

### Editorial Team

Dr. Tareq Samir Salameh (Chair)

Eng. Mariam S. Hassan

Dr. Sourjya (Shorjo) Bhattacharjee

Dr. Khawla Alnajjar

Dr. In Ju Kim

Dr. Ihsanullah Obaidullah

Eng. Rola Abu Farha

#### Advisor

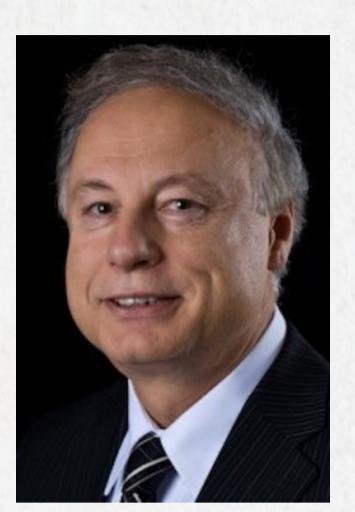
Prof. Mohamed Maalej

College of Engineering University of Sharjah P.O. Box 27272 Sharjah- U.A.E

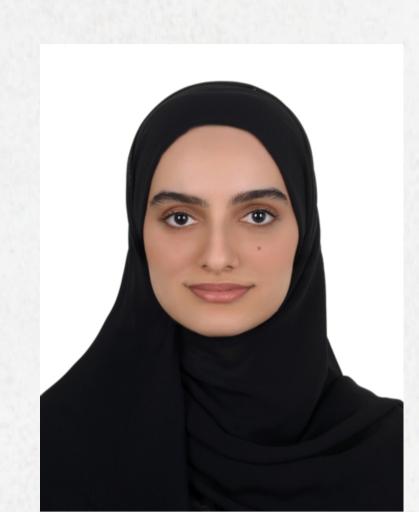


# Community news

#### New Appointments



Prof. Murat
Saatcioglu
Visiting
Professor
Civil &
Environmental
Engineering



Eng. Arwa
Waleed Fikri
Lab Engineer
Sustainable &
Renewable
Energy
Engineering

#### Promoted Faculty



Prof. Sameh Al-Shihabi Full Professor Industrial Engineering & Engineering Management



Dr. Aseel Ali Hussien Associate Professor Architectural Engineering



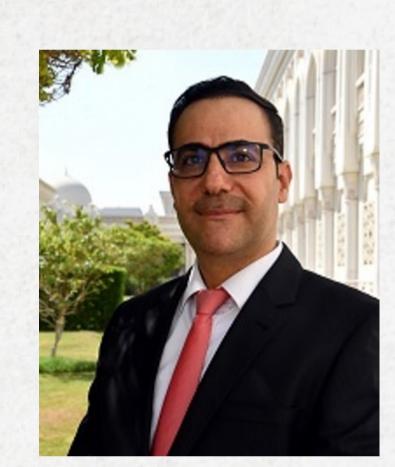
Dr. Salem B.
Abdalla Salem
Associate
Professor
Architectural
Engineering



Dr. Vittorino
Belpoliti
Associate
Professor
Architectural
Engineering



Dr. Khawla
Alnajjar
Associate
Professor
Electrical
Engineering



Dr. Eqab Almajali
Associate
Professor
Electrical
Engineering



Dr. Sofiane
Khadraoui
Associate
Professor
Electrical
Engineering

#### Achievements & Awards



Dr. Ahmed Amine Hachicha
Sustainable & Renewable
Energy Engineering
UOS Annual Faculty Incentive
Award Academic | Year
2023/2024
Scientific Research Category



Dr. Saleh Abu Dabous
Civil & Environmental
Engineering
UOS Annual Faculty Incentive
Award Academic | Year
2023/2024
Teaching Category



Dr. Aseel Ali Hussien
Architectural Engineering
Sharjah Islamic Bank Award
for Scientific Research |
Academic Year 2023/2024
Community Service
Category



Eng. Ahmad Qasem Ababneh
Mechanical & Nuclear
Engineering
Certified Energy Manager
Certification from the
Association of Energy
Engineers

#### News & Activities

# COLLEGE OF ENGINEERING STUDENTS' SENIOR DESIGN PROJECTS EXHIBITION- SPRING 2024

In the presence of His Excellency Professor Hamid M.K. Al Naimiy, Chancellor of the University of Sharjah, the College of Engineering organized the annual exhibition of Senior Design projects for undergraduate students. The organizing committee had selected the top 35 projects from all engineering departments to be presented in the exhibition; they were distinguished by innovative ideas and various solutions in sustainability and technology and were concerned with serving the local community by providing solutions to many of the challenges facing society in various fields. It also encouraged students to present the best projects and ideas reflecting their skills and knowledge gained throughout their undergraduate journey.





