



**Yarmouk University**  
Hijjawi Faculty for Engineering Technology

# Hijjawi Faculty Newsletter

Issue 2 | April 1<sup>st</sup> 2022



Established in **1984**



**9 Engineering Departments**  
(**10 B.S.E.T / 5 M.S.**)



More than **125 Academic Staff**



More than **25,000 Engineering Graduates**



**Entrepreneurship and Innovation Center**  
Established in **2003**

# Yarmouk University

## Hijjawi Faculty for Engineering Technology



### Our Vision

Towards a distinct faculty in teaching and research exists among 500 best faculties in the world in the various fields of engineering by the year of 2025.

### Our Mission

Excellence in teaching, scientific research and community service through the provision of high-quality education in line with the latest developments in various fields of science and engineering, and closely linked with industry as well as various community needs.

### Our Objectives

- Provide high-quality education in line with the latest developments in the various fields of science and engineering.
- Achieve partnership with industry to prepare qualified graduates to work efficiently in this sector.
- Establish research centers to get familiar with the community needs and work to find effective solutions to these needs.
- The presence as a strong competitor in the field of scientific research in the world, through the quantity and quality of scientific publications issued by the faculty.

### Our Values

The faculty seeks to prepare the graduate to be a good person who is productive in his community and loyal to his country and nation. Therefore, the faculty focuses on developing the student's personality and inclinations, encouraging him to be creative, and developing his moral aspect, which contribute to the preparation of the elites and the leaders of the future.

# Dean's Message



I am delighted to welcome you to the second issue of the Hijjawi Faculty for Engineering Technology Newsletter, in which we attempt to portray the Faculty through the eyes of its students, faculty members, and management personnel. In my welcome message for the first issue of the newsletter, I presented my action plan for this academic year. Here, I try to present what we have achieved in this short period of time.

According to the university's strategic plan, my team prepared a Vocational Education and Training (VET) model that fits the needs and status of the Hijjawi Faculty for Engineering Technology, to construct and develop professional diploma programs in collaboration with industry, such as medical informatics, robotics design, additive manufacturing and 3D printing, and cybersecurity. Three to six courses are required for each program, which can be completed in as short as six months. The program will cover advanced information technology, design, and data analysis, and it will be developed and taught in collaboration with industry specialists.

We have worked on giving our Entrepreneurship and Innovation Center more momentum by proposing it to become a center at the university level. The different councils in the university and outside the university have approved our proposal. We are now in the process of establishing its structure and regulations. The modernized center will continue to offer career counseling, and to

house research and development incubators for faculty members as well as industry research incubators for major international and local companies.

The Faculty has continued to be involved in several international projects. As a result of these projects, the Faculty was able to send nine students to Europe for four months of field training, build and increase the capacity of several faculty members and students in the area of technology transfer and online education, establish and set up smart rooms, and equip several faculty laboratories with advanced machines and cutting-edge technologies. One interesting project funded by the Royal Academy of Engineering in the UK targets the integration of SDGs in Engineering Education. This is increasingly becoming crucial. At the same time, teams from the Faculty worked on eight proposals submitted to the EU Erasmus+ Capacity Building Programme. Five of these proposals were submitted to the Capacity Building in Higher Education (CBHE) stream, two proposals for the Capacity Building for Youth, and one proposal for the Capacity Building in Vocational Education and Training (VET). These proposals cover topics such as Circular Economy, Sustainability, Digital Competencies, Online Education, STEAM, Linkage with Industry, Entrepreneurship and Innovation in the Water Sector, and Artificial Intelligence skills.

The industrial Engineering Department accepted the first cohort in the Engineering Management Master's program. To cope with the increase in the number of students in all Faculty programs, the Faculty has hired five new faculty members to join in the Fall 2022 / 2023.

Finally, the Faculty has received very positive feedback on the three programs submitted to the ABET accreditation, that are: Computer Engineering, Electronics Engineering, and Industrial Engineering. At the same time, the Faculty has submitted the interest to apply for ABET accreditation for three more programs, that are: Biomedical Systems Engineering, Biomedical Informatics Engineering, and Communication Engineering.

I hope you a pleasant experience as you read this second issue of the Faculty newsletter.

**Prof. Mwaffaq Otoom, PhD**

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# Featured Article

## Re-Inventing Higher Education in the Post COVID Era



I'm honored to be invited to write the featured opening article for the second edition of the the Hijjawi Faculty for Engineering Technology Newsletter. I share in this article what I have recently included in the International Universities Association Magazine about my views of the higher education in the post COVID Era.

**Prof. Islam M. Massad, MD**  
**President**

In light of the changes as a result of the COVID-19 pandemic, new higher education policy makers and education specialists have to face new challenges world round.

Indeed, access to education has been partially and sometimes totally disrupted during the pandemic. The higher education (HE) sector is moving towards initiating new delivery models to face current challenges and reflect the demands of social, political and economic changes. Higher education institutions around the world are adopting more flexible virtual and physical classrooms which lead to the need for a comprehensive set of reform measures and upskilling capabilities in terms of teaching methods, curricula and infrastructure.

The digital transformation of HE has become a matter of survival. It is not only about providing services handily and smoothly, but also about keeping pace with the evolving expectations of students. Inevitably, transformation is coming and we need to be ready for it in advance. In itself, though being an important tool, technology alone is not the solution to challenges facing universities. Other components are equally important, such as the introduction of innovative new academic programs to meet the needs of the labour market, the development of universities' infrastructure and building capacity of both learners and teachers.

Today, we are living in a technology-based society, and we should adapt with emerging challenges and trends. Online learning has become an effective and necessary action at higher education institutions. Becoming a necessity, and in light of many difficulties facing traditional university education, online education can improve the educational process and develop scientific research, particularly that it entails involvement of students in the learning process, which also provides students with skills required to carry out research. The success of e-learning during the pandemic period constituted a good incentive to invest in e-learning systems in the post-pandemic period. It is significant to review the effectiveness of e-learning platforms and the tools necessary for the e-learning process. Moreover, we should focus on setting legislation to regulate modern trends in education, bearing in mind that transforming traditional education into digital and integrating technology in education will contribute to build a better teaching and learning experience.

At present, universities should overstep their traditional roles and missions and embrace a wider goal to serve society, with focus on addressing issues of employability and fostering sustainable development. This may be achieved by creating an environment that encourages entrepreneurship and innovations, thus enhancing competitiveness and increasing economic growth. Generating new job opportunities and adapting to the rapid

change occurring in the higher education sector will be much treasured, particularly when students are well prepared to the jobs of tomorrow, and when graduate employability is reinforced. In the end, this will contribute to the national economic growth and development. We need to link our curricula to the business and market needs and to enhance partnerships with industry sectors to maximize students' skills, giving them the opportunity to get practical training that helps them have their own business. The education sector, particularly universities, should motivate students to innovate and train them in theory and practice, thus stimulating scientific research and contributing to achieving the sustainable development goals.

Today, recognition of the value of Vocational Education and Training is increasing. Needless to say, that delivering high quality vocational education programs would effectively contribute to sustainable development and labor market. However, vocational education was the sector most affected by the pandemic because a practice-oriented.

For this reason, strategies and quality assurance measures should be discussed and implemented to maintain the standards of competences required and to integrate new digital tools within this sector.

# Alumni

## ■ Dr. Abualkhair Alkhateeb



**Dr. Abualkhair Alkhateeb (Class of 2005)** is an engineering executive and has been working in the U.S. industrial market for the past 17 years. He is a U.S. patent holder and a scientist. Through his industrial experience, Alkhateeb has worked for different employers most of which are among the highly ranked in the fortune-500 companies in the United States, such as but not limited to General Electric (GE), NOKIA and Chrysler (FCA). Alkhateeb has had a unique opportunity to accumulate a valuable engineering and managerial asset in the aviation industry, defense, wireless communication/networking, medical imaging (MRI) and automobile manufacturing, where he at each of the aforementioned industries, has played a key role in the development process and he at each has left a fingerprint to tell the story.

