2nd International Conference For Engineering, Technology & Sciences of ALKITAB UNIVERSITY

2nd ICETS-2018

Iraq- Erbil
4-5/12/2018

Sponsored By

IEEE Iraq Section

Welcome To ICETS-2018

On behalf of the preparation & organizing committees for ICETS-2018 , I would like to welcome you to the (2nd International Confereence for Engineering, Technology & Sciences of ALKITAB UNIVERSITY) , Iraq-Erbil (4-5/12/2018) with the sponsorship of IEEE – Iraq Section.

After the wide success that achieved by the 1st International Conference of Alkitab University on Dec/2017, we found our selves obligated to continue that success in order to support the academic and scientific mission in our beloved country, and we decided to achieve that by our selves or by cooperation with local or international parties to support our activities despite of how young our university is, and this what happened by cooperation with the IEEE foundation , the globally well known organization in the field of technology and engineering.

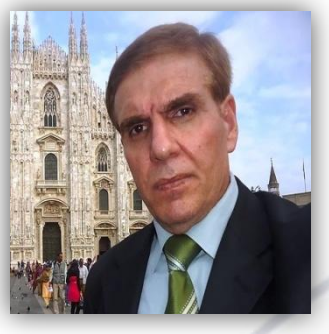
2nd ICETS-2018 aims to provide a forum for the presentation of new advances and research results in engineering, technology and medical Sciences , also for academic experts and participants to exchange their experiences and share research results about all aspects, and discuss the encountered practical challenges and the adopted solutions.

The Scientific committee of the conference received a large number of researches related to the field of the conference , and all these researches were evaluated (on the same standard) by a large number of the best editors and evaluators (locally and abroad), and at the end 38 researches were accepted to be presented in the conference.

Again we would like to welcome you to our conference, wishing you the best time, hoping to meet you in our next conferences.

Contents

Welcome Message from the Conference Chairman



On behalf of the 2nd International Conference for Engineering, Technology and Science of Al-Kitab-2018 (2ndICETS-2018), which is sponsored by IEEE technically I'm pleased to welcome you to the 2ndICETS-2018 and beautiful Erbil, Kurdistan-IRAQ.

It has been a real honor and privilege to serve as the general chair of this conference, 2ndICETS-2018, which has brought together a tremendous and rich diversity of authors and speakers from universities, states and industry around the globe to share ideas and new perspectives on a wide range of engineering, science research and technologies.

The conference addresses new technical and business issues essential to advancing today's engineering and technological environments. Thus, I am confident that this conference will allow researchers, industry players, academicians and decision makers share their experiences and knowledge to generate innovative research with the use of modern technologies efficiently and provide solutions to various related issues.

The 2ndICETS-2018 conference focuses on a broad range of these issues and challenges and weaves them through the Keynote Speakers, Distinguished Lecturers, Invited Talks, Workshops, and Technical Program. I would like to thank the scientific and the organizing committees and the technical sponsor IEEE Iraq branch. I greatly appreciate the unlimited efforts of our Technical sponsor, and everyone involved in this event, especially our partner organizations and companies that have contributed to the 2nd ICETS-2018. Finally, I wish you a successful conference, fruitful discussion, and that you will spend a pleasant time in Erbil the capital city of Kurdistan region, and hope that the conference will be stimulating, informative, enjoyable and will offer a very productive experience to all who attend it.

Prof. Dr. Ayad Ghany Ismaeel

Conference Chairman, and

President of Al-Kitab University

Welcome Message from IEEE –Iraq Section

It is my pleasure to be a part of this scientific event and be one of the stones who tries to raise the scientific level in the whole of Iraq. We are as IEEE Iraq section, confident that such technical sponsorship of the International conferences will provide good opportunities to the researchers, industry players, and decision-makers to share their experiences and knowledge. Ultimately, will provide suitable solutions to various issues which need a good scientific cooperation among the different research disciplines.

This conference was organized through a collaboration among " **Al-Kitab University** " and IEEE Iraq Section (as a scientific sponsorship is authorized by the IEEE organization). These two parties worked hard to gain good scientific outputs which will inform the world that Iraq has a good scientific mind, and capable to produce such excellent scientific outputs.

Finally, we would like to thank the scientific and the organizing committees, and everyone involved in this event, especially authors, for their unlimited efforts. We also would like to take advantage of the opportunity to express my gratitude to all national and International reviewers. Without their scientific supports, such scientific event would not be achieved.

Prof. Dr. Eng. Sattar B. Sadkhan

SMIEEE Representative

IEEE Iraq Section

Conference Date & Venue

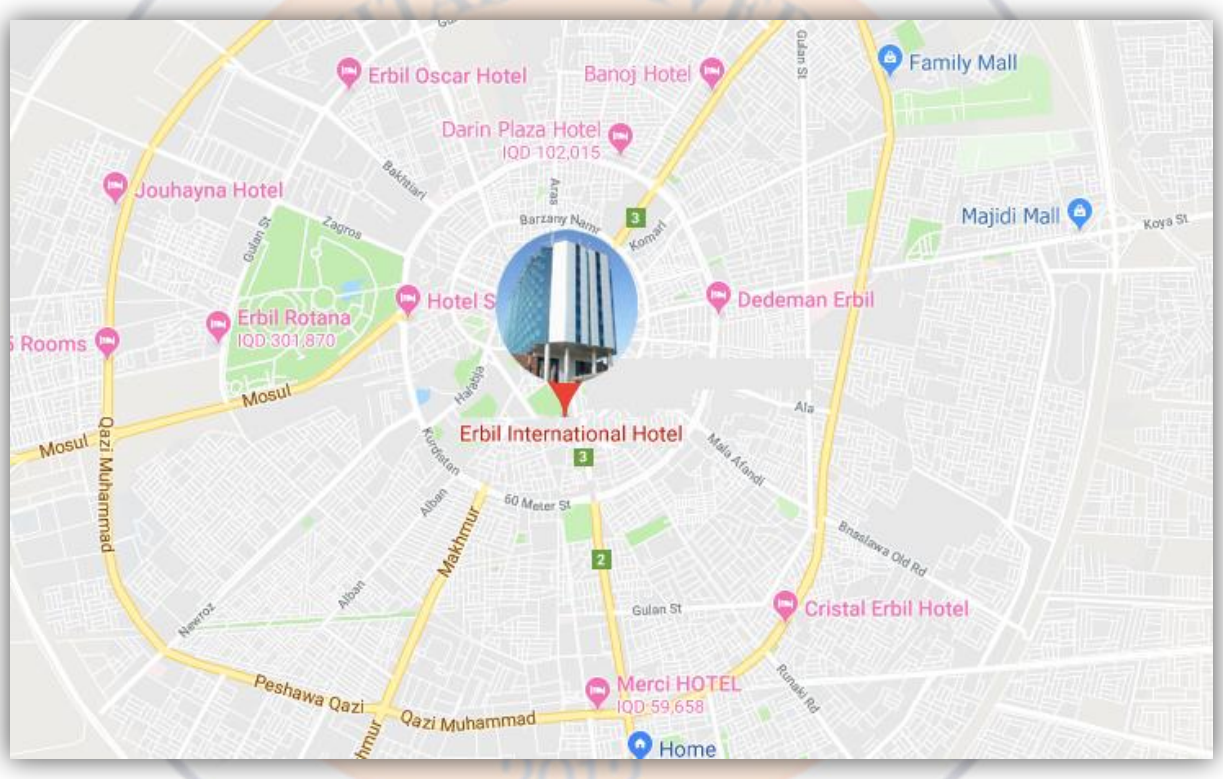
***Date* :**

4- 5 /Dec./2018

***Venue* : Conference & Guests accommodations**

Erbil International Hotel

30 Meter Street, Erbil, Kurdistan, Iraq



Conference Committees

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- Dr. Ayad Ghany Ismaeel, Al-Kitab University, ***Conference Chairman***
- Dr. Nidaa A. Abbas Head of IEEE Iraq Section
- Dr. Sattar B. Sadkhan, IEEE Iraq Section
- Dr. Abdulelah H. Yaseen, Al-Kitab University.
- Dr. Sameer Saadoon, Al-Kitab University.

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- Dr. Sattar B. Sadkhan (Iraq)
- Dr. Eva Volna (Czech Republic)
- Dr. Ibrahim Omary (Sudia Arabia)
- Dr. Ali- Al-Sherbaz (UK)
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- Dr. Abdel- Badeeh Salem (Egypt)
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- Dr. Hussien Habeeb (Iraq)
- Dr. Fang Wang (UK)
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- Dr. Ghassan Hameed (Iraq)
- Dr. Mustafa Özaka (Turkey)

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- Dr. Salman H. Omran,Ministry of Higher Education & Scientific Research.
- Dr. Siham kamel Mohammed, Al-Kitab University, IRAQ.
- Dr. Haider Kh. Easa, Al-Kitab University, IRAQ.
- Dr. Hazim Aljewaree, Al-Kitab University, IRAQ.
- Dr. Nadema A. Aljaf, Al-Kitab University, IRAQ.
- Dr. Runak T. Ali, Al-Kitab University, IRAQ.
- Dr. Manal A. Alssamaq, University of Mosul, IRAQ.
- Dr. Farqad Raheem North Technique University, IEEE IRAQ Section
- Dr. Suad H. Danook, Northern Technical University, IRAQ
- Abdul H. Alaidi Wasit University, IEEE IRAQ Section

- Sabiha F. Jawad (SMIEEE - Al-Mustansyriah University, IEEE IRAQ Section)
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- Mohammed H. Yaseen, IEEE IRAQ Section.
- Rusul S. Bader IEEE IRAQ Section
- Ihsan H. Hussien, Northern Technical University, IRAQ.

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- Dr. Abdul-rasoul Kh. Abbas, Al-Kitab University, IRAQ.
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- Dr. Farqad Raheem (North Technical University, IEEE IRAQ Section)
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- Dr. Samirah Saadoon Mustafa, Middle Tech. University, Iraq
- Dr. Amal Rasheed Farhan, Middle Tech. University, Iraq
- Dr. Huda Jabir Waheed, Al-Mustansiriyah University, Iraq
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- Dr. Bilal Abdullah Nasir. North Tech. University, Iraq
- Dr. Zeki Majeed, North Tech. University, Iraq
- Dr. Fawzi M. Omer, North Tech. University, Iraq.