The students of the Architectural Engineering department presented seven projects: "Naama," an eco-friendly indoor vertical farm in Sharjah; "The Link," a multifunctional hub for Expo City in Dubai; "Wateen," a project modernizing Khor Fakkan's mountainous sites with AI; "From Risk to Resilience," focused on sustainable design solutions for durable structures; "Rebirth from Memory," a park and memorial museum; "Falaj Agresort," a heritage agricultural development in Dhaid; and "Hassad," a sustainable project to enhance the UAE's global food security.

The students of the Electrical Engineering Department presented five projects: "Baby-Haven," a smart nursery for newborns using AI to enhance care; "Design and Implementation of an Electric Vehicle," aimed at reducing pollution; "Design and Implementation of Hospital Nursing System for Self-Medical Check," a unit for patients to independently register and measure vital signs, sending data to the E-health system; and "Smart Waste Collection System," an economical and effective waste management solution.

The students of the Civil & Environmental Engineering Department presented six projects: "Interchange Over Al-Dhaid Road (E88)," proposing an overpass to improve access to Sharjah International Airport and ease traffic; "Analyzing and Improving Traffic Operations at the Intersection of Road S116 and S112," enhancing transportation planning on Maleha Street; "Enhancing Asphalt Pavement Performance with Styrofoam and Reacted and Activated Rubber (RAR) Additives," optimizing asphalt for durability; "Headwear Detection System for Construction Safety," evaluating helmet recognition algorithms; "Integration of Titanium Oxide Nanoparticles and Carbon Nanotubes for Enhancing Asphalt Binder Properties," incorporating nanomaterials into asphalt binders; and "Investigate the Synergistic Effect of the Nano Materials on Asphalt Binder," studying performance improvements in nanomodified asphalt.





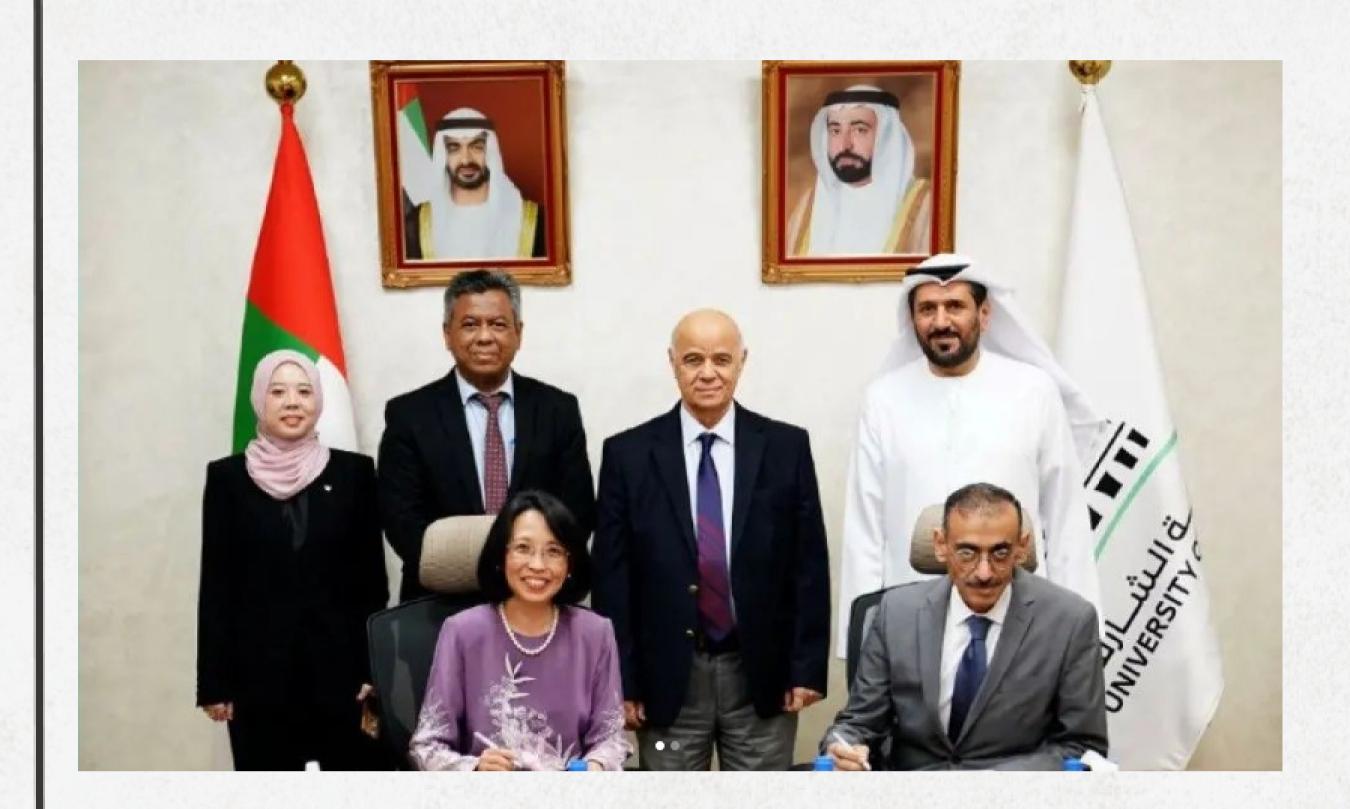
The students of the Industrial Engineering & Engineering Management Department presented three projects: "Streamlining Warehouse Operations With Lean: A Case Study at Aramex," which improved warehouse efficiency from 55.65% to 60% by applying lean principles and optimizing the picking process; "Revamping of a Fuel Cell System from Industry 2.0 to Industry 4.0," transforming an outdated fuel cell system into a modern, intelligent system using data analytics and monitoring; and "Design and Implement a Digital Twin of a Compressed Air Energy Storage System for Real-Time Optimization," leveraging Digital Twin technology to enhance the efficiency and sustainability of energy storage systems through real-time monitoring and predictive analytics. The students of the Mechanical & Nuclear Energy Engineering department presented seven projects: "Design and Fabricate a Solar Thermal System for Brine Recovery," using solar energy to evaporate water from brine waste; "Designing a Racing Kart," creating an efficient and cost-effective