Through his Ph.D. studies, Alkhateeb was assigned to investigate a potential technical threat to GPS

navigation aids at U.S. airports that was of great concern to the U.S. Federal Aviation Administration (FAA). The FAA has fully funded his research which has officially been the first in the USA to successfully investigate the GPS Jamming Impact of Vehicle-level Personal Privacy Devices (PPD) antennas radiation pattern on the Local Area Augmentation System (LAAS) for precision approach and landing of aircrafts at commercial airports.

Alkhateeb has heavily contributed to both the industrial and the scientific research community with rewarding industrial achievements and quality publications including U.S. issued patents and research work most of which, have been funded by various governmental and non-governmental entities. His research has been recognized and supported by prestigious and premier research & academic institutions such as NASA, Harvard-Smithsonian Center for Astrophysics (Harvard University) and a number of U.S. government agencies, most of whom have yet reviewed and officially selected Alkhateeb's research contributions as U.S. government authoritative federal science information. He has served most of the aforementioned entities as a Scientific Advisor. His research has also been published by leading Journals and conferences such as The U.S. Institute of Navigation (the NAVIGATION Journal) & IEEE, leading publishers and organizations such as WILEY & the WORLD WIDE SCIENCE.

Alkhateeb has earned his Bachelor's degree in Communication Engineering from Hijawi Faculty for Engineering Technology at Yarmouk University in Jordan, Master's and Ph.D. in Electrical and Computer Engineering at Oakland University in the USA.

## ■ Dr. Hussein Abdel Fatah Alzoubi



**Dr. Hussein Alzoubi (Class of 2003)** is a senior Software Engineer at Google serving as the Technical Lead for the Security and Identity Infrastructure group for Google Cloud. Dr. Alzoubi is leading the group with focus on implementing and deploying Cloud specific cryptographic infrastructure and Identity solutions to accommodate Google, Google Cloud, and Cloud's Customers.

Dr. Alzoubi initially joined Google to work with the Cloud's Network Routing and Load Balancing group (GFE) as a Senior Software Engineer. With the Group, Dr. Alzoubi helped with implementing and deploying a multi-cloud load balancing solution able to handle request routing and load balancing across multi-cloud and on-premise instances.

Prior to joining Google, Dr. Alzoubi served as a Senior Software Engineer at Bloomberg L.P. in the Internal systems and infrastructure group. Dr. Alzoubi's focus was load balancing, network routing and network operations support.

Dr. Alzoubi earned his Doctorate and Masters' degrees

in Computer Engineering from Case Western Reserve University (2015, 2007). And his Bachelor's degree from Yarmouk University in Computer Engineering (2003). During his graduate studies, Dr. Alzoubi research was focused on Content Delivery Networks, Load Balancing and Network/Request Routing. Dr. Alzoubi's main publications:

- H. Alzoubi, M. Rabinovich, S. Lee, O. Spatscheck, and J. Van Der Merwe. "Revisiting Anycast for Content Delivery Networks". Book Chapter. Chapter 10 of "Advanced Content Delivery and Streaming in the Cloud" by M. Pathan, R. Sitaraman And D. Robinson. Published by John Wiley & Sons, Inc.
- H. Alzoubi, M. Rabinovich, and O. Spatscheck, "The Anatomy of LDNS Clusters: Findings and Implications for Web Content Delivery". The 22nd International World Wide Web Conference. May 2013. PP: 8394-.
- H. Alzoubi, M. Rabinovich, and O. Spatscheck. Performance Implications of Unilateral Enabling of IPv6. The 14th Passive and Active Measurement Conference, April 2013. PP: 115124-
- H. Alzoubi, S. Lee, M. Rabinovich, O. Spatscheck, and J. Van Der Merwe. "A Practical Architecture for an Anycast CDN". ACM Transactions on the Web, Oct 2011 issue.
- Z. Al-Qudah, H. Alzoubi, M. Allman, M. Rabinovich, and V. Liberatore. Efficient Application Placement in a Dynamic Hosting Platform. The 18th International World Wide Web Conference, April 2009.
- H. Alzoubi, S. Lee, M. Rabinovich, O. Spatscheck and J Van Der Merwe. "Anycast CDNs Revisited". The 17th International World Wide Web Conference, April 2008.
- H. Alzoubi, M. Rabinovich, and O. Spatscheck. "MyxDNS: A Request Routing DNS Server With Decoupled Server Selection". The 16th International World Wide Web Conference, May 2007.

## ■ Dr. Mohammad Alsaleh



**Dr. Mohammad Alsaleh (Class of 2005)** completed his Bachelor degree in communication engineering from Yarmouk University. He moved the same year to the U.S. where he obtained his

Masters degree from Virginia Tech in 2007. He joined Qualcomm upon graduation as a software engineer in the WCDMA team where he helped building the different chipsets that went in most of the smartphones used by most people around the world. During his work at Qualcomm, he filed many patents in the area of power-control, that all made it to the different iPhone chips. He joined Intel in 2013 where he started the Firmware Verification Lab and led a team to deliver the first Intel LTE modem. Mohammad joined MathWorks upon finishing his Ph.D. from Purdue University in 2019 and spent two years supporting the Aerospace sales team. He then joined Booz Allen Hamilton in 2021, and since then he has been working on different projects in the areas of Wireless Communication, Sensor Fusion, and Artificial Intelligence.

Mohammad has always reached to his previous engineering faculty at Yarmouk university for consulting, advice, and show appreciation. He keeps an eye on the growth of the Hijjawi faculty of engineering to whom he owes where he reached today.

# Students' Corner

## Google Developer Student Club-YU holds a Free Training Course

- The Google Developer students club-YU held a free course (The Arduino and C language basics) for the Hijawi students. This course was given by the student Mohammad Alzubaidi and supervised and supported by Dr. Yusra Obeidat. It is the first stage of the Internet of Things (IOT) course series. It mainly covered the basics of Arduino, the basics of C language, some sensors and motors, and the connection of Arduino to LCD screen and to control sensors operation.

By the end of this course students were able to deal with and understand different types of sensors, microcontrollers, and electronic components. They learned to write codes in C language, and they worked in teams to build and run simple projects. In the second stage, we are planning to provide more advanced course to teach Python and Machine learning.



## Hijawi Students Participate in the "I Participate" Program

The goal of the "I Participate" program is to build university students' capabilities and skills in the field of democracy and decision-making, and is implemented in 13 Jordanian public universities in partnership with the National Democratic Institute.



## How to Make (HTM) Platform

HTM is A student platform launched by two distinguished students (Abdullah Naamneh, and Majdi AL-Manaseer) from the Electronics Engineering Department. It provides engineering services, and meets the needs of engineers, seeking to qualify engineering students for the labor market according to practical requirements.



Their vision is to provide the necessary support for young people interested in the technology sector, especially engineering students, and to prepare them for the labor market through specialized workshops and courses that will raise the level of youth, to put them on the first step in the path to the future. They aim to provide their content with the best quality that take into account the individual differences of students.

Their achievements so far include: Holding training workshops in the field of (Internet of things and microcontroller technology) attended by more than 120 people, Training more than 20 engineering students in specialized courses in the field of Internet of Things and Arduino, Participation in scientific events at the university level, and the country, including project exhibitions at Hijjawi College, participated as speakers in the TECHNOVA event organized by the IEEE/COMSOC-YU team. participated as keynote speakers in one of the largest student engineering conferences, ESBC21 Conference. Moreover, the platform team contributed to representing Yarmouk University at Princess Sumaya University for Technology in the annual robotics competition.