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2. Omar Adil M.Ali, Al-Kitab University, IRAQ.
3. Marwan Hazem Ahmed, Al-Kitab University, IRAQ.
4. Nibras I. Saed, Al-Kitab University, IRAQ.
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6. Mahmood Talal Hussein, Al-Kitab University, IRAQ
7. Ahmed Aliady, IEEE IRAQ Section.
8. Mohammed H. Yaseen, IEEE IRAQ Section.
9. Mahmood T. Hussien, Alkitab University, Iraq
10. Khuthair Ahmed Hameed, Alkitab University, Iraq
11. Amir Saad Salih, Alkitab University, Iraq

Conference Program

Day (1) 4/12/2018

09:00 -10:00	*Registration*
10:00-11:00	*Opening Ceremony*
11:00-12:00	*Keynote Speakers*

- **Prof. Dr. Ayad Ghany Ismaeel (Alkitab University)**
- **Dr. Yaseen Taha Mustafa (IEEE Iraq Section, Member)**

12:00-13:30	*Lunch*
13:30-17:00	*Visting to ALKITAB UNIVERSITY Campus (Altun Kupri)*
18:00	*Start of Scientific Sessions*

Scientific Sessions				
Session One: Mechanical engineering				
Time :18:00-19:15				
Meeting Room :Qandil Hall				
Chairman: Prof. Dr. Muna Abbass University of Technology		**Editor: Asst. Prof. Dr. Adnan Mohammed, North Tech. University**		
#	Time	Research No.	Researcher Name	Research Title
1	18:00-18:15	1570493542	Omer Khalil Ahmed, Northern Technical University, Iraq,	Thermal and Electrical Performance Analysis of PV/Trombe Wall System
2	18:15-18:30	1570496206	Aram Mohammed Ahmed, Baghdad Road house No. 512, Iraq,	Efficiency improvement for solar cells panels by cooling
3	18:30-18:45	1570497116	Ehsan Abbas, Mohammed, Northern Technical University & Kirkuk Technical College, Iraq,	The effect of the tube material on the fouling resistance in the heat exchanger
4	18:45-19:00	1570497966	Fras Hadi, Al-Kharkh University of Science, Iraq,	Pre-feasibility Study of Hypothetical Wind Energy Project Using simulated and measured data
5	19:00 -19:15	1570495890	Marwa Qasim Ibrahim, University of Technology, Iraq,	Predict the Best Variants of Cutting in Turning Process Using Genetic Algorithm Technique

Session One: Communication Engineering				
Time :18:00-19:15				
Meeting Room :Arbaillo Hall				
Chairman: Dr. Raghad Zuhair Yousif, Salahaddin University, Erbil			Editor: Dr. Jalal H. Ameen , Salahudeen University	
#	Time	Research No.	Researcher Name	Research Title
1	18:00-18:15	1570493891	Dlnya Aziz, AL-KITAB University, Iraq,	GPS Based Quadcopter Flying Range Observation
2	18:15-18:30	1570494912	Fatima Nadhim Ameen, Northern Technical University Mosul & Qalam University, Iraq,	An Economic Tracking Scheme for GPS-GSM Based Moving Object Tracking System
3	18:30-18:45	1570495487	Hilal A. Fadhil, University Malaysia Perlis, Malaysia,	Random diagonal code over the phase carrier approach for an OCDMA system
4	18:45-19:00	1570496057	Rusul Bader, Razi University, Iran,	Performance Comparison of Concatenated Codes used in HF Wireless Networks
5	19:00 -19:15	1570496065	Rusul Bader, Razi University, Iran,	A Proposed Cipher System Using Isomorphisms and Permutations

Workshop : Flexible A C Transmission System FACTS				
Time :18:00-19:00				
Meeting Room :Hawler Hall				
Chairman: Dr. Bilal Abdulla Nasir, North. Tech. University			Editor : Mr. Raed Daoud, North Tech. University	
#	Time	Research No.	Researcher Name	Research Title
1	18:00-18:15		Dr. Majid S. M. Al - Hafidh	FACTS Principles
2	18:15-18:30		Dr. Abdelelah Kidher Mahmood	Controlling FACTS
3	18:30-18:45		Dr. Mohammed Y. Suliman	Series Elements of FACTS
4	18:45-19:00		Dr. Saad Enad Mohammed	Shunt elements of FACTS

Coffee Break 19:15- 19:30

Day (1) 4/12/2018

Session Two: Material Engineering				
Time :19:30-20:30				
Meeting Room :Qandil Hall				
Chairman: Prof.Dr.Sabah Mohammed Jamil, Al-Kitab University			Editor: Assist Prof. Dr. Iyd Eqqab Maree, Al-Kitab University	
#	Time	Research No.	Researcher Name	Research Title
1	19:30-19:45	1570485515	Muna Abbass University of Technology, Iraq	Characterization of CoCrMo Alloy Fabricated by Powder Metallurgy Route
2	19:45-20:00	1570495399	Mohammed M. Rasheed Al-Rawi, Al-Mustansiriya University, Iraq & Dhofar University, Oman,	Strengthening of I-Beams Steel Section by Prestressing Strands
3	20:00-20:15	1570497787	May Abduljabbar, University of Technology, Iraq,	Study the Characteristics of α-Fe2O3 NPS Synthesized by Pulsed Laser Deposition Method
4	20:15-20:30	1570497977	Hussein Zghair, University of Technology, Iraq,	Rheological Characteristics of Nano-Silica Modified Asphalt Binder Material

Session Two: Computer & Control Engineering				
Time : 19:30-20:45				
Meeting Room :Arbaillo Hall				
Chairman: Dr. Haider Khalil Easa, Al-Kitab University			Editor: Dr. Ziad Saeed, North Tech. University	
#	Time	Research No.	Researcher Name	Research Title
1	19:30-19:45	1570484462	Nima AL-Fakhry, University of Mosul & College of Admn. & Econ., Iraq	FUZZY CLUSTERING TECHNIQUES to determine the genetic characteristics of some dates varieties
2	19:45-20:00	1570490183	Mounir Taha Hamood, University of Tikrit & College of Engineering, Iraq,	An Efficient Algorithm for Computing the Discrete Hartley Transform

Session Two: Computer & Control Engineering				
Time : 19:30-20:45				
Meeting Room :Arbaillo Hall				
Chairman: Dr. Haider Khalil Easa, Al-Kitab University			Editor: Dr. Ziad Saeed, North Tech. University	
#	Time	Research No.	Researcher Name	Research Title
3	20:00-20:15	1570497947	Shakir Kak, Duhok Polytechnic University, Iraq,	Enhance Smart Home Management, Security, Energy, and Safety Based Members State
4	20:15-20:30	1570501405	Karam Abdulqader,	The Swarm's Size Effect on Particle Swarm Optimization for a Modified Cuk Converter's Controller
5	20:30-20:45	1570488548	Dlnya Aziz, AL-KITAB University, Iraq	Eye In Hand Robot Arm Based Automated Object Grasping System

20:45 End of Day 1 Sessions

Conference Program

Day (2) 5/12/2018

Session Three: Computer & Communication Engineering				
Time :9:00-10:30				
Meeting Room :Qandil Hall				
Chairman: Dr. Fatin Hassan, North Tech. University			Editor: Dr. Firas AlFaqi, Nawroz University, Duhok	
#	Time	Research No.	Researcher Name	Research Title
1	9:00-9:15	1570501595	Mokhles Khudhur, MKH, University of Diyala, Iraq	An Efficient and Fast Digital Image Copy-Move Forensic Technique
2	9:15-9:30	1570502902	Suhier Dawood, Mosul University, Iraq,	Internet-based Designing of databases for scientific researches Department of Management
3	9:30-9:45	1570496071	Rusul Bader, Razi University, Iran	Proposed Enhancement of Authentication by Development of El-Gamal Subliminal Channel
4	9:45-10:00	1570497257	Mustafa Jasm, Northern Technical University, Iraq,	Investigation on the Performance of the IEEE802.11n based Wireless Networks for Multimedia Services
5	10:00-10:15	1570500974	Mohammed A. G. Al-Sadoon, MSc, United Kingdom (Great Britain) & Engineer, Iraq,	Partial Noise Subspace Method for DOA Estimation Applications
6	10:15-10:30	1570494824	Mohammad Sabawi, Tikrit University & College for Education for Women,	A Posteriori Error Analysis for Fully Discrete Semilinear Parabolic Problems

Session Three: Renewable Energy & Electrical Engineering				
Time :9:00-10:15				
Meeting Room :Arbaillo Hall				
Chairman: Dr. Amer Mijbel, Al-Mustansiriyah University			Editor: Dr. Ali Jaafar, Karbala University	
#	Time	Research No.	Researcher Name	Research Title
1	9:00-9:15	1570502366	Ali Jafer Mahdi, University of Kerbala, Iraq,	A Modified Algorithm for Economic Evaluation Between Diesel-Generator and PV Solar Systems
2	9:15-9:30	1570488165	Amer Ali, Al-Mustansiryah University, Iraq,	Estimation of Copper and Iron Losses in a Three-Phase Induction Motor using Finite Element Analysis
3	9:30-9:45	1570494475	Nida H. Abid Aown, University of Baghdad,	Good governance of service quality through the adoption of sustainable energy
4	9:45-10:00	1570497938	Murtadha Sadkhan, AL-Kaabi, Baghdad, Iraq,	Application of Surge Arresters in low voltage network supply to Reduce Lightning Overvoltages
5	10:00-10:15	1570498288	Taha Hussein, Northern Technical University, Iraq,	A Simulink Matlab model based Selective harmonic elimination for a PWM single phase inverter

Session Three: Medical Session				
Time :9:00-10:15				
Meeting Room :Hawler Hall				
Chairman: Dr. Nohad Alomari, Al-Kitab University			Editor: Dr. Sinan Mohammed Abdullah Al-Kitab University	
#	Time	Research No.	Researcher Name	Research Title
1	9:00-9:30	Keynote Speaker	Professor Abeer M. Al-Ghananeem, Jordan	Nanotechnology in Drug Targeted Therapy: Bridging the gap between molecular and cellular science
2	9:30-9:45	Lecture	Professor Shanthana Lakshmi Duraikkannu, India	Fabrication of bio composite green material from seaweed polysaccharides for medical applications

Session Three: Medical Session				
Time :9:00-10:15				
Meeting Room :Hawler Hall				
Chairman: Dr. Nohad Alomari, Al-Kitab University			Editor: Dr. Sinan Mohammed Abdullah Al-Kitab University	
#	Time	Research No.	Researcher Name	Research Title
3	9:45-10:00	1570501614	Muna H. Sh. Al Jubori college of science, Tikrit University, Iraq,	The inhibitory effect of Garlic and Onion root exudates on Escherichia Coli from urinary tract infection and molecular detection of hlyA virulence gene
4	10:00-10:15	Lecture	Anas Y. Al Hayawi, college of science, Tikrit University, Iraq, Aesha Sh. Sh. Baban, Molecular Biochemistry, Tikrit University.	Medical forensic science: Forensic Sciences: DNA testing