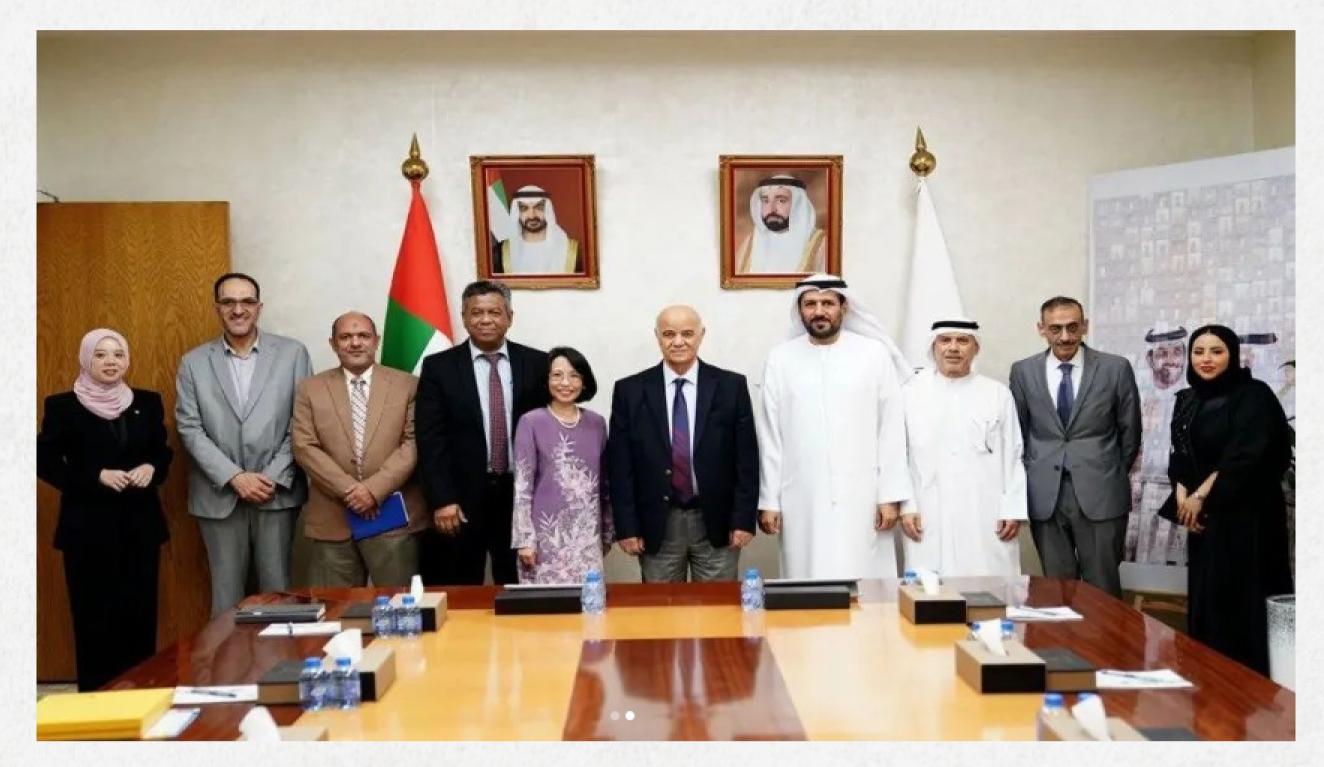


go-kart; "Design of Heat Exchanger with Different Phases," developing a two-phase heat exchanger to improve thermal and hydraulic performance; "Design of a Smart Mechanical Platform to Lift Small Vehicles Parked in No Parking Places," engineering a mobile appcontrolled scissor lift to relocate illegally parked vehicles; "Design of Solar-Powered Machine to Turn Plastic Waste into 3D Printing Material," converting recovered polymers into 3D printing filaments; "Hybrid Electric Vehicle (HEV) Improvements to Frame," designing a lighter, stronger HEV frame; and "Radiological Screening for Underground Water Quality Assessment," using advanced instruments to ensure groundwater quality in the UAE. The students of the Sustainable & Renewable Energy Engineering department presented six projects: "Sand-Based Thermal Energy Storage for CSP Systems in the UAE," investigating sand as a thermal energy storage medium; "Design of a Floating Solar PV/Wave Generator Hybrid Power System," combining floating solar panels with wave energy converters for clean electricity generation; "Hybrid CPV Module for Energy Generation," integrating CPV and bifacial PV cells to capture both beam and diffuse solar radiation; "Solar Hybrid Car," developing a self-charging hybrid car using combined solar and kinetic energy; "Solar-Powered Lectrolyzer," producing green hydrogen through water electrolysis powered by renewable energy; and "Utilizing Seawater for Sustainable Green Hydrogen Production by Solar Energy," using solar panels and solar stills to purify seawater and produce hydrogen.

# The University of Sharjah and the University of Malaya Sign a Memorandum of Understanding

The University of Sharjah has recently signed a joint memorandum of understanding with the University of Malaya, Malaysia. The agreement aims to facilitate the granting of a double doctorate in selected engineering disciplines such as Electrical Engineering, Engineering Management, and Civil Engineering. With time, the program will expand to include Mechanical Engineering and Renewable Energy. The memorandum will enable students to obtain a doctorate degree accredited by both universities and benefit from joint-supervision. To be eligible, graduate students and researchers must meet the conditions and rules of each university.





#### College of Engineering Showcases Innovation at University "Open Day"

The College of Engineering played a pivotal role in the university's Open Day, welcoming new students and their parents. Faculty members and current students showcased a variety of innovative projects, highlighting the diverse engineering programs available. The interactive demonstrations and informative sessions provided attendees with valuable insights into the curriculum, research opportunities, and career prospects in engineering. This engagement not only informed prospective students about the dynamic and supportive nvironment of the college but also inspired them to pursue their academic and professional goals in

engineering.

innovative student projects and



# Government and Academia Unite in Al Madam's 'Engineer of the Future' Initiative

The "Engineer of the Future" initiative, an exciting collaboration between government departments and educational institutions, is unfolding, bringing together school and university students, distinguished officials, and prominent figures from the central region of the U.A.E. The event occurred at "Al Bait Al Metwahed" hall in Al Madam. A significant highlight of the event is the participation of the College of Engineering at the University of Sharjah in the "Engineer of the Future" initiative. The college showcased

introduced a range of engineering majors, emphasizing their crucial contributions to the initiative. Mr. Salem Obaid Al Mayalah- The Director of Al Madam Municipality- praised the college's involvement, stressing how their presence elevates the initiative's



goals. Al Mayalah explained that the Initiative aims to familiarize school students and graduates with various fields of study and boost collaboration between school and university students. The Central Region Parents Council also actively participated, supporting the initiative's objective to bridge educational levels and inspire future engineers.