## Computer Engineering Students Spend their Field Training in Germany

Two Computer Engineering students are spending their field training at the Bonn-Rhein-Sieg University in Germany during the second semester 2021/2022. This training mobility is fully sponsored by the Yarmouk University Remote Lab (YURL) project, funded by the German Academic Exchange Service DAAD, through a partnership between Yarmouk University and the Bonn-Rhein- Sieg University to develop remote labs in the Hijjawi Faculty for Engineering Technology.

The YURL project will last for two years, starting from 2021.



## Architectural Engineering Department held several courses and workshops

### Wayfinding Workshop

Eng.Alaa Alzoubi , Eng.Lama Akmeel , and Eng.Maram Al-Otoom, discussed the importance of wayfinding strategies in architectural design ,and the wayfinding role in organizing human circulation and behavior in the built environment



### Free Hand Workshop

Eng. Samah Mohammad , Eng. Leen Alturk, Eng. Maram Alatoom, and Eng.Aseel Rababaa had given the workshop that aimed to teach students advanced techniques of presenting Architectural drawings manually using different coloring media and tools.



### Architectural drawings Workshop

Eng.Aseel Rababaa and Eng.Ghadeer Rashdan had given this workshop that aimed to provide a review and coverage to the basics of the different architectural drawings. Focusing on the different elements and symbols that must be drawn in each drawing besides providing a revision of the main followed architectural standards was also an objective achieved through this workshop.



## Lumion Workshop

Student Anas Bani Khalaf had given this workshop that aimed to enrich the graphic in the Department of Architecture at Al-Hijawi College. Over the course of two weeks, the workshop was divided into educational and interactive lectures. The Lumion program was explained from the beginner level to the advanced level. Students were trained on photographic principles, and a set of notes on realistic presentation and how to prepare and use materials in the program.



## Architectural Model Making Workshop

Eng.Saja Zeyadeh, Eng.Shatha Jaradat, Eng.Ghadeer Rashdan, and Eng.Ranee Baniyounis had given this workshop to introduce the first year architecture students to 3d modeling tools, materials, and techniques. Within the design studio students learnt to link 2D drawings and 3d forms by folding and unfolding shapes and nets in addition to building 3d shapes from scratch



## AutoCAD Workshop

Eng.Raneem Baniyounis had given this workshop, in which it discussed the AutoCAD as a 2D technical drawings tool to help students in providing more precise drawings, Including advanced topics



## A lecture for Architectural Design Course at Hijjawi Faculty for Engineering Technology



A lecture for Architectural Design Course was held under the supervision of Inst. Samia Ayoub at Hijjawi Faculty for Engineering Technology to introduce the concept of vertical farming and an explanation of the most important types and the latest technological developments in this field and the possibility of their application after highlighting their pros and cons. In addition, a detailed explanation was provided for certain types of materials that can be used in such projects to achieve product quality and long-term sustainability, and focused on the importance of implementing vertical farms in Jordan in a sustainable manner as one of the ways to achieve food security and local development.

The lecturer, Eng. Mohamed Siam from Senara Hydroponics Company in Jerash: He is one of the pioneers in this field and owns his own project. He has received many local and international grants to implement projects of this type and has many volunteers work with the aim of spreading this idea in the local community.

## IEEE ComSoc YU Visits MARSRobotics

IEEE ComSoc YU organized a visit to Mazar Autonomous Systems (MARSRobotics) company under the supervision of the Communication Engineering department chairman and IEEE ComSoc YU advisor, Dr. Sharief Abdel-Razeq.

During the visit, an explanation was provided about the company's work fields, and the engineers presented various projects that have been completed and are being worked on. Furthermore, a tour of the company's departments was performed.



## The Communication Engineering Department Organizes a Field Visit to the Tech Line Company



The Communication Engineering Department organized a field visit to the Tech Line Company under the supervision of Dr. Hassan Thiabat and Dr. Assem Al-Zoubi. The visit has included an introductory lecture on fiber-optic technology of its various types, in addition to information about Telephone Cable & Data Cable of all types and how to manufacture and use them.



This field visit helped the students understand the nature of work in such establishments, get closer to the labor market, and acquire new skills in this field.

Eng.Ahmed Al-Smadi (the CEO) took the students on a tour inside the factory to see the production process, he explained that the establishment of the factory came to keep pace with the continuous development in the field of communications, especially fiber-optic cables technology to provide integrated solutions for communication networks.

## The Hijjawi Faculty Students Participate in the Yarmouk University Football League

The Hijjawi Faculty students participated in the Yarmouk University football league, which started on Sunday the thirteenth of March, where Hijjawi team defeated the College of Tourism and Hotels team with nine goals against only one goal for the College of Tourism team. The match was attended by the dean of Hijjawi, a number of faculty and administrative staff, and a large audience of the Hijjawi students



## The IEEE ComSoc-YU Visits the Zain Innovation Platform



The IEEE ComSoc at Yarmouk University organized a field visit to the Zain Innovation Platform under the supervision of Dr. Sherif Abdel Razek the Chair of the Communication Engineering Department and Dr. Hazem Shakhatreh. This visit helped students to learn more about the areas of telecommunications engineering including the fields of work after graduation. The company team has explained more about the Zain platform and how it supports the owners of innovative ideas, encouraged students to learn more about entrepreneurship and how to start new ideas. Finally, the company team introduced students about a company called "Mind Rockets" specialized in creating and developing applications and websites to help deaf people and seek to fully integrate them with society through its various applications and the features it adds to sites and web pages

## The Architectural Engineering Department Visits Umm Qais

The architectural department organized a Scientific visit to Umm Qais ruins under the supervision of Dr. Muna Al-Ibrahim, Arch Maram Alatoom, Arch Mervet Abualadas, and Arch Saja Ziadeh. The students visited the archaeological area and the surroundings, they observed the ancient city, the beautiful nature and landscape view of the Umm Qais, this visit was targeted to teach students how to document their own spatial experience by making sketches and analyze the elements of the landscape in the city, Furthermore, proposing a site within context to design a public park which is required for landscape course.



## Students from the Hijawi Faculty Visit JODDB



A group of students from the Hijawi Faculty for Engineering Technology visited the office of the Jordan Design and Development Bureau (JODDB) at the University of Jordan under the supervision of Dr. Yusra Obeidat the assistant dean for students and graduates' affairs and Eng. Mohammad Assadi from the Electrical Power Engineering Department. The visit came at the invitation from the JODDB office director to present some of the students' projects that were presented during the activities of the Hijawi scientific day, to give an opportunity to financially support and develop them and transfer their impact to the local community. The participating students presented their projects and discussed them with the engineers from the research and innovation project at the JODDB center. Many ideas were exchanged to develop the projects and highlight the element of creativity and excellence in them.



Engineer Radi Al-Wardat, the director of the office, praised the excellence of the students of the Hijawi Faculty and the continuous development of the projects they design in line with modern technology. He emphasized the importance of creativity and innovation in all fields of engineering, in addition to the need to support ideas that would solve multiple problems and benefit the local community. Al-Wardat also praised the cooperation of Hijawi Faculty with the industrial sector to produce innovative products that keep pace with modern technology. He also mentioned the direction of JODDB to make training and employment agreements that include the Hijawi students in all majors.