Coffee Break 10:15- 10:45

Session Four: Mechanical Engineering				
Time :10:45-11:45				
Meeting Room :Qandil Hall				
Chairman: Prof. Dr. Omer Khali, North Tech. University			Editor: Asst. Prof. Ihsan Abas Fathil, North Tech. University	
#	Time	Research No.	Researcher Name	Research Title
1	10:45-11:00	1570496800	Zaid Husham, Mayoralty of Baghdad, Iraq,	Experimental Test For Fatigue Life In Orthotropic Trapezoidal Ribbed Slab Bridge
2	11:00-11:15	1570497468	Israa Farhan, University of Tikrit, Iraq	Experimental investigation of the performance of a multi-purpose solar chimney power plant
3	11:15-11:30	1570498198	Oday Abdullah, University of Baghdad, Iraq & Hamburg University of Technology, Germany	The Influence of the Sliding Speed on the distribution of Frictional Heat Generated in the Dry Friction Clutches

Session Four: Mechanical Engineering				
Time :10:45-11:45				
Meeting Room :Qandil Hall				
Chairman: Prof. Dr. Omer Khali, North Tech. University			Editor: Asst. Prof. Ihsan Abas Fathil, North Tech. University	
#	Time	Research No.	Researcher Name	Research Title
4	11:30-11:45	1570501732	Abdullah Duryea , Institute of Technology, Iraq,	The Effect of Welding Joints Design on the Fatigue Crack Growth Rate

Session Four: Environment & Civil Engineering				
Time :10:45-11:30				
Meeting Room :Arbaillo Hall				
Chairman: Dr. Fawzi Merdan, North Tech. University			Editor: Dr. Firas Abdulrazaq, University of Baghdad	
#	Time	Research No.	Researcher Name	Research Title
1	10:45-11:00	1570490232	Ali Kadhum, Mustansiryah University & Iraqi Mete. Org. & Seismology, Iraq,	Characteristics of Sand and Dust Storm Sources in Iraq
2	11:00-11:15	1570491399	Mohamed Ahmed Najemalden, Ministry of Environment, Iraq,	Measurement of Radon gas Concentration in air and soil samples of Kirkuk city
3	11:15-11:30	1570498548	Ali H. Albojassim, Razi University, Iran,	The use of fiberglass textile-reinforced mortar (TRM) jacketing system to enhance the load capacity and confinement of concrete columns

Session Four: Medical Session				
Time :10:45-12:05				
Meeting Room :Hawler Hall				
Chairman: Dr. Jaafer Altememi, Al-Faraheedi University			Editor: Dr. Zeena Abdulmunem, Mosul University	
#	Time	Research No.	Researcher Name	Research Title
1	10:45-11:05	Lecture	Ibrahim M Abdulbaqi, Reem .Abou Assi, Yusrida Darwis	Transdermal Delivery of Colchicine As Novel Route Of Administration
2	11:05-11:25	Lecture	Reem Abou Assi, Ibrahim M Abdulbaqi, Yusrida Darwis	The impact of Solid and Liquid Self-Emulsifying Drug Delivery Systems in Enhancing Azithromycin dissolution and Epithelial Tight Junctions opening
3	11:25-11:45	Lecture	Nohad . Alomari (alkitab) Safaa polus bahnam (mosul) Hikmat ali Mohamad (salahdin)	Docking studies of Bis-Benzimidazole Disulfide Derivatives as Cycline Dependent Kinase Inhibitors
4	11.45-12.05	Lecture	Sinan Mohammed Abdullah AL-Mahmood1*, Shahrin Tarmizi Bin Che Abdullah2, Nik Nur Fatnoon Nik Ahmad2, Abdul Hadi Bin Mohamed2 and Tariq Abdul Razak2	Analgesic synergism of gabapentin and carbamazepine in rat model of diabetic neuropathic pain

12:30 Closing Ceremony

Keynotes (Day 1)

Internet of Things IoT Technologies to Disabilities Persons

Prof. Dr. Ayad Ghany Ismaeel (Alkitab University)

Internet of Things IoT technology aims to improve People`s quality of life, which has already made everything much easier and convenient for everyone. IoT technology enormously benefits the people with disabilities and one important application for disabled persons is home automation.

IoT helps people with disabilities by enabling them to act more independently, thus reducing the need for personal assistance at home, when traveling, at work or on the street etc. The introduction of IoT technology has lowered the hinderences that people with disabilities encounter in their daily lives.

Advancements have also been made for the deaf and hearing impaired with the first (IoT) hearing aid, which can be programmed to communicate directly with a full range of connected devices such as baby alarms, smoke detectors, and other health and safety related technologies (for child/patient succoring). Apps provide the ability to remote control 24 hours or use objects within Home Automation via Mobile GIS technologies that use sensors, Wi-Fi enabled cooking devices or even smart buttons that can control apps and features anywhere and anytime in your smartphone with a simple push of a button.

Biography

Ayad Ghany Ismaeel, professor in computer science since 7 August, 2012, the former dean of Al-Kitab University College till September 2018, is currently the president of Al-Kitab University (URL: https://www.uoalkitab.edu.iq/eng). He was Awarded PhD in computer science (computer) from University of Technology, Baghdad, M.Sc. in computer science (applied) from the National Computers Center (currently ICCI), Iraq at 1987, and B.Sc. in Informatics from Al-Mustansiriyah University, Baghdad-Iraq, 1982.

Professor Ismaeel is Chief editorial, advisor, and reviewer board member of many international and national journals and Chairman, Keynote Speaker, Chair sessions, Program committee member of many international and national conferences.His research interest is in bioinformatics, mobile network, cloud computing, distributed/healthcare systems. He has experiences and skills in Advising, Counseling, Teaching, Training, Industrial and Curricula Development using German standards. For more details visit his website URL: goo.gl/gn8pK4

Keynotes (Day 1)

Satellite and Imaging Technologies, What's next?

Dr. Yaseen Taha Mustafa (IEEE Iraq Section, Member)

We are living within the century, when humankind created the capacity for the measurement of features, phenomena and impacts across the Earth on a planetary scale. This is due to the new technologies that consistently advance our world, guiding, positioning and visualizing solutions guide us through this latest digital disruption. Accordingly, our generation has an unprecedented capacity with our technologies and data to look across time, on a planetary scale to address issues that are relevant to the future of Earth and how it can be utilized. Earth observations through satellites have provided incomparable information about the Earth System and its components.

This talk provides an overview of the state of the art and applications of satellite imageries including a brief history of satellites. Some prominent examples will be presented, including monitoring, change detection and some other applications. These technological developments within the umbrella of a remote sensing system help with continuous observation of dynamic processes over the Earth's surface.

Biography

Yaseen T. Mustafa is currently an Asst. Prof. of Applied Statistics in Remote Sensing and its Applications at the University of Zakho. Dr. Mustafa received his Ph.D. (2012) in Remote Sensing from the Faculty of Geo-Information Science and Earth Observation of the University of Twente (ITC), Enschede, The Netherlands. His research interests include the area of Remote Sensing and GIS, spatial statistics and contextual image analysis, including mathematical and statistical tools, such as Bayesian networks, and also include applications emerge from a range of agricultural, urban, and environmental fields.

Dr. Mustafa has participated in several training courses and has been appointed in various scientific positions during his career. He is recipient of several awards, among them the Best Paper Award at the American Society for Photogrammetry and Remote Sensing (ASPRS) conference 2011 in Milwaukee, Wisconsin, USA. Dr. Mustafa is currently a Vice President of Scientific and Postgraduate Affairs at the University of Zakho.Link: http://yaseen.uoz.edu.krd

Keynotes (Day 2)

Nanotechnology In Drug Targeted Therapy: Bridging The Gap Between Molecular And Cellular Science

Professor Abeer M. Al-Ghananeem, Ph.D., ALFP
Faculty of Pharmacy, Jordan University of Science and Technology

Recent years brought about a pervasive interest in the potential applications of nanotechnology for the therapy of human diseases. The nanotechnology potential for targeted drug delivery, patient-tailored treatment, and reduced side effects, brings hope for patients suffering from disorders. However, regulatory and development considerations, including properties of the components, reproducible manufacturing, and appropriate characterization methods, as well as nanoparticles safety and efficacy are critical and challenging for regulatory approval and rapid marketing of the new products. The recent advances in targeted brain therapy using nanotechnologies and highlights of the pharmaceutical development challenges that must be overcome in order to fill the gap existing between the promising bench trials and the successful bedside applications will be discussed.

Biography

Professor Al-Ghananeem is an Academic Leadership Fellow of the American Association of Colleges of Pharmacy (AACP). She is an International Commissioner for American Council for pharmacy education (ACPE). She was the Associate Dean of Research and Graduate Program at Sullivan University USA. Before that, she was a faculty member at the University of Kentucky,College of Pharmacy (ranked among the top ten Colleges of Pharmacy in the USA).

Also, she worked as a Vice President for Scientific Affairs at US WorldMeds pharmaceutical company and lead successful academic-industrial collaboration illuminating three pharmaceutical products in the USA and global market; Revonto®, Valchor®, and SubSys®.

Prof. Al-Ghananeem received her Ph.D. in Pharmaceutical Sciences (Pharmaceutics and Biopharmaceutics) from the University of Kentucky College of Pharmacy, USA and her B.Sc.

Pharmacy with distinction from the University of Jordan. During her academic journey, Dr. Al-Ghananeem secured over $2.5 million in funding for her research projects and is an author of over 70 peer-reviewed research articles, symposium abstracts, and patent applications. She was among the executive team that heads the College of Pharmacy ACPE PharmD accreditation and University SACScoc accreditation at Sullivan University USA. Her research focuses on Drug Delivery, industrial collaboration, FDA CMC guidelines/submissions, and nanotechnology for transmucosal drug delivery. Also, she serves on the Editorial Advisory Board for many reputable pharmaceutical and clinical journals.

Thermal And Electrical Performance Analysis Of PV/Trombe Wall System

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Abstract-
This paper presents theoretical and experimental studies of the performance of a PV-Trombe conferencewall (PV-TW) system with and without DC fan under the conditions of weather in Iraq. A theoretical model was developed based on an energy balance concept and an experimental setup was built up for system performance analysis. The validation has shown well matching between the theoretical and the experimental data. The results reveal that the presence of DC fan increases the indoor temperature significantly for the tested PV-TW system. Furthermore, there is an improvement in the electrical performance of this system, where its electrical efficiency reaches up to 12%. Accordingly, the existence of the DC fan is able to enhance the indoor comfort condition and to cool the PV cell. This potential of the PV-TW system is extractable based on the tested conditions.