#### End- of- Year College of Engineering Performance Retreat day

The College of Engineering Social Affairs Committee organized the End-of-year College Performance Retreat Event held on May 30, 2024, in the student forum building. The event was hosted in the presence of Prof. Maamar Bettayeb, Vice Chancellor for Research & Graduate Studies, Prof. Abdul Wahab Bin Mohammad, Dean of the College of Engineering, and many of the College of Engineering's faculty and staff members. The event began with welcoming remarks by Prof. Abdul Wahab Bin Mohammad, followed by a review of the College's KPIs by Dr. Thanh Mai VU. This social gathering was also an opportunity to welcome one newly joined faculty member and one Laboratory Engineer and to congratulate 5 faculty members who recently got promoted. Moreover, three faculty members with significant achievements were recognized, and four faculty members who resigned were honored at the event

# Architectural Engineering

# Department of Architecture Bridges Borders: MoU Signed with University of Pavia

We are thrilled to announce the signing of a Memorandum of Understanding (MoU) between the University of Sharjah and the University of Pavia! This exciting development, spearheaded by Dr. Eslam Nofal, Assistant Professor at the Department of Architectural Engineering, paves the way for fruitful collaboration in both research and teaching endeavors. The MoU signifies our commitment to fostering international partnerships and



expanding academic exchange opportunities for our students and faculty. Stay tuned for further updates on this exciting collaboration!

# Architectural engineering students and their supervisor won the EtihadWE Competition

Supervised by Dr. Ahmad Sukkar, architectural engineering students Mohammed Shaltout and Said Elbeiouk have won the first award at the Etihad Water and Electricity's (EtihadWE) Legacy Lounge design competition to design Majlis for Senior employers of this national company in Dibba al Hisn Office. It will be constructed on several sites.