# Our Erasmus+ Students

Spring 2021 / 2022



**Alaa Hasan**

**Computer Engineering**

*Universidad de Castilla-La Mancha*



**Yoser Aljijakli**

**Electronics Engineering**

*Universidad de Castilla-La Mancha*



**Zaid Salameh**

**Computer Engineering**

*Universidad de Castilla-La Mancha*



**Rania Foudeh**

**Computer Engineering**

*Universidad de Castilla-La Mancha*



**Mohammad Tabakha**

**Biomedical Engineering**

*Universidad de Castilla-La Mancha*



**Fatma Zamil**

**Biomedical Engineering**

*University of Porto*



**Rinad Abu Zaitoun**

**Communication Engineering**

*Universidad de Castilla-La Mancha*

# Recently Defended Masters Theses

## Computer Engineering Department

### **Ghadeer Jaradat**

*An Automatic Arabic Speech Recognition for Human-Vehicle Interaction*

**Advisor: Mohammad Alzubaidi & Mwaffaq Otoom**

### **Mohammad Zytoon**

*A Multi-Stage Computer Aided System for Glaucoma Diagnosis*

**Advisor: Mwaffaq Otoom & Mohammad Alzubaidi**

### **Alaa Obeidat**

*Parallelizing and Optimizing the Indexing-Tree Based Algorithm for Motif Finding on GPUs Platform*

**Advisor: Abedalmuhdi Almomany & Ahmad M. Al-Omari**

### **Areen Abu Rwaq**

*A Novel Assistive Device to Convert Hand Gestures of Arabic Sign Language into Voice Signals*

**Advisor: Mohammad Alzubaidi & Mwaffaq Otoom**

### **Shorooq Abu Qazan**

*Automatic Classification of Sleep Stages Using EEG Signals and Convolutional Neural Networks*

**Advisor: Amin Alqudah & Ihssan Masad**

### **Sireen Al-Omari**

*Optimized FPGA based implementation of a modified K-means by combining GWO and NN algorithms for brain tumor detection*

**Advisor: Amin Alqudah**

### **Walaa Ayyad**

*Optimized Implementation of an Improved KNN Classification Algorithm using FPGA Computing Device*

**Advisor: Amin Alqudah & Abedalmuhdi Almomany**

### **Raghad Khanjar**

*A Multi Stages Chest Diseases Classification Using Convolutional Neural Networks*

**Advisor: Amin Alqudah**

### **Samah Taamneh**

*A Feature Selection Technique for Network Intrusion Detection System based on Chaotic Crow Search Algorithm*

**Advisor: Hussien Al-Zoubi**

## Electrical Power Engineering Department

**Ammar Khaled Abd Momani**

*Optimal Design of a Hybrid photovoltaic combined with wind Energy Grid Connected System*

**Advisor: Ibrahim Al-Taweel**

**Saddam Mosa Gasem Omari**

*Optimization of an Adaptive Neural Fuzzy Inference controller for Brushless DC Motors*

**Advisor: Mohammad Al-Momani & Ibrahim Al-Taweel**

**Esraa Abd Jasem Aljameeli**

*Optimized Reactive Power Generation from Distributed Solar Panels to Improve Energy Efficiency of Distribution Systems*

**Advisor: Muwaffaq Al-Omouh & Ashraf Radaideh**

**Bayan Husam Fawwaz Hussien**

*Photovoltaic System Fault Classifier Using Convolutional Neural Network Techniques*

**Advisor: Abdalghani Athamneh**

**Sawsan Saleh Abd-Alqader Ab-Alaal**

*Protection Scheme for Multi Microgrids*

**Advisor: Abdalghani Athamneh**

**Bashar Fayez Hamed Mhairat**

*Assessment of Wind Energy Resources in Jordan*

**Advisor: Ayman Al-Quran**

**Mohammad Moteb Fheman Al-Khraing**

*Fault Diagnosis of three phase Induction Motor using Machine Learning Methods*

**Advisor: Ibrahim Al-Taweel & Mohammad Al-Momani**

**Ehab Ahmad Ayyat Obeidat**

*Optimal Load Balancing in Three Phase Low Voltage Distribution Networks based on Optimization technique*

**Advisor: Ibrahim Al-Taweel**

**Mu'men Abd-Almohdi Ahmad Al-Bdoor**

*Advanced Control Architecture for Grid Connected Wind Turbines Based Doubly-Fed Induction Generator*

**Advisor: Ashraf Radaideh**

## Communication Engineering Department

### **Marah Ahmad Al-Hayek**

*An Efficient Pairing Strategy for Power Domain Non-Orthogonal Multiple Access Based Cognitive Radio Networks: A Maximum Minimum Channel Gain Approach*

**Advisor: Ahmad Ajlouni & Haythem Bany Salameh**

### **Mariam Khaled Al-Tamimi**

*A Jamming-aware QoS-constrained Routing Algorithm for IoT Cognitive Radio Networks with Parallel-transmission Capability*

**Advisor: Ahmed Musa & Haythem Bany Salameh**

### **Themar Irfyeh Arabyyat**

*A joint Bandwidth and Power Allocation for NOMA Cognitive Radio Systems*

**Advisor: Ahmad Ajlouni & Haythem Bany Salameh**



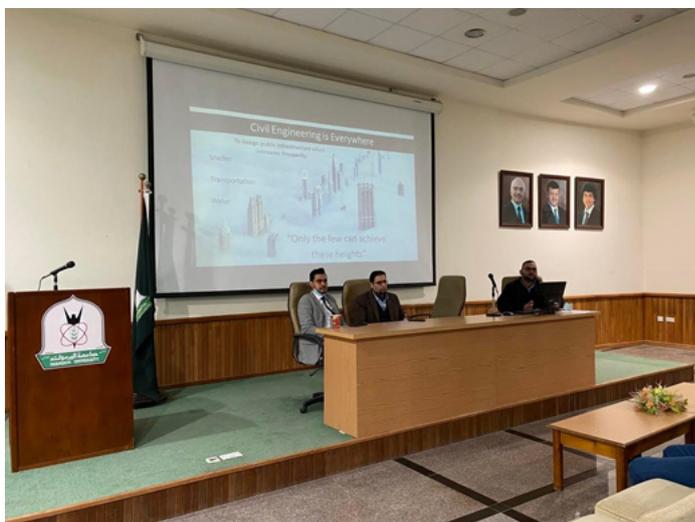
# Faculty Events

## Civil Engineering Department holds a Welcome event for its students

To consolidate the visions of the wise university top management in enhancing communication with students and activating the role of academic departments in serving students to obtain feedback that enables us to apply the principles of total quality management and continuous improvement of the educational and learning processes. Accordingly, the Department of Civil Engineering (CE Department) organized a welcome meeting for the department's students in Wesam Bushnaq Hall at Hijjawi Faculty for Engineering Technology on Sunday 20th February 2022, where Dr. Mohammad Alzubaidi (Vice Dean), Dr. Ahmed Koran (Vice Dean), Dr. Ali Shehadeh (head of the CE department), and Dr. Musab Abuaddous. The meeting was attended by a group of students from the CE department, in which they expressed their experience during the distance education period and the period of return to face-to-face education, where they expressed their satisfaction with the presence of multiple forms



of teaching (face-to-face, hybrid, and distance) and stressed that these meetings advance them towards more excellence and creativity. The meeting also included an explanation of the new civil engineering curriculum for 2021 and its fundamental improvements. Then, the meeting concluded with a discussion session with questions and answers presented by both the vice deans and faculty members in the Civil Engineering Department.



## Computer Engineering Department Holds a Meeting to Listen to Students



In implementation of the strategic plan of the university and the college and in response to the directives of the president of the university, Prof. Islam Massad, the Hijawi College for Engineering Technology started a program to hold a series of meetings with the students of the college, the first of which was with the students of the Computer Engineering Department, where the Dean of the College and the Head of the Computer Engineering Department met with the students of the department to find out the problems and difficulties that they may encounter and answer their inquiries.

During the meeting, the Dean of the College, Prof. Mwaffaq Otoom, stressed the importance of these meetings and the importance of involving students and taking their opinions into account, as the student is considered the center of the teaching process. In turn, the Head of the Computer Engineering Department, Dr. Mohammad Alzubaidi, reviewed the department's achievements during the past two years, the most prominent of which was applying for ABET accreditation and obtaining positive initial results from the ABET authority to obtain accreditation.