Efficiency Improvement For Solar Cells Panels By Cooling

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Abstract-

The high temperature makes the efficiency of the solar panels decrease and thus leads to a decrease in the production of power. In this study, the cell surface temperature was reduced to low rates to improve efficiency and to increase power by cooling the surface of the solar panel with water by adding a tube to the surface of the panel and making holes in diameters of 2 mm at different flow rates (3 L /h , 6 L /h and 9 L /h) and later it is compared with solar panel without cooling. It has been observed that the efficiency for all panel has peaked at (12:30 pm), and the efficiency has also increased with cooling by water. The results show that the efficiency is higher when the flow rate is less. The results for solar panel without cooling, with 3 liters/hour, 6liters/hour and 9 liters/hour respectively for efficiency average per day through the experiment are (12.63%), (13.54%),(13.23%) and (13.06%), and the rate of increase of efficiency with compression without cooling panel results have shown that the efficiency increased by rate of (6.71%) for flow rate 3 liters/ hour, (4.51%) for 6 liters/hour flow and (3.28%) at flow rate 9liters/hour.

The Effect Of The Tube Material On The Fouling Resistance In The Heat Exchanger

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Abstract –

In this study, the heat resistance and thermal performance of the shell and tube heat exchanger were estimated using 0.1M of NaCl solution as hot fluid. Experiments were conducted on three types of pipes (copper, aluminum, and 304-SS) under similar operating conditions for 175 hours, where the hot fluid flows through the tubes of 4LPM and 61C and cold fluid flows in the shell side with a rate of 1 LPM and 23C. The results showed that the highest resistance was found in aluminum tubes, resulting in a greater reduction in the number of thermal units and effectiveness compared to Copper tubes by 7.5% and 6.01% respectively

Pre-Feasibility Study Of Hypothetical Wind Energy Project Using Simulated And Measured Data

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Abstract-

In this study, the preliminary economic feasibility study of the project of wind power at the site of Al-Shehabi (Wasit-Iraq) was conducted using wind data for this site at altitudes of 10 m, 30 m, 50 m and 52 m per 10 minutes. For the purpose of comparison, data from NASA space were used at the same location at 50 m height. The lowest unit cost of electricity from wind energy was found (0.0618 $/Kwh and 0.0786 $/Kwh), which was calculated using the standard methodology LCOE equation and Net Present Value procedure respectively. Furthermore, the RET Screen software was also used to perform the economic pre-feasibility study of proposed wind farms at this site. The study has concluded that this site is economically feasible if a wind farm 5.0MW often wind turbines (EWT DW54) were erected with NPV of $11,309,956, After-tax IRR 24.7% and simple payback period 6.1years. Finally, wind farm development will result in a reduction in greenhouse gases of 31876 tCO2 per each year. The sensitivity and risk analysis were performed to guarantee the safety of specified financial input parameters values.

A Modified Algorithm For Economic Evaluation Between Diesel-Generator And PV Solar Systems

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Abstract-
This paper aims to develop an algorithm for economic evaluation between a diesel-generator set (DGS) and a PV solar system according to Iraqi conditions and market. The criteria of economic evaluation are based on the estimation of the life cycle cost (LCC) by determining the initial cost, periodic maintenance cost, replacement cost, diesel fuel cost, and the total energy yield during a 25-year lifetime. A cost comparison between a conventional 125 kVA DGS (e.g. low-quality and high-quality types) and a 100kW PV solar system using the proposed algorithm is made. It is found that LCC (during 25-year lifetime) for the PV solar system is 44,430$, which is cheaper than the low-quality and the high-quality DGSs, which are 388,910$ and 436,380$ respectively. In order to highlight the effects of diesel fuel cost and energy yield on LCC, the percentage-profit (profit %) and percentage-loss (loss %) are demonstrated. It is concluded that during 25-year lifetime, the average profit% of the PV solar system is 47%, whilst the average loss% for both low-quality DGS and high-quality DGS are 43% and 38% respectively

Fuzzy Clustering Techniques To Determine The Genetic Characteristics Of Some Dates Varieties

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Abstract-
This Research attempts to illustrate the concept of clustering technique in both theoretical and practical aspects as well as proposing an explanation of algorithm (Fcm). The theoretical side of the research deals with the concept of data complexity and types. The practical side applies the application of the nearest neighboring algorithm to determine the extent of convergence between some date varieties from the adoption of Fructose and Glucose in the dates. MATLAB preprogram R2013a was used to implement the practical side.

Characterization Of Cocrmo Alloy Fabricated By Powder Metallurgy Route

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Abstract-
The research studies the characterization of CoCrMo alloy that is fabricated by powder metallurgy route. The atomized Gas CoCrMo alloy powder with average particle size 47.983 µm was ball milled for 8 hrs at 175 rpm in 304 stainless steel containers. Uniaxial double pressing was done by application of (800, 900, 100, 1100 &1200) MPa to produce the green compacts. Green density of the compacts increased by increasing the applied pressure until it reached its greater value at (1000 MPa), then slightly decreased at higher applied pressures. The sintering of the green compacts was performed in the electric resistance furnace in the argon atmosphere for temperatures (1000, 1100, 1200 and 1300) Co for 2 hrs soaking at these temperatures. The second group of samples was sintered at the same conditions at (1200 Co) for different soaking times including (1, 1.5, 2 & 2.5) hrs. Micro-hardness results of the sintered compacts illustrated that the best sintering temperature and time were 1200oC and 2hrs respectively, where its value reached to the maximum (335 HV). The comparison of the chemical composition of the received CoCrMo powder and that was detected by SEM-Mapping for sintered compacts revealed the very high similarity between their values without referring to any contamination.

Estimation Of Copper And Iron Losses In A Three-Phase Induction Motor Using Finite Element Analysis

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Abstract-
The present work proposes a methodology to estimate the iron and copper losses of a three-phase, squirrel cage induction motor using a two - dimensional finite element analysis software (Maxwell 2D - V16), including the three dimensional effect of stator end winding, rotor end ring ,and rotor bars skewing by coupling with RMxprt software. The modeling was done based on the design documents of a 2.2 kW, 2 pole test motor. The accuracy results of the model were verified successfully by comparing the results of the rated current and torque with motor nameplate data. The values of iron and copper losses estimated by Maxwell 2D at full load condition were compared with that extracted from solving the motor equivalent circuit parameters, and that taken from RMxprt, with a good agreement. The results obtained for both copper and iron losses will make a good roadmap for the motor designers, and operators to achieve the objective of an efficient induction motor operation.

Eye in Hand Robot Arm Based Automated Object Grasping System

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Abstract-
The modern robotic systems state that the tracking methodology and the visual serving are imperative to discover the existence of an object and excite the robot in order to manipulate the target. This paper shows a new object tracking and grasping technique in real time based on Eye in Hand visual serving structure via a camera mounted at the end of the robot arm. The working principle of the robotic system mainly depends on the prediction based on Kalman filter method that estimates the next location of a moving object in order to specify the path of the target under the scope of the camera. Hereby, the proposed system observes the object and studies its behavior based on the previous state in order to grasp the target at the exact position. Furthermore, the vision system implements feedback control approach to keep the extracted information of the object updated to solve the stability and the reliability issues that might be encountered. The proposed robotic system was tested by grasping moving objects at different speeds and directions. In addition, the grasping of a stationary object was tested to confirm the practical and the theoretical results. As a final result, it can be stated that the speed of the object is directly proportional to the grasping time and vice versa.

An Efficient Algorithm for Computing the Discrete Hartley Transform

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Abstract-
The discrete Hartley transform (DHT) is a particular discrete transform utilized as an alternative to discrete Fourier transform (DFT) for real-valued data applications. In this paper, an efficient algorithm for the fast computation of the DHT (FHT) based on radix-2/4/8 approach was presented. This algorithm has a comparable arithmetic complexity as the split-radix algorithm but retains the regular and simple butterfly structure of the radix-2 algorithm. Radix- 2/4/8 algorithm is motivated by firstly developing the radix-2/8 FHT algorithm and then cascading it with the radix-2/4 and radix-2 FHT algorithms. The algorithm is implemented and its arithmetic complexity is analyzed and calculated for different transform lengths. Comparisons with the existing FHT algorithms have shown that this algorithm can be considered as a good compromise between arithmetic and structural complexity.

Characteristics Of Sand And Dust Storm Sources In Iraq

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Abstract-
Recent Weather Observation in South - West Asia Region had shown an increase in both frequency and intensity of Dust phenomena. The increasing trend of Dust phenomena was used to view the future outlook for dust phenomena. The urgent need to begin a mitigation plan showed the necessity of locating Dust Storm Sources (DSS) in the region. Using the backward - projection method DSS was catted, also the mineralogical study of dust particles was done to give an idea about their sources. It is seen that the silt is the major constituent of the samples with the percentage of 42.6% followed immediately by clay 40.8% and sand is the minor constituent 5.8%. Chemical analysis of dust specimens showed that oxides of Silicon, Aluminum, Calcium, Ferrous, and Magnesium are the major constituents of accumulated dust with a minor constituent of Potassium, Sodium and Titanium oxides and some Sulphates.

Measurement Of Radon Gas Concentration In Air And Soil Samples Of Kirkuk City

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Abstract-
Indoor, outdoor and soil Radon level measurements were carried out in 28 locations at Kirkuk city, using Alpha guard professional radon monitor. The measurements were performed from April 2013 till August 2015. The average indoor Radon concentration was 18.25± 15.69 Bq/m3 with maximum and minimum value (6-71) Bq/m3 respectively, and the average for outdoor Radon concentration was 8.82±3.94 with maximum and minimum value (4-8) Bq/m3 respectively, while for soil sample the mean values were 390.14± 178.83 Bq/m3, with maximum and minimum value (883-87) Bq/m3 respectively. The correlation between indoor and outdoor Radon concentration shows positive and weak correlation (R2 =0.025), indicates that Radon indoor concentration depends on building material, building age ventilation efficiency and heating system rather than soil type. The results of the study showed that Radon concentration was within international standards, indicating no need for further measurements.