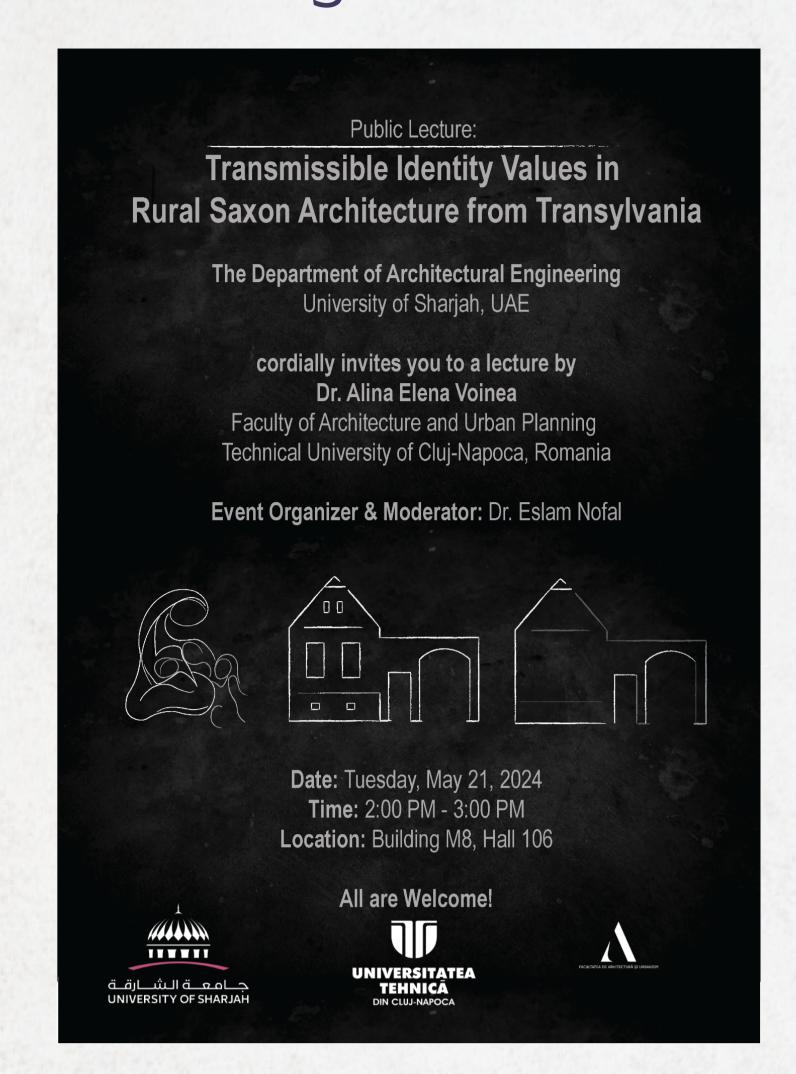


# AE Faculty paper featured in the Editor's Choice Selection of the Journal of Architectural Engineering

AE Faculty, Vittorino Belpoliti, Emad S. N. Mushtaha, Ahmed A. Saleem, and former chairperson Abbas A. Elmualim, published paper, Assessment of Natural Ventilation Techniques by Means of Measurements and Retrospective CFD Simulation on a Test Building, was announced as Editor's Choice section of the Journal of Architectural Engineering page in the ASCE Library. It is available for free for 3 months and is being featured in the selected section in the ASCE website and ASCE's social media accounts. The study compares CFD digital simulations results and field measurement on a prototype building in the UAE. The analysis quantified 0.7°C/day indoor temperature reduction due to natural ventilation strategies.

#### Public lecture in Vernacular Architecture and cultural heritage

The Department of Architectural Engineering hosted a public lecture by Dr. Alina Elena Voinea from the Faculty of Architecture and Urban Planning at the Technical University of Cluj-Napoca, Romania organized by Dr. Eslam Nofal. Dr. Alina is a leading researcher in the field of vernacular architecture, with a particular focus on the cultural heritage of Transylvania. Dr. Voinea's research explores the ways in which architectural forms and techniques can embody and transmit cultural identity. Her work has been published in numerous academic journals and she is a frequent speaker at international conferences.