## Integrating Sustainability into Architecture Technology University Education: the ASEE Student Chapter at Yarmouk University



To address the growing issues that threaten the sustainability of human society, such as climate change, the international community reached two milestone agreements in 2015: the 2030 Agenda for Sustainable Development, including the Sustainable Development Goals (SDGs), and the Paris Agreement on Climate Change. It should be noted that the international community's steering of building a decarbonized economy over the long term through the Paris Agreement can significantly change the social and economic systems related to business, technology development, production, and consumption. Universities are higher education institutions that contribute to sustainable development and research activities required to solve national issues and attain the required SDGs, which aim to support safety and security through social infrastructure development, enrich people's lives, and promote the local industry. Engineering education is required to provide students with the ability to understand the characteristics of sustainable

development and respond to issues unique to the region. Thus, the ASEE Student Chapter at Yarmouk University aims to crystalize the role of engineering education in supporting the SDGs. Therefore, a hybrid event was conducted on Sunday 27th February 2022 about "Integrating Sustainability into Architecture Technology University Education" presented by Mr. Sameh Ameen, who is an NZAid scholar alumni, Lecturer at School of Architecture, Unitec Institute of Technology, Auckland, and a Ph.D. student and researcher at the University of Auckland, New Zealand. Prof. Mwaffaq Otoom (Dean of Hijawi Faculty for Engineering Technology), Dr. Mohammad Alzubaidi (Vice Dean), Dr. Ahmad Koran (Vice Dean) and Dr. Ali Shehadeh (the CE Department chairperson and the ASEE SC Advisor) in addition to other faculty members, students, and guests.

The ASEE SC at YU under the supervision of Dr. Shehadeh will continue organizing such lectures that will support Jordanian future development to form a model example in resource-efficient and sustainable consumption and production form and contribute to the global realization through international cooperation. Also, to realize innovations that establish decarbonized and resource-efficient business models and lifestyles, Jordan needs to develop shared economic models and systems related to innovative products and services through collaboration with research institutes (e.g., universities), urban governments, and other stakeholders facing the significant challenges that are decelerating the sustainable development processes.



## The Faculty Organizes the IEEE-YU Day



The Hijjawi Faculty for Engineering Technology held the IEEE-YU day as part of the IEEE student chapter activities at YU, in the presence of a number of the teaching and administrative staff, and Prof. Mohamed Salah the Vice chair of IEEE-Jordan section. Prof. Mwaffaq Ootom emphasized in his speech on the continuous support for students and activities that would raise their scientific and professional level to develop their technical and personal skills. Ootom also stressed his aspiration for IEEE-YU to win the best branch in Jordan and the need to compete with all IEEE local and international organizations.

Prof. Mohammad Salah presented the achievements of IEEE Jordan section that includes all IEEE branches in Jordan and has shown the increase in the number of



IEEE members across the years. He also emphasized the great progress made by student branches in all Jordanian universities over the years.

Dr. Yazan Al-Issa, the Yarmouk branch counselor, presented the IEEE-YU achievements in previous years and the plans it set for the upcoming year. He also confirmed that he will cooperate with students of all IEEE-YU societies to win local and international competitions

The event also included presentations about the life skills (by Mr. Jaafar Shehabat) and Time management (by Eng. Mohammad Assadi), booths from all IEEE-YU societies, and other activities including competitions and entertainment.



## ACI YU Student Chapter Organizes Wooden Truss Competition



The ACI Yarmouk University Student Chapter organized and hosted the “Wooden Truss Competition”. Fifteen student groups from the department of civil engineering participated in the competition. The competition, which was held under the supervision of Dr. Faris Matakah, intended to give students a chance to design and implement trusses using wooden sticks. The trusses were tested to determine the truss that can hold the maximum weight. Professor Mwaffaq Omoush, the Vice President of Yarmouk University, and Professor Mwaffaq Otoom, the Dean of the Hijawi Faculty for Engineering Technology attended the event, alongside a group of faculty members and more than 300 students. The trusses were evaluated for their attractiveness and efficiency in carrying loads. Trophies and medals were distributed at the end of the event.



## The Industrial Team at Hijawi Faculty Organizes an Event entitled: “How to Receive Ramadan”

A group of students in the Industrial Department organized an event entitled “How to Receive Ramadan”, in which Prof. Natheer Al-Sharairi from the Faculty of Sharia at Yarmouk University presented an interesting lecture on “How to manage the Qur’an Reading” in which he talked about the importance of contemplating and reading the Qur’an and mentioned a group of stories about the Companions in loving and contemplating the Qur’an and he focused on the necessity of utilizing the month of Ramadan for worship and reading the Noble Qur’an.

In another lecture presented by Dr. Muhammad Al-Qudah from the Jordan University of Science and Technology entitled “Anxiety and Dealing with It,” he focused greatly on the importance of getting rid of anxiety and tension and the need for self-confidence and building ambitions. He mentioned a series of stories that stress the importance of communicating with positive people and staying away from negativity and negative people. He gave advice to students about organizing time and how to study and prepare for exams to reach the desired success.



## The Faculty Participates in the Scientific Day of the Deanship of Scientific Research and Graduate Studies

The Hijjawi Faculty for Engineering Technology participated in the scientific day of the Deanship of Scientific Research and Graduate Studies, entitled "Research, the Path to Innovation", under the auspices of Prof. Muwaffaq Al-Omoosh, The Vice President for Academic Affairs. The Hijjawi students had an active participation in thirty-five graduation projects that were supported by the Deanship of Scientific Research, and some of the faculty members participated in posters of their supported research work. The event was attended by a large number of deans of faculties at Yarmouk University, members of the academic and administrative staff at the university, and a number of guests and companies from outside the university.



Two projects from The Hijjawi students won the Best Project Award: The first project from the Communication Engineering Department entitled as **"Wireless charging of electric vehicles using solar energy"** and done by the students: **Eline Ammari, Samar Malkawi, Fatima Al-Youssef, and Amal Al-Rabba**, and supervised by **Dr. Shareif Abd-Al-Razeq**.

The second project from the Biomedical Engineering Department entitled as **"Hand Self -Rehabilitation Device"** and done by the students: **Israa Al-Satri, Bayan darawsheh, and Aya Al Share'a**, and supervised by **Dr. Sami Mashaqbeh**.





# Faculty Activities

## The Dean Meets the Chairs and Mentors of the IEEE-YU Student Branch Societies

The Dean of the Hijjawi Faculty for Engineering Technology met the students who are representing IEEE-Yarmouk University Student Branch.

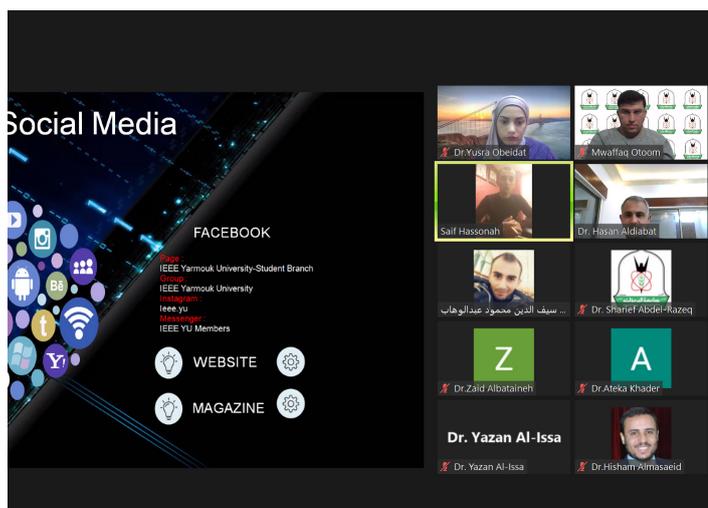
After welcoming the students, the Dean emphasized the importance of the students' participation in such voluntary activities and programs to enhance students' personality, expand their relationships, and prepare them for the labor market.