Gps Based Quadcopter Flying Range Observation

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Abstract-
The signal coverage area is considered the Controversy point that was solved and discussed wisely in this paper. The designers usually concentrate only on satisfying the controllability of the quadcopter module without discussing the coverage range between the transmitter and the receiver. This paper shows a unique design method for a low-cost quadcopter device controlled by the GPS system. Moreover, the modern control system was designed to control the plane by creating integration between the control unit and the PID system, which allowed the system to reach stability very fast and the peak overshoot was eliminated completely. The control system of the quadcopter calibrates the Pitch, Roll, Twist located on x,y, z-axes respectively depending on the altitude sensor. Under GPS system act, the entire frame will be allocated in the covered area which was specified by 500 meters. This specification keeps the quadcopter in the required range and the tipping down accidents will be unexpected. Finally, this work was completed based on Arduino IDE C++ compiler and the MATLAB software that emphasizes the theoretical results.

Good Governance of Service Quality through the Adoption of Sustainable Energy

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Abstract-
Governance emerged as a term in the last decade of the twentieth century as a method and a methodology for achieving sustainable development in many countries, especially developing countries, as a result of the inability and absence of government departments to achieve efficiency and effectiveness. Competency required. Although cities are the main drivers of growth and innovation for development, they face some of the worst aspects of energy shortage and provision of services and infrastructure in the world. Non-renewable energy is one of the most important problems that have long been threatening societies, making it one of the most important international concerns and topped by the Millennium Development Goals. The study aims to study good governance and knowledge of its requirements as an administrative approach that helps to reflect on multiple visions that take into account all values and cultures, participate in planning and decision making, and play role in enhancing the capacity and efficiency of the governmental institutional sector to achieve sustainable energy in Iraqi Cities in general and their historic centers in particular. The main findings of the study are that the achievement of renewable and sustainable energy cannot be effective or reach tangible results unless it is integrated into city governance and on the basis of the establishment of legitimate government institutions governing principles from transparency, accountability and the power of law, to all partners to achieve comprehensive sustainable development.

A Posteriori Error Analysis For Fully Discrete Semilinear Parabolic Problems

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Abstract-
Optimal order a posteriori error estimates for fully discrete semi-linear parabolic problems in norm are presented. Standard conforming Galerkin (continuous) finite element method is employed in space discretisation and backward Euler method is used in time discretisation. The main tools in deriving these error estimates are the elliptic reconstruction technique, energy arguments, with Gronwall's lemma and continuation argument.

An Economic Tracking Scheme for GPS-GSM Based Moving Object Tracking System

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Abstract-
Many tracking systems work based on Global Positioning System (GPS), Global System for Mobile communications (GSM) and smartphones, due to their wide availability and reliability. A moving object to be tracked, it sends its GPS coordinates to the observer via SMS. However, the economic feasibility of these systems mainly depends on the total cost of the used SMS messages. In this paper, an economic tracking scheme was proposed to reduce the tracking cost. A GPS-GSM tracking system that uses the proposed scheme was implemented and tested together with two classical tracking systems under two practical test cases. The first test case is a 121 km vehicle trip and the second is a 2.4 km walking journey. The results show the effectiveness and economic feasibility of the proposed system over the tested classical systems.

Strengthening Of I-Beams Steel Section By Prestressing Strands

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Abstract-
Seven simply supported steel beams were tested to explain the effect of strengthening by external pre-stressing strands. All of these beams have the same steel section; clear span length and six of them strengthened by two external pre-stressing strands. The tested beams are divided into two categories according to the existence of external pre-stressing strands, the first category consists of one steel beam as a reference, while, the second group deals with steel beams strengthened by external pre-stressing strands consists of six steel beams divided according to the eccentricity location of pre-stressing strand with jacking stress (1120.061 MPa). During the tests, it was found that the load-deflection curves for tested beams strengthening with external pre-stressing strand are stiffer as compared with the reference beams and the percentage of stiffness increase with increasing the eccentricity location. On the other hand, the maximum applied load increases with increasing the eccentricity location, while the increasing percentage in deflection at mid-span decreases with increasing the eccentricity as compared with the reference beam.

Random Diagonal Code Over The Phase Carrier Approach For An OCDMA System

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Abstract-
A technique for optical code-division-multiple-access (OCDMA) spectral amplitude coding was proposed and analyzed. The proposed approach work based on combining both OCDMA systems over a phased carrier. Compared with conventional OCDMA systems, this approach exhibits numerous advantages such as simplicity in the system design and cost efficiency. The phase shift based on phase modulation is adopted in the proposed system, and the orthogonal function based on the random diagonal code was applied. The proposed scheme is considered cost-effective because only one laser source was used, which minimizes interference for access network passive optical network applications.

Predict The Best Variants Of Cutting In Turning Process Using Genetic Algorithm Technique

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Abstract-

In the present work, the effect of CNC machining parameters such as cutting speed (v), depth of cut (d) and feed rate (F) were investigated in turning process, based on genetic algorithm and ANOVA technique which is adopted in the present work. In addition, the material that selected for the machining is EN24T steel, because it's used in different applicants such as rollers, bolts, screws and connecting rods, and the turning operation is implemented on CNC lathe with SINUMERIK 802D to study the performance characteristics for turning of EN24T Steel by taking coated carbide inserts cutting tool. Also, the statistical methods genetic algorithm (GA) and the analysis of variance (ANOVA) are applied to investigate effects of cutting speed, depth of cut and feed rate on material removal rate (MRR), tool wear and tool life. Where three objective functions have been adopted which gives minimum tool wear and tool life, and maximum material removal rate that is simultaneously optimized. Finally, it does conclude from the results that the optimal value of cutting speed is (296.100m/min), depth of cut is (1.33mm) and feed is (0.4mm/rev) for the present work.

Performance Comparison of Concatenated Codes Used In HF Wireless Networks

Rusul Bader
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Abstract-

The error rate performance obtained on a frequency selective Raleigh fading channel, was designed and illustrated graphically for concatenated codes in which the outer code is a Read-Solomon code and the inner code is either a (Reed-Solomon, Bose- Chaudhuri - Hocquenghem or Hamming) codes. Comparison of the performance of these three types of concatenated codes is made on the basis of the same bandwidth expansion factor. A concatenated system using Reed-Solomon codes as an inner code performs better than the concatenated system using Bose-Chaudhuri-Hocquenghem and Hamming inner codes.

A Proposed Cipher System Using Isomorphisms and Permutations

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Abstract-
The main aim of this paper is to introduce the proposition of using isomorphisms and permutation of them to produce a good cipher system with good statistical properties.

Proposed Enhancement of Authentication By Development Of El-Gamal Subliminal Channel

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Abstract-
This paper proposed development for EI-Gamal subliminal channel. EI-Gamal subliminal channel supports authentication and security aspects. However, it is an inappropriate algorithm for computers network. Hence, the development was necessary to provide a new appropriate and powerful algorithm to be used in such networks.

Experimental Test for Fatigue Life In Orthotropic Trapezoidal Ribbed Slab Bridge

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Abstract-
Around the world, many long-span steel bridge structures used the orthotropic trapezoidal longitudinal ribbed steel bridge deck as one of the basic building blocks in the structural system, for distribution of traffic loads in decks and because of many recognized properties like lightweight, high resistance, fast installing in the bridge structure and life cycle economy. Generally, the orthotropic bridge deck contains a flat, thin steel deck plate, stiffened by a series of longitudinal stiffeners (ribs) at right angles, or orthogonal, to the floor beams. This study includes three closed longitudinal rib which has a trapezoidal cross-section, two specimens with the same dimensions and the third specimen with different dimensions. Laboratory tests were done for the three specimens including two kinds of tests which are static calibration and dynamic. In the static calibration test, strain gages were fixative on two of the three specimens and strain values were got for all of the tests and comparing the results for the two specimens. Dynamic tests were done to assess the fatigue life of specimens by observing the initiation of cracks and propagation by accounting in which a number of cycles the specimen will fail. Through laboratory testing, the three specimens will be loaded to demonstrate its impact on fatigue cracks. Crack lengths were evaluated versus a number of cycles until fatigue. The specimen was classified according to the S-N curve to determine in which category lies to estimate its strength.

Investigation on The Performance Of The IEEE802.11n Based Wireless Networks For Multimedia Services

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Abstract-
The high data rate of the IEEE 802.11n standard is due to its Physical layer Multiple Input Multiple Output (MIMO) system and MAC layer enhancement features. This rate enables the standard to support multimedia with Quality of Service (QoS) application through its Enhanced Distributed Channel Access (EDCA) mechanism. This paper focuses on evaluating the QoS for the IEEE 802.11n Wireless Local Area Network (WLAN). Three different number of node scenarios with one access point at different spatial streams (1, 2, 3 and 4) are considered in the process of investigating the network performance. The Riverbed Modeler 17.5 is used to model and simulate the proposed scenarios. Simulation results show an effective improvement in the performance when QoS is applied and with respect to the no QoS case, the 18 node number scenario (at 4x4 MIMO) shows a maximum improvement of 91.6% and 34.8% for throughput and delay respectively.

Experimental Investigation of the Performance Of A Multi-Purpose Solar Chimney Power Plant

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Abstract-
The solar chimney power plant is considered a clean power generation that needs to be investigated to enhance the performance by studying the effect of this type of configuration. The objective of this research is to present the practical results of a solar chimney model. The study was conducted under the environmental condition of Iraq / Tikrit in May 2018. The dimensions of the solar chimney were the area of the square collector 36 m2, the chimney is a galvanized steel tube colored by black paint with diameter 20 cm, chimney height 6 m and opening collector periphery height from the ground 2 cm. The chimney tower surface temperature was higher than the temperature of the air inlet to the chimney tower by (6 ^{o}C). The air temperature inside the chimney tower was increased by (2^{o}C). Therefore, the use of the galvanized steel chimney tower has enhanced the performance of the solar chimney power plant.

Study the Characteristics of A-Fe2O3 NPS Synthesized By Pulsed Laser Deposition Method

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Abstract-
In this paper, α-Fe2O3 nanoparticles were synthesized by pulsed laser deposition technique in vacuum directly on a quartz substrate using Nd: YAG laser at different energies (171, 201 and 363 mJ/pulse), then the slides were heated to 700o C for 1 hour. The structural, optical, morphological and electrical properties were studied. The optical properties indicated that the prepared thin films have an energy gap ranging from 2.28 to 2.04 eV. The XRD results showed that there were no lattice impurities for other iron oxide phases, confirming that all particles were transformed into the α-Fe2O3 phase during the heating process. The AFM results indicated the dependence of nanoparticles size on the laser energy. As the laser energy increase, the average grain size increased from 72.6 nm to 79.02 nm. Hall Effect measurement indicated that the film was an n-type semiconductor.