#### Al Dhaid Public Park Design Competition

Architectural engineering students and their supervisors won awards in a design competition, Al-Dhaid Public Park Design Competition, organized between the AED and the Department of Public Works, Government of Sharjah, coordinated by Dr. Ahmad Sukkar. The competition aimed to create a post-curricular space for collaboration between these two departments to link the university to real governmental projects for the benefit of the community and to achieve sustainability. The final celebration took place on 27 May 2024 at the main branch of the Sharjah Department of Public Works in Naseeria



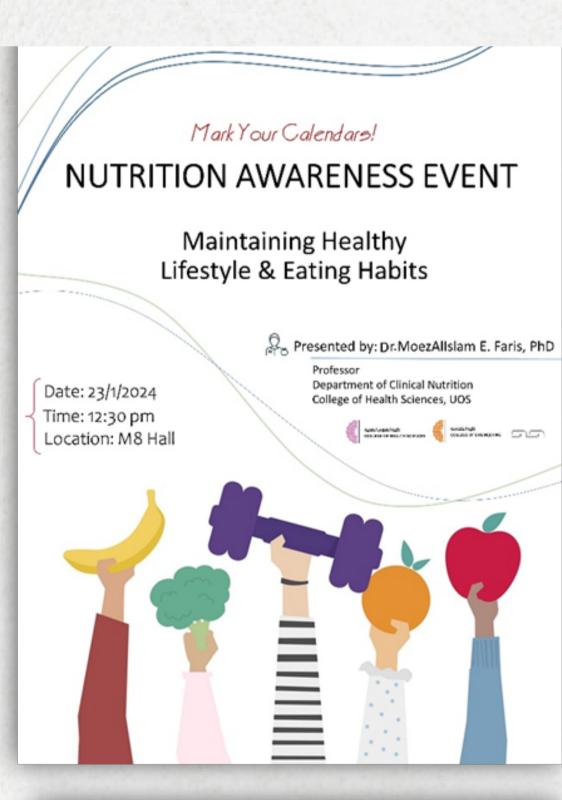


#### Nutrition Awareness event

The Architectural Engineering department In collaboration with the College of Health Sciences, Prof. MoezAllslam and Eng. Rozan has brought to us an Event explaining the importance of maintaining a healthy lifestyle.

#### Sketch Book Supervision + Sketching Tutorials

Giving tips and techniques for students to allow them visualize and apply their thoughts properly using drawings while developing their Bank HQ Project.





# Civil & Environmental Engineering

#### "Geo-Talks" Geotechnical Seminar

On January 11th, 2024, the Department of Civil and Environmental Engineering hosted the "Geo-Talks" Geotechnical Seminar at M9 - Albayrouni Hall, in collaboration with the National Marine Dredging Company (NMDC), New York University of Abu Dhabi, and ADEC Engineering Consultancy. The seminar featured presentations on critical topics such as geotechnical considerations in dredging by Dr. Mouad Lambarki, the design of marine structures by Prof.



Mohamed Mansour, advanced physical modeling and sensor-based health assessment by