studying the color as one of the most important effective factors on the Art work appearance, and studying the simple constructions weaves as it is the basic in any textile or weaving works.

The study handled also sample of artists works which depended on colors weaves effects The study aimed and concentrated on contriving.

Geometrical technical rules which help the designers in controlling and swaying the decorative patterns on the weaving textile surfaces. It is resembled "till this point of the research" in; "30" Geometrical technical rules.The study also handled laying down and compiling a suggested program depends on numbers of coloured threads in the Repeat to enrich the weaved surfaces, to be applied in teaching units which divided in 4 (four) units to benefit of simple plain constructive weaves 1/1 and devised rules for obtaining ornamental decorative weaves-non classical-designs.

Keywords:

Weave Structure; Color Effect; Weave Effect; Colour and Weave Effects; Decarative Factors; Artistic Qalit; Design.

Appendix

Appendix

General Scientific Research Department
Information System Unit

Cairo University- University Administration Building,
Tharwat St., Giza, Egypt, Postal code: 12613.

Phone: +(202) 35704943 - 35676918 - 35675597
Fax: +(202) 37745324
Web site: http://gsrs.cu.edu.eg
www.cu.edu.eg
E-mail: resinfo@cu.edu.eg