Application of Surge Arresters In Low Voltage Network Supply To Reduce Lightning Overvoltages

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Abstract-
In this paper lightning overvoltages occurring of an actual low voltage distribution line are studied. Simulations are performed using MATLAB Simulink environment. Analyses are performed in two scenarios. In the first one the system without any arresters along the powerline is considered, and in the second scenario, the effect of proper surge arresters connected in the network was observed. The results of simulations show that in the first case lightning overvoltages exceed the withstand level of the powerline's insulators. Therefore, the overvoltages must be reduced. In the second scenario, one set of surge arresters is installed along the distribution line and its impact on the lightning overvoltages are analyzed in different situations.

Enhancing Smart Home Managemet System Using Member`s Privilage

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Abstract-
In this paper, a modern home control electronic system is designed based on cloud technology to provide a user-friendly environment that capable to control and monitoring the family members' activities and grant to be under-control home appliances privileges. The home system uses a responsive web application to run and remotely control home devices through making decisions based on the member state. The remote control is done by using a PC, mobile and tabulate based application. In this research, all the control over the home appliances is done according to the family members previously determined priorities, where the parents have full control privilege on all the home devices either she/he is in home or out. A parent member has the administrator role over all the system. He /She has the ability to create new….? and give them their actual privileges and appliances control in their reserved time when in their presence, he /she has the ability to put on or off the appliances remotely when there is an undesired action in the home devices. There is also an exception for handicap members which is a special privilege given by a parent member. All the data that is coming from the sensor devices of the smart home including unusual action data, like gas leak, heat rise because of fire are monitored and watched by the application and there a warning signal would be generated and sent to the website, that would be generated and sent to the special authorities, where no one at home, then the system would be put on the safe mode, where all the devices work in the idle state. By this system, security is improved, cost reduced, in addition, to provide a watch mechanism to handicap persons and children.

Rheological Characteristics of Nano-Silica Modified Asphalt Binder Material

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Abstract-
A critical research area overlooked in previous studies on the nano-silica material is the understanding of how its physical characteristics influence its final behavior as a composite when added to the asphalt binder. This study aimed to understand the feasibility of modifying the nano-silica with asphalt binder based on the asphalt binder characteristics. 60/70 penetration grade asphalt cement was prepared by adding (2%, 4%, and 6%) of nano silica by weight of asphalt. Properties of nano silica material and asphalt cement were first examined. To prepare the modified asphalt binder was heated at 140°C, blended by mechanical mixer at a speed of 2000 rpm for different mixing durations (30 to 60) minute. The modified asphalt binder was examined for rheological properties including penetration grade, softening point temperature, penetration index, Brookfield rotational viscosity, and ductility test. Results show that the modified asphalt binder stiffness increases based on rheological properties and sensitivity of temperature decreases with increasing nano silica percentage. A 4 % nano silica by asphalt weight enhanced the conventional properties of the modified asphalt binder and became proper in hot weather conditions. While ductility of modified asphalt decreases with increasing nano silica percentage, due to stiffness and agglomeration increased. Finally, longer mixing time to more than 60 min had an adverse effect on the ductility property and lead to agglomeration of nano silica modified asphalt binder.

The Influence of The Sliding Speed On The Distribution Of Frictional Heat Generated In The Dry Friction Clutches

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Abstract-
Among the period of sliding, the thermo-elastic behavior of the friction clutches over specific sliding periods was taken into consideration as an essential factor to obtain a successful design for automotive engineers that voided premature failure. It is worth mentioning that the finite element technique was adopted in the current study to investigate and analyze the angular sliding speed influence on the generated heat due to friction among the elements of friction clutch at the engagement beginning period. The distributions of the heat generated during the complete sliding periods were achieved via coupling between the thermal and the elastic model analysis. Results in the form of the distributions of the generated heat due to friction, the temperatures of the surface, and contact pressure are presented for different values of sliding speed. Obviously, the results showed that the frictional heat generated was increased dramatically when the sliding speed was increased too.

A Simulink Matlab Model Based Selective Harmonic Elimination for A PWM Single Phase Inverter

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Abstract-
This paper presents a Simulink model in Matlab to eliminate a selected number of harmonics in a single-phase inverter. Newton's Raphson method is used to solve the nonlinear trigonometric functions in order to find the triggering angles. All possible combinations of these triggering instants are then computed for the period of one cycle. Frequency spectrums for the elimination of certain harmonics are shown. Any other desired harmonics can be eliminated using the proposed model.

The Use of Fiberglass Textile-Reinforced Mortar (TRM) Jacketing System to Enhance the Load Capacity And Confinement Of Concrete Columns

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Abstract-
Many of the Middle-East buildings need rehabilitation mainly because of wars in countries such as Iraq, Syria, and Yemen, and because of frequent earthquakes in countries like Turkey, Iran, and Afghanistan. The textile-reinforced mortar (TRM) jacketing system is a high-strength textile entrenched into an inorganic matrix, wrapped around the concrete part to reinforce it externally. This is one of the latest techniques developed for the renovation and rehabilitation of structures. In general, the most important member of a building structure is the column. If this member is weak or affected by overload, over-moment or sudden impact caused for instance by an earthquake or explosion, the building structure will be weak too. In the present paper, the influence of two different parameters on the load capacity and confinement of concrete columns using textile-reinforced mortar (TRM) jacketing systems is tackled from two aspects; first, the shape of the wrapping section, and second, the type of mortar. To carry out that, three mortar types were used: Ordinary mortar (OM), new mortar (NM), and 50% of the ordinary mortar mixed with 50% of the new mortar (50-50). The textile-reinforced mortar (TRM) jackets provide remarkable gains in terms of compressive strength and deformability. This gain is optimized when new mortar (NM) is used, which increases the compressive strength and confinement of the columns to 100%. Also, the 50-50 mortar provides very good results, increasing the compressive strength to about 95%.

Partial Noise Subspace Method for DOA Estimation Applications

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Abstract-

This paper presents a new angle of arrival (AOA) method to overcome the problem of spurious peaks that appeared with Pisarenko Harmonic Decomposition (Ph.D.) algorithm. The proposed method is called partial noise subspace (PNS); it is picking k-subsets of the rows/columns of the noise subspace matrix. The PNS method can achieve lower computational complexity than the MUSIC in the grid searching stage, while not debasing the performance of angle estimation. The idea and principle of working of the proposed method are presented and the mathematical model is derived. Numerical simulations are achieved with a different signal to noise ration to show the effect of the false peaks. A Monte Carlo simulation with a different number of antenna elements is implemented and results verified that the detection performance and estimation accuracy of the PNS and MUSIC are comparable and much better than the Ph.D. algorithm. It is also demonstrated that PNS presents a lower computational load than the MUSIC method.

The Swarm's Size Effect on Particle Swarm Optimization For A Modified Cuk Converter's Controller

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Abstract-
This paper tackles the effect of changing the parameter of the swarm's size on the performance of the particle swarm optimization methodology. A PSO-based controller previously designed to control the performance of a modified dc-dc converter is used in to evaluate the performance of the PSO at different swarm's sizes. The previous work included deriving the mathematical state space model of the studied converter, and a state feedback controller for it had been designed, using a PSO technique with a time-decreased weighting inertia and a uniform multi-conditioned stopping criterion for all the studied cases. The designed PSO technique was used for selecting the optimal values of the state feedback gains for the controller. The uniform stopping criterion was too beneficial in understanding the mechanism that the PSO takes into the process, the effect of swarm's size on the efficiency of the optimizer, and the time consumed by this technique to achieve the required computations. This work is directed to discover the graphical relation between the size of the swarm and the correspondent time consumed. This relationship draws an obvious image to the researcher and the programmer about the advantage that increasing the swarm size versus the disadvantage of consuming time per contra. The open loop response, the closed-loop responses at different population sizes have been analyzed and composed, and a graphical relationship is plotted between the swarm's size and the time consumption in shade of the semi-permanent positive relationship between enlarging the swarm's size and enhancing the performance.

An Efficient and Fast Digital Image Copy-Move Forensic Technique

Mokhles Khudhur
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Abstract-

Digital images are considered as an active and natural media for carrying worth information over the world. With the release of high-resolution digital cameras, PCs, and developed photo editing applications, the digital images forgery becomes very popular. Therefore, the need for using the forensic techniques increases and the most active research subfield is the copy-move forgery detection. Through many existing techniques, block-based matching strategy provides good results, but it needs increasing the processing time. To cope with this problem, an efficient and fast technique has been designed to detect and identify the digital image copy-move forgery without any prior information concerning the image under analysis. The performance analysis presents that the proposed technique is capable of detecting the duplicated-regions efficiently, with a minimal processing time.

The Effect of Welding Joints Design on the Fatigue Crack Growth Rate

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Abstract-
The project in this paper is the first in a series of studies that deals with the evaluation of welded joints, each one types characteristic toughness and strength for constant amplitude &variable amplitude fatigue loads more than other inn order to know the influence of the difference in welded joints design for types (V, VV, U, UU) of fatigue crack behavior and compare it with base metal, which is considered Mild Steel (St-52-3), and show the influence of fatigue amplitude on the fatigue crack growth rate in this case. The test was conducted by using Reverse Bending Method and fatigue test machine at stress ratio (R=-1) for constant Amplitude load. Fatigue results have shown that the fatigue limit of the base metal is higher than the fatigue.

Internet-Based Designing of Databases for Scientific Researches Department of Management

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Abstract-

Due to the development in information technology including the information, communication, networks, database systems and culture, the organization realized that there is a necessity to change the method of changing the data processing from the traditional to the electronic form. So, it designed the information system which depends on computer databases to overcome the problems and drawbacks suffered before. Through the pilot studies conducted by the researcher in terms of the scientific committee tasks in the management information system department, the researcher observed that the tasks of the scientific committee considerably depend on the traditional way in data processing and storing the information using big amounts of papers, which result in many problems including repeated mistakes made in the work and the long time needed to accomplish the work, problems in storing the data and information in addition to the difficulty in communication between the departments and the deanship of the college concerning completing the tasks of the scientific committee. Accordingly, the present paper deals with designing an information system for the scientific committee which pivots on the computer network in the scientific department Using Microsoft Visual Studio 2010 Dot Net.