After getting to know all the representatives and the different societies of the IEEE Yarmouk University Student branch, the Dean listened to their suggestions and plans for the new



year and confirmed that the Hijjawi Faculty is ready to provide full logistical support for all the activities of the societies in order to excel in all activities and competitions at the local and international levels.

Later, the Dean met the new mentors of the IEEE-YU societies on Zoom. He began his speech by thanking them for their volunteering to supervise the students and support the various activities related to IEEE-YU student branch. He emphasized the keenness of the Hijjawi Deanship to provide all kinds of support necessary for the Branch's success and distinction at the local and international levels.



The Chairman of the IEEE-YU student branch, Saif Hassoneh, provided a presentation to show the activities and plans of IEEE-YU for the next stage, such as participation in local and international competitions, holding events and conferences, and organizing various training courses in the various fields of engineering.

## IEEE-YU Student Chapter New Mentors



**Dr. Yazan Al-Issa**  
*Counselor*



**Dr. Hisham Almasaied**  
*Computer Society*



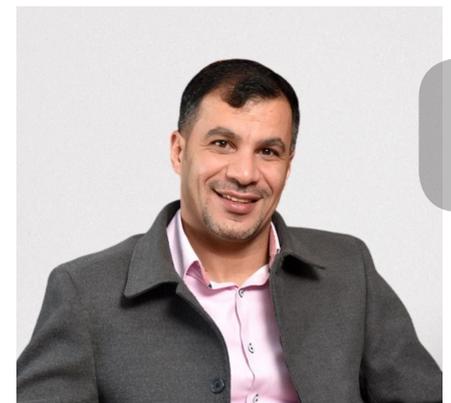
**Dr. Ashraf Radaideh**  
*Power and Energy Society*



**Dr. Ateka Khader**  
*Medicine and Biology Society*



**Dr. Ola Taani**  
*Industry Applications Society*



**Dr. Zaid Bataineh**  
*Robotics and Automation Society*



**Dr. Yusra Obeidat**  
*Women in Engineering Society*



**Dr. Sharief Abd-Alrazeq**  
*Communications Society*

## Hijjawi Tech Incubator Graduates a Distinguished Cohort of the Website Development Training Course



## Virtual Workshops on Take-Home and Remote Labs Have Been Conducted by the Bonn Rhein Sieg University of Applied Science, HBR-S, Germany

Virtual workshops on Take-Home and Remote Labs were conducted by the Bonn Rhein Sieg University of Applied Science, HBR-S, Germany on March 15th and 16th, 2022 as part of the YU-RL DAAD funded project, managed by Dr. Mwaffaq Otoom. The Take-home workshop was conducted by Prof. Dr. Iris Gross, Vice Dean of Department of Electrical Engineering, Mechanical Engineering and Technical Journalism at HBR-S. The workshop was attended by faculty members, lab engineers and students at The Hijjawi Faculty for Engineering Technology.

At Bonn Rhein Sieg University of Applied Sciences, two different kinds of Take-Home-Labs have been developed; one for electrical engineers and one for mechanical engineering students. In the workshop, an introduction towards developing The Take-Home-Labs was presented to give insights about the experiences of HBR-S in this field and provide an opportunity for discussing ideas for developing own Take-Home-Labs.

Two examples of Take-Home-Labs were provided in the workshop. The first Take-Home-Lab is meant for building up many different types of electrical circuits on a breadboard and measure the behavior of current and voltage. The second lab is a cheap opportunity to build a force measurement device by using Arduino and strain gauges, to conduct and evaluate a self-developed measurement on a chosen scientific question.

The presented Take-Home-Labs are based upon cheap materials that can be used several times, under which the students may take home to have hands on experiences with. The materials and settings can as well be used in any kind of a teaching room.

The workshop also provided insights about the teaching materials for the students in the corresponding labs and experience of tutoring students at home via conference tools. At the end of the workshop, a discussion was held regarding how to transfer the HBR-S experience in Take-Home-Labs at the Hijjawi Faculty for Engineering Technology. A visit by faculty members of the HBR-S to The Hijjawi Faculty for Engineering Technology is expected to take place on June,2022 to conduct several workshops and give a more hands on experience of Take-Home-Labs.

The Remote Lab workshop was conducted by Eng. Andrea Schwandt, Mechanical Engineering and Technical Journalism at HBR-S, Coordination Digital Internationalization of the department (DIF) Research associate.

At Bonn Rhein Sieg University of Applied Sciences, FPGA Vision Remote Lab is a remote laboratory where students access experiments physically located in the HBR-S, having the same experience as in traditional hands-on lab sessions. This lab has won the International Online Laboratory Awards, presented by the Global Online Laboratory Consortium (GOLC) for 2019.

The presenter showed the hardware components used for implementing the online lab, some of the image processing and video processing experiments done on FPGA remotely. Then the presenter illustrated how to set up the remote lab system step by step.

At the end of the workshop, a Q & A session was held to address some of the audience's questions. A visit by faculty members of the HBR-S to The Hijjawi Faculty for Engineering Technology is expected to take place in June,2022 to conduct several workshops and give a more hands-on experience of remote lab.

## Cooperation with the NVIDIA Company

The Hijjawi Faculty for Engineering Technology made a cooperation with the NVIDIA company, through Dr. Ahmad M. Al-Omari, the chairman of the Department of Biomedical Systems and Informatics Engineering.

1. Nvidia selected Yarmouk University as a GPU Education Center around the world.
2. Nvidia granted GPU teaching kit consisting of (10) books, one Tesla K40 {active} and two Titan X GPUs, and \$2500.

Nvidia Corp. engages in the design and manufacture of computer graphics processors, chipsets, and related multimedia software. It operates through the GPU and Tegra Processor. The GPU comprises product brands, which aim at specialized markets including GeForce for gamers; Quadro for designers; Tesla and DGX for AI data scientists and big data researchers; and GRID for cloud-based visual computing users.

The Tegra Processor segment integrates an entire computer onto a single chip and incorporates GPUs and multi-core CPUs to drive supercomputing for autonomous robots, drones, and cars, as well as for consoles and mobile gaming and entertainment devices. The company was founded by Jen-Hsun Huang, Chris A. Malachowsky, and Curtis R. Priem in January 1993 and is headquartered in Santa Clara.



## Honoring the Recently Retired Professors

In the presence of Prof. Muwaffaq Al-Omoush, Vice President of the University, the Dean of Hijjawi Faculty for Engineering Technology honored a number the professors of the faculty who recently retired after a service that lasted many years in conveying the message of science and serving students and the university. The honoring was attended by the deanship staff and all the heads of departments in the Faculty.

The honored are: Prof. Fathi Ammoura and Prof. Ali Farhan from the Electrical Power Engineering Deptmnet and Prof. Qasem Alzoubi from the Electronics Department



## The First Cohort in the Engineering Managment Masters Program

The Industrial Engineering Department has accepted the first cohort of the Engineering Management Masters program this semester Spring 2022 / 2023. According to Dr. Dania Bani-Hani, the Chair of the Department, the program is designed to combine modernity and relevance to the job market. The program deals with the practical administrative aspect related to various engineering jobs. It constitutes a major component for developing the performance of the public sector in terms of engineering procedures and designing modern administrative systems on scientific grounds. The program also provides the industrial sector with competencies capable of applying the best administrative standards, due to the development of the product and service provided. The development of this program comes to fill the regional market's need for competencies that combine the administrative and technical aspects at the same time.

## A Delegation from the Polish University Silesian University of Technology Visits the Faculty

A delegation from Silesian University of Technology visited the Hijjawi Faculty for Engineering Technology. Prof. Marek Placzek from the Faculty of Mechanical Engineering provided a detailed presentation about the University including all its departments, majors, and research laboratories. He has shown some examples of the projects done by the students and their practical applications. He also talked about the students' and faculty members' mobility programs, and the available research cooperation opportunities; He mentioned that the University is interested in integrated cooperation with the industrial sector and international Universities.