The Inhibitory Effect of Garlic And Onion Root Exudates On Escherichia Coli From Urinary Tract Infection And Molecular Detection Of Hlya Virulence Gene

Muna H. Sh. Al Jubori, Anas Y. Al Hayawi
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Abstract:-
162 urine samples were collected from men and women infected with UTIs during October to December 2017 at Saladin General Hospital. E. coli was isolated from 38.9% of the collected samples. Compared with men, women are more vulnerable to infection. The resistance percentage of E. coli to Chloramphenicol, Ofloxacin, Ceftraxone, and Impenem varies from 17% to 100%. The root exudates were prepared by using hydroponics with different periods: (7, 10 and 14 days). Onion (Allium cepa L.) root exudates have not any effect on the isolated E. coli through all the periods while root exudates of garlic (Allium sativum L.) gave the highest inhibitory effect at the period of 10 and 14 days. The virulence factors of E. coli were screened for the presence of hlyA through PCR and showed that all the resistant isolates can produce beta-hemolysis.

Workshops Abstracts

Flexible Ac Transmission Systems Facts

Static Synchronous Series Compensator (Sssc)

Assistance Professor Dr. Mohammed Y. Suliman

— FACTS (Flexible AC Transmission Systems) technology is one aspect of the power electronics revolution that is taking place in all areas of electric energy. The power transfer capability of a transmission line can be enhanced by the use of power electronics based system like FACTS that offer high speed and reliable control capability. The Static Synchronous Series Compensator (SSSC) is the second generation of the FACTS controller, which is used to control the power flow in the transmission line. The voltage-sourced converter-based series compensator, called Static Synchronous Series Compensator (SSSC).It operates by adding a controlled voltage of variable magnitude and phase angle in series with the line at the power system frequency. The additional voltage, Vq, has a controllable magnitude and phase angle to control active power flow.

The practical applications of the SSSC, it may be used for control of any of the following parameters :

The load angle (δ)

the bus voltage Regulation.

the impedance of the transmission line (X_L or X_C). Therefore, the SSSC may have *three control modes*.

The SSSC provides three phase controllable voltage, whose vector (magnitude and angle) adds to the source voltage to restore the load voltage to pre-disturbance (sag and swell), Static Series Compensator also named Dynamic Voltage Restorer (DVR), where connected between the source and load.

Biography

Assistant Professor Mohammed Y. Suliman B.Sc. Electrical Engineering, Power and Machines, University of Mosul, Iraq. (1995)

M.Sc. Electrical Engineering, Power and Machines University of Mosul, Iraq. (1998)

Thesis title "Controlling of Multiple Relays Based on Microcomputer"

Ph.D. Electrical Power Engineering, University of Mosul (2014).

Thesis title "Fast Response Static Synchronous Series Compensator (SSSC) Based on Instantaneous Power Theory".

MIEU Member of Iraqi Engineers Union, Iraq (1995-present).

MIEEE Member, Institute of Electrical and Electronic Engineers, USA. (2014)

Workshops Abstracts

Flexible A C Transmission System (FACTS)

Dr. Majid S.M. Al-Hafidh

In 1988,Dr.Narain G. Hingorani introduced the concept of Flexible AC Transmission Systems (FACTS) by incorporating power electronic controllers to enhance power transfer in existing AC transmission lines, improve voltage regulation and system security without adding new lines. The FACTS controllers can also be used to regulate power flow in critical lines and hence, ease congestion in electrical networks.

Flexible AC Transmission System (FACTS) is defined as `Alternating current transmission systems incorporating power electronic-based and other static controllers to enhance controllability and increase power transfer capability'. The FACTS controller is defined as `a power electronic based system and other static equipment that provide control of one or more AC transmission system parameters'.

The FACTS controllers can be classified as

1. Shunt connected controllers
2. Series connected controllers
3. Combined series-series controllers
4. Combined shunt-series controllers

The concept of Custom Power introduced by Dr.Hingorani in 1995 has extended the application of FACTS controllers for distribution systems with the objective of improving power quality. An understanding of the working of individual FACTS controllers and issues that affect their operation under various conditions is essential for both students and engineers (in industry) who are interested in the subject.

Biography

Dr. Majid S.M. Al-Hafidh.. Power System Analysis (Operation and Planning).
Renewable energies (hydropower, Solar Power, Wind power . . . etc).
Applications of intelligent programming in power system analysis.
Flexible A C Transmission System (FACTS).
Ph.D. 2006 Power and Machines, University of Mosul / IRAQ.
M.Sc. 1979 Power and Machines, University of Mosul / IRAQ.
Post Graduate Diploma 1977 University of Mosul / IRAQ.
B.Sc 1976 Power and Machines, University of Mosul / IRAQ.
Assistant Lecturer: 1983., Lecturer: 1988., Assistant Professor: 2001.

Workshops Abstracts

STATCOM with Energy Storage Device (ESTATCOM)

Dr. Saad Enad Mohammed

Power system engineers are seeking solutions to operate the system in a stable and flexible manner utilizing power electronics technology. Adding new devices to the system such as Static Synchronous Compensators (STATCOM), not only solves the matter but also increase the capability of the existing transmission lines. With self-commutateted devices, such as Insulated Gate Bipolar Transistors (IGBT), it is possible to control all variables in the system including active power, reactive power and voltage. The integration of energy storage systems (ESS) into FACTS devices may lead to a more economical and/or flexible transmission controller. It can help transmission service by providing means to rapidly damp oscillations, respond to the most sudden change in load, supply load during transmission or distribution interruptions, correct load voltage with rapid reactive power control, and allow the generators to balance with the system load at their speed.

Biography

B.Sc electrical engineering 1997 university of Mosul, Iraq.
M.Sc electrical engineering 2000 university of Mosul, Iraq.
PhD electrical engineering 2013 university of Mosul, Iraq.
Lecturer in university of Mosul since 2001.
Working field : Flexible AC Transmission Systems, STATCOM, Power System Stability and Analysis.
No. of papers: two in protection systems and five papers in the field of flexible ac transmission systems two of them out of Iraq.

Workshops Abstracts

The impact of Solid and Liquid Self-Emulsifying Drug Delivery Systems in Enhancing Azithromycin dissolution and Epithelial Tight Junctions opening

Reem Abou Assi, Ibrahim M Abdulbaqi, Yusrida Darwis

Azithromycin (AZM) is a macrolide antibiotic used for the treatment of a number of bacterial infections. It is known to have a low oral bioavailability (37 %) due to its relatively high molecular weight, incomplete solubility and/or poor intestinal permeability, which is potentially restricting its intestinal absorption. To overcome these drawbacks liquid and solid self-emulsifying drug delivery systems of AZM were prepared in an attempt to enhance its solubility, which might improve its oral bioavailability. Eight different pseudo-ternary diagrams were constructed based on AZM solubility and emulsification studies in different SEDDs excipients at different surfactant to co-surfactant (Smix) ratios. The selection criteria was droplet size (DS) < 150 nm, polydispersity index (PdI) ≤ 0.7, and transmittance (T) % > 85 in three diluents of distilled water ($D.H_2O$), 0.1 mM HCl, and simulated intestinal fluids (SIF) as well as highest drug content.

The final L-SEDDs formulation which is composed of Capryol 90®, Tween 20®, and Transcutol HP® at the concentrations certain concentrations (v/v), was able to meet the selection criteria and had a DS of 141.57 ± 1.1 nm, PdI 0.52 ± 0.004, T% 90.1 ± 0.1, and drug content of 60.42 ± 0.4 mg/ml ($p < 0.05$).

Accordingly, it was selected for conversion to solid SEDDs (S-SEDDs) using different solidifying agents. Aerosil 200® produced S-SEDDs with the smallest DS of 155.3 ± 1.91 nm, PdI 0.62 ± 0.03, and drug content of 38.79 ± 0.52 mg/g ($p < 0.05$). Blanks of both formulations proved to be safe at different concentrations upon evaluating them in the microtiter tetrazolium (MTT) cytotoxicity assay.

Blank and AZM incorporated formulations were able to cross through the Caco-2 cell monolayer through reducing their transepithelial electrical resistance in comparison to the pure AZM. Furthermore both formulations have increased the release of AZM in $D.H_2O$, 0.1 mM HCl, and SIF when compared to the pure AZM with a fast release of > 90% in 5 min and 60 min by liquid and solid formulations respectively (p values < 0.05). The stability study revealed that liquid and solid formulations are stable at refrigerator storage conditions with estimated shelf life of 39.29 and 40.29 months respectively.

Workshops Abstracts

Docking Studies of Bis-Benzimidazole Disulfide Derivatives as Cycline Dependent Kinase Inhibitors

- NOHAD A. ALOMARI College of Pharmacy Alkitab University Alton Kopre, Kirkuk, IRAQ
- SAFAA POLUS BAHNAM College of Pharmacy University of Mosul Mosul, IRAQ
- HIKMAT ALI MOHAMAD College of Education University of Salahdin Salahdin, IRAQ

Most drug discovery efforts have been directed against CDK, because this enzyme has been thought to be necessary for the early phases of the cell cycle that are most often miss regulated in tumor cells. Benzimidazole is one important heterocyclic organic compound having structural analogy to nucleotides found in human body and hence is an important pharmacophore in medicinal chemistry. Disulfide linker was employed, which was stable in blood circulation but readily cleaved by intracellular reducing substances in the tumor. The addition of computer aided drug design technologies to the Research and Development (D&R) approach of a company, could lead to a decrease in the cost of drug design and development by up to 50%. The enzyme in complex with a potential inhibitor was downloaded from the Protein Data Bank (PDB). In-silico screening for the compounds (A-O) and the inhibitor CT7 were then docked into the defined site and their poses inside the active site were analyzed. In all the three models used of MD, 10ns, 20ns and 25ns, the docking results showed clearly that compounds that have donating group achieved better scores than that contain withdrawing group. Compound C was able to enter the active site and achieve scores that are better than the scores of CT7 and all of the other designed compounds.

Workshops Abstracts

Analgesic Synergism of Gabapentin And Carbamazepine In Rat Model Of Diabetic Neuropathic Pain

Sinan Mohammed Abdullah AL-Mahmood[1]*, Shahrin Tarmizi Bin Che Abdullah[2], Nik Nur Fatnoon Nik Ahmad[2], Abdul Hadi Bin Mohamed[2] and Tariq Abdul Razak[2]

[1]Al-Kitab University, Pharmacy College

[2]International Islamic University Malaysia, Faculty of Medicine

Purpose: To evaluate synergy in the analgesic effects of a combination therapy of carbamazepine (CBZ) and gabapentin (GBP) in diabetic neuropathic pain. **Methods:** Neuropathic pain was produced in rats by a single intraperitoneal injection of streptozotocin (STZ) at 60 mg/kg. CBZ, GBP, and their combination were orally administered at varying doses (GBP 30 - 180 mg/kg; CBZ 20 - 40 mg/kg) comparable to their therapeutic doses in humans. Nociceptive responses in the diabetic rats were assessed using hot plate test.

Results: Hot plate latency significantly increased with oral administration of GBP at a dose of 180 mg/kg when compared with control group ($p < 0.05$), while at a dose of 90 mg/kg, the increase was not significant. Oral administration of CBZ at doses of 20 and 40 mg/kg did not produce any significant impact on hot plate latency. However, a combination of GBP at 90 mg/kg and CBZ at 20 mg/kg produced significant increase in latency, compared with control group and other groups ($p < 0.05$), except the group that received 180 mg/kg GBP. The combination of low dose GBP 30 mg/kg and carbamazepine 30 mg/kg had no significant effect on latency ($p > 0.05$).

Conclusion: The results obtained in this study provide useful information on the combination therapy of GBP and CBZ, which may be applied in the treatment of pain in diabetic neuropathy.

Workshops Abstracts

Transdermal Delivery of Colchicine as Novel Route of Administration

Ibrahim M Abdulbaqi, Reem Abou Assi, Yusrida Darwis.

Colchicine is used for the treatment of gout, pseudo-gout, familial Mediterranean fever, and many other illnesses. Its oral administration is associated with poor bioavailability and severe gastrointestinal side effects. The drug is also known to have a low therapeutic index.

Thus to overcome these drawbacks, the transdermal delivery of colchicine was investigated using transethosomal gels as potential carriers. The colchicine-loaded transethosomes (TEs) were prepared by the cold method and statistically optimized using three sets of 2^4 factorial design experiments. The optimized formulations were incorporated into Carbopol 940 gel base.

The prepared colchicine-loaded transethosomal gels were further characterized for vesicular size, dispersity, zeta potential, drug content, pH, viscosity, yield, rheological behavior, and ex vivo skin permeation through Sprague Dawley rats' back skin.

The results showed that the colchicine-loaded TEs had aspherical irregular shape, nanometric size range, and high entrapment efficiency. All the formulated gels exhibited non-Newtonian plastic flow without thixotropy. Colchicine-loaded transethosomal gels were able to significantly enhance the skin permeation parameters of the drug in comparison to the non-ethosomal gel.

These findings suggested that the transethosomal gels are promising carriers for the transdermal delivery of colchicine, providing an alternative route for drug administration.

Workshops Abstracts

Forensic Sciences: DNA testing

Dr. Anas Yaseen Al Hayaw (Assist. Prof. PhD. Genetic, Biology department, Tikrit University) The theoretical part
Aesha Sh. Sh. Baban) Assist. Lecturer, MSc. Molecular Biochemistry). Applied part

Forensic Sciences: The application of a broad spectrum of sciences to answer questions of interest to the legal system .DNA profiling) also called DNA fingerprinting (is the process of determining an individual's DNA characteristics, which are as unique as fingerprints .DNA analysis intended to identify a species, rather than an individual, is called DNA barcoding.

The seminar includes the following topics

-Fields of Study) Latent Print analysis, Toxicology, Crime Scene Photography, Document analysis, Blood Spatter analysis, Ballistics, Fiber analysis, Arson, Explosives, DNA, Computer and Other(

-Methods of identification

-Brief History of Forensic DNA Typing

-Identification vs. Expression

5What are some of the DNA technologies used in forensic investigations؟

Workshops Abstracts

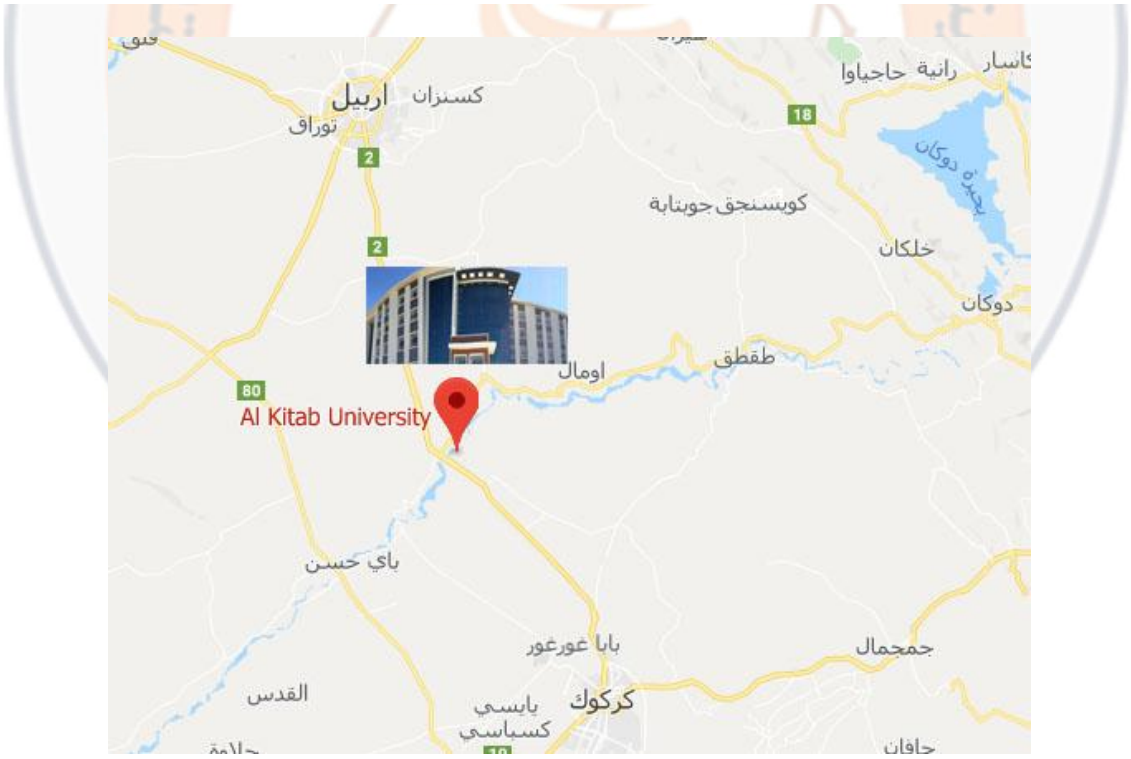
Fabrication Of Bio Composite Green Material From Seaweed Polysaccharides For Medical Applications

Shanthana Lakshmi Duraikkannu

Polysaccharides are among the multifunctional and highly abundant biomolecules of the plant kingdom. Their diversities range from being a homopolymer to heteropolymers with a vast list of applications precisely for the marine algae derived sulfated polysaccharides. Chlorophyceae are among the three major domains of marine algae and bear higher growth rates together with the highest sulfated polysaccharide contents; ulvan being 15-20% dry weight of alga. They have been modified by number of methodologies to prepare biocomposites, tissue scaffolds, hydrogels, aerogels, etc. using various chemical cross linkers; some of which are also reported as potential toxins to live cells. The present study demonstrates for the first time use of ionic cross-linking using calcium as a green cross linker. Ulvans have been modified number of times for their application as a cell scaffold using various synthetic chemicals as well as enzymes. The present report presents a greener approach for casting scaffolds for tissue engineering applications. The scaffold was characterized by FT-IR for assessing functional groups changes, XRD for physical changes, and 1H NMR whereas morphological properties were assessed by FE-SEM-EDX and AFM. The characterization rendered functional group modifications taking place in the back-bone potentially due to calcium binding whereas AFM and SEM provided surface characteristics showing significant changes occurring in the physico-chemical behavior of the polymer. The combined chemical and biological response of the scaffold makes it a potential alternative to the debated chemically cross-linked polymers for drug delivery, controlled release of biochemical components and tissue engineering application.

About AlKITAB UNIVERSITY

ALKITAB University was founded in 2012 under the approval of the Ministry of Higher Education and Scientific Research with its letter C / 1655 on 26/3/2013.
The study began in the University in the academic year 2012-2013, and the beginning was divided into three Departments: the Department of Law, Department of Computer Technology Engineering and Department of Finance and Banking. The number of students at the University has steadily increased,
The university is made of 9 colleges consisting 21 scientific and human covering various medical, engineering, administrative, financial, legal, political, physical education and English
According to the expansion strategy of the university ,the number of the university students increased from the year of establishment 2012 (500) students, to the recent academic year (2018-2019) to around 3500 students
The distinguish location of the University on the midway of the road between the two major cities (Erbil and Kirkuk) made it the focal point for the students living in these two cities in addition to the near-by cities like (Mousel – Sulimanya- Tikrit- …etc) and other cities of Iraq even from the southern cities because of the good reputation it earned during the past few years beside the up to date specialties offering that are needed in the market



The colleges of the University are:

College of Dentistry

College of Pharmacy

College of Engineering

College of Nursing

College of Medical Technique

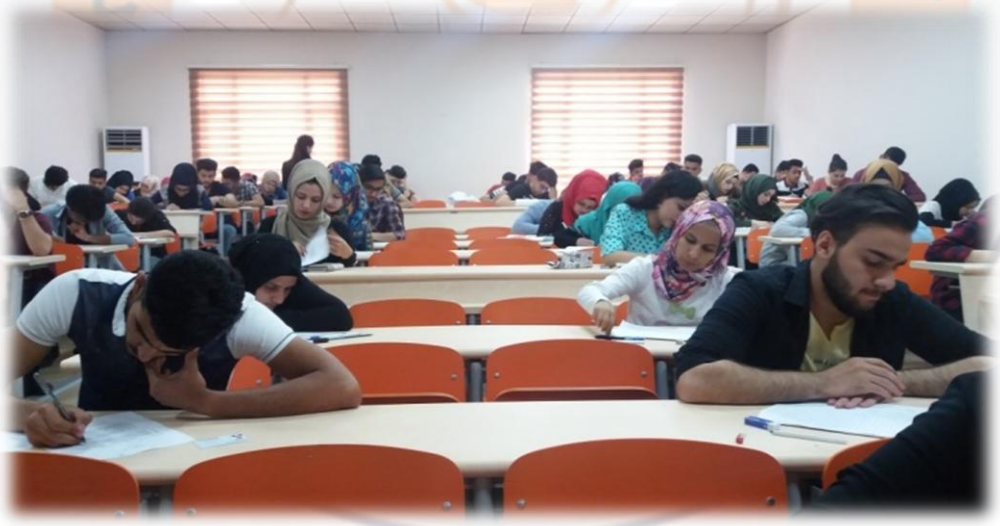
College of Education

College of Engineering Technique

College of Law & International Relations

College of Business Administration and Financial Science

Modern Labrotaries



Best Studying Spaces and Environment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