Prof. Marek provided another presentation in which he focused on the Mechanical Engineering Department at the university, the numbers of students and faculty members therein, and mentioned the existence of opportunities for granting bachelor's and doctorate degrees and encouraged students to apply for it.

The presentation was attended by Prof. Ammar Al-Rousan, the Head of the Mechanical Engineering Department, and a number of faculty and administrative staff and students at Hijjawi Faculty.

After the presentation, Prof. Ammar Al-Rousan took the delegation on a tour in the Mechanical Engineering Department and showed them its laboratories. By the end of their visit, the two parties agreed to collaborate and exchange faculty members in future.



## Our Civil and Architectural Engineering Organize the Italian Design Day 2022 at Yarmouk University



As part of Italy's celebration of the Italian Design Day 2022, Yarmouk University hosted this activity in Jordan. The activity was organized by the Hijawi Faculty for Engineering Technology. The international designer Giulio Lacchetti gave a presentation about a group of Italian industrial products that were creatively and innovatively designed through modern technological techniques to support the concept of sustainability. Lacchetti stressed the importance of employing innovation and creativity in all fields of science and engineering, explaining that Ferrari, the leading manufacturer of Italian Formula cars, had developed a new brake system with advanced design value. He then talked about the developments in the field of construction science and materials technology of resistant textile fireproof fibers as well as in the environment-friendly cement in addition to the developments in the fields of ecology, agriculture, electronics, and robotics. Lacchetti also reviewed a group of success stories of companies and pioneers in the field of innovation and industrial leadership in

Italy, concluding his presentation by emphasizing the importance of partnership between the industrial sector and academia to get engineering and practical designs that meet the requirements of sustainable development.

The Head of the Civil Engineering Department, Dr. Ali Shehadeh, elaborated on the topics that were presented, stressing that Yarmouk University represented by Hijawi Faculty of Engineering Technology is keen to support the concepts of sustainability by providing high-quality engineering education that contributes to achieving sustainable development goals. He also referred to one of the latest international projects of Hijawi Faculty of Engineering Technology supported by the Royal Academy of Engineering in the United Kingdom entitled "The Role of Engineering Education in Achieving Sustainable Development Goals in Jordan". This project is led by Prof. Mwaffaq Ootom.

## Hijawi Faculty Submits Eight Proposals to the EU Erasmus+ Programme



The Hijawi Faculty for Engineering Technology has submitted eight proposals for funding from the EU Erasmus+ programme. Five of these proposals were submitted to the Capacity Building in Higher Education (CBHE) stream, two proposals for the Capacity Building for Youth, and one proposal for the Capacity Building in Vocational Education and Training (VET). The proposals cover topics such as Circular Economy, Sustainability, Digital Competencies, Remote Education, STEAM, the linkage with industry, entrepreneurship in water, and Artificial Intelligence skills.

This is considered as an achievement for the faculty, as this is the first time to submit this large number of proposals for the programme. One main advantage is that the proposal writing has been done by more than ten faculty members, which is considered an important

exercise that can be utilized in the upcoming calls for funding.

It is worth mentioning that Erasmus+ has launched this year a new structure for funding for the period 2022 to 2027, with a notable increase in the budget, and a major change in the priorities.

Erasmus+ is the EU Programme in the fields of education, training, youth and sport for the period 2021-2027. Education, training, youth and sport are key areas that support citizens in their personal and professional development. High quality, inclusive education and training, as well as informal and non-formal learning, ultimately equip young people and participants of all ages with the qualifications and skills needed for their meaningful participation in democratic society, intercultural understanding and successful transition in the labour market.

## Department of Biomedical Engineering Organizes a Workshop on Robotic Surgery Process and Technology



Under the patronage of the President of Yarmouk University, Professor Islam Massad, Dr. Rami Ghanem and Eng. Alaa Al-Basheer from The King Hussein Cancer Center presented the Robotic Surgery process and technology as it is a very new medical technology used in Jordan medical section. Dr. Ghanem presented the medical point of view that concerns this technology, on the other hand, Eng. Al-Basheer explained the technical and engineering parts of the medical robot.

Chair of the Biomedical Engineering Department Dr. Ahmad Al-Omari said that it was an event full of valuable and rich information despite the fact that the center has recently bought the medical robot.

Many instructors and students from the biomedical engineering department and the medicine department attended this event.



# Faculty Members Recognition

Faculty Members have been elevated to IEEE Senior Members



**Prof. Mwaffaq Otoom**  
Computer Engineering

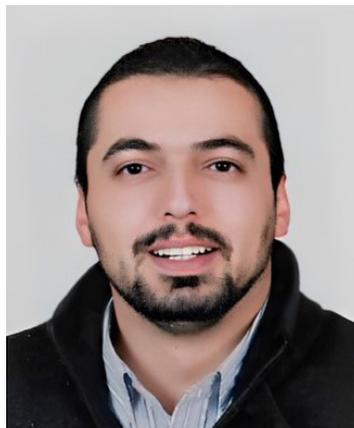


**Dr. Ahmed Koran**  
Electrical Power Engineering

## Faculty Members in Journal Editorial Boards



**Prof. Awad. Al-Zaben**  
Biomedical Systems and Informatics  
Engineering  
Associate Editor: Medical & Biological  
Engineering & Computing Journal



**Dr. Hazim Shakhathreh**  
Communication Engineering  
Guest editor: Mobile Information Systems  
Journal



**Dr. Zaid Bataineh**  
Electronics Engineering  
Guest editor: IEEE Transactions on Circuits  
and Systems I



### Assadi has become JEA Board Member

**Eng. Mohammad Assadi** a Lab Engineer in the Electrical Power Engineering Department has won in the elections of the Jordanian Engineers Association / Irbid Branch Board, that was held on February 19th, 2022. Congratulations!



**Dr. Ahmad Al-Omari** Associate Professor of Bioinformatics, and the Chair of the Biomedical Systems and Informatics Engineering Department has recently published a paper that makes his Erdos Number equals two. He became the first Jordanian Nvidia Deep Learning Institute (DLI) Certified Instructor and DLI University Ambassador in April 2020. He is an editor member for the Gavin Publishers journal and the director of Nvidia parallel computation incubator in the Entrepreneurship and Innovation Center at Hijjawi Faculty for Engineering Technology.

## Faculty Members Receive Funding from the Royal Academy of Engineering in the UK



**Dr. Ali Shehadeh**  
Civil Engineering



**Prof. Mwaffaq Otoom**  
Computer Engineering

Two professors from the faculty received funding from the Frontiers Champions Tranche 2 program of the Royal Academy of Engineering. **Dr. Mwaffaq Otoom**, Professor of Computer Engineering, and **Dr. Ali Shehadeh**, Assistant Professor of Civil Engineering, received the funding for the project, entitled: Engineering Education in Supporting the SDGs in Jordan.

This project is important for universities to update their engineering curriculum to support the sustainable development. The proposed project aims to provide a platform for experts in engineering education and sustainable development to meet and discuss the best practices required from each stakeholder in supporting the SDGs attainment through effective engineering education. Also, discussions about establishing a sustainable community with high-quality living standards within solid social and economic foundations will be provided. Moreover, investigation technologies related to supporting the SDGs within engineering education from different points of view will be developed to share the issues and needs and to contribute to SDGs 3, 6, 7, 9, 11, 12, 13, and 17.



## New Faculty Members



**Dr. Mahmoud Masadeh**

**Assistant Professor / Computer Engineering**

*PhD: Concordia University, Canada, 2020  
Approximate Computing / Machine Learning*



**Dr. Sinan Obeidat**

**Assistant Professor / Industrial Engineering**

*PhD: University of Arkansas, USA, 2020  
Decision Modeling of Maintenance, Quality, and Reliability*



**Dr. Shefa Tawalbeh**

**Assistant Professor / Biomedical Systems and Informatics Engineering**

*PhD: State University of New York at Binghamton, USA, 2020  
Biomedical Informatics*



**Dr. Sahar S. Alrabadi**

**Assistant Professor / Architectural Engineering**

*PhD: Lund University, Sweden, 2020  
Urban Design, Public Spaces, Pedestrians and Crowds*



**Dr. Hamsa Fathi Nimer**

**Assistant Professor / Civil Engineering**

*PhD: Northeastern University, USA, 2020  
Project Management, Risk Management in Construction Projects*



**Dr. Amjad Alsakarneh**

**Assistant Professor / Mechanical Engineering**

*PhD: Munster Technological University, Ireland, 2011  
Applied Mechanics*



**Dr. Mohammad A. Al Zubi**  
**Associate Professor / Mechanical Engineering**

*PhD: Wayne State University, USA, 2012*  
*Energy and Combustion, Engineering Materials, and Automotive NVH*

## Joining in Fall 2022 / 2023



**Dr. Faleh AlTal**  
**Electronics Engineering**

*PhD: Queen's University, Canada, 2017*  
*Organic Light-Emitting Electronic Devices*



**Dr. Aiman Ziout**  
**Industrial Engineering**

*PhD: University of Windsor, Canada, 2011*  
*Sustainable Production and Sustainable Product Design*



**Dr. Faisal Shalabi**  
**Civil Engineering**

*PhD: University of Illinois at Urbana-Champaign, USA, 2001*  
*Geotechnical Engineering*

7

# Study Abroad Scholarships



**Aseel Khanfar**

**Industrial Engineering**

**Pennsylvania State University, USA**

*Human Performance Modeling using Discrete-event and Agent-based Simulations*



**Abedallah Abed Alfatah Al Kader**

**Industrial Engineering**

**Ohio State University, USA**

*Optimization and Simulation Models, Machine Learning in Cognitive Human Factors in the Healthcare Domains*



**Mohammad Y. Al-Daraghmeh**

**Industrial Engineering**

**Iowa State University, USA**

*Industrial and Manufacturing Systems Engineering*



**Mu'ath I. Abu Qamar**

**Civil Engineering**

**Lehigh University, USA**

*Geotechnical Engineering / Soil-Structure Interaction of Foundation Elements Supporting Offshore Wind Turbines*



**Ammar Alshannaq**

**Civil Engineering**

**Georgia Institute of Technology, USA**

*Responsible and Adaptive Repurpose of De-Commissioned Wind Turbine Blade Materials*



**Mohammad Firas Tamimi**

**Civil Engineering**

**Oklahoma State University, USA**

*Characterization of System Performance under Combined Actions of Gradual Deterioration and Sudden Extreme Events*



**Suhaib Fareed Alfaris**

**Civil Engineering**

**Texas A&M University, USA**

*Full-scale Testing and Simulation of Prestressed Concrete Girders*



**Mutaz Dwairy**

**Civil Engineering**

**Texas A&M University, USA**

*Mechanics of Cancer Progression and the Effect of Mechanical Stresses and Interstitial Fluid Pressure upon Tumor diagnosis*



**Baraa Alkhatatbeh**

**Architectural Engineering**

**Pennsylvania State University, USA**

*Comfort Living, Passive and Sustainable Design, and Buildings' Energy Efficiency*



**Eiman Graiz**

**Architectural Engineering**

**University of Kansas, USA**

*Bio-inspired Energy-efficient Architectural Façade*



**Jakleen Amin Al-Dalal**

**Architectural Engineering**

**University of Sheffield, UK**

*Participatory Planning, Urban Justice, Activism, and Decolonisation*

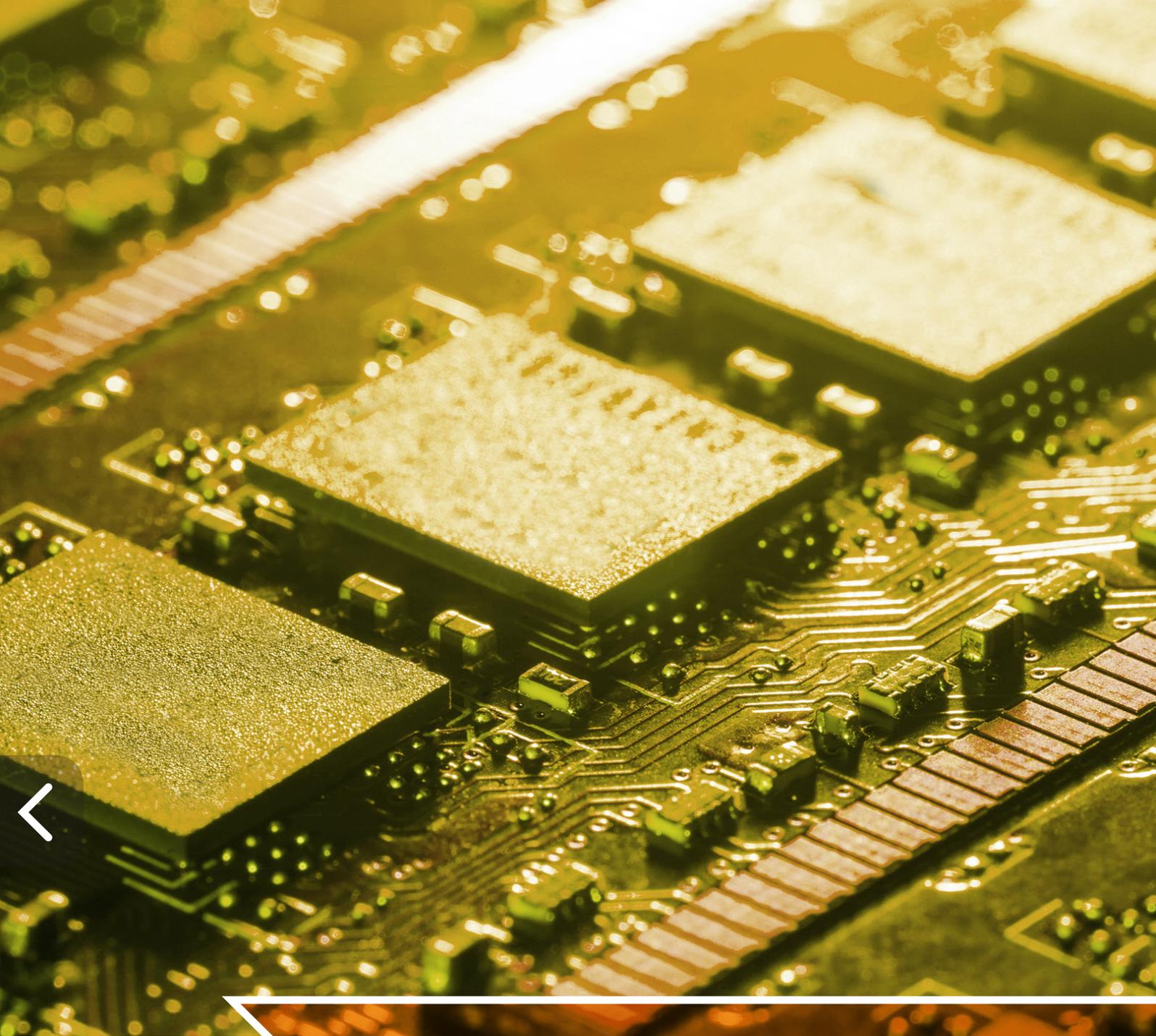


**Salwa Mohammad Alawneh**

**Architectural Engineering**

**University of Kansas, USA**

*Refugee Spaces*



### **Newsletter Staff:**

**Editor-in-Chief:** Prof. Mwaffaq Otoom, Dean

**Editor:** Dr. Yusra M Obeidat, Assistant Dean for Students and Graduates Affairs

**Designer:** Prof. Mwaffaq Otoom & Mr. Ismail M Alsabbahen

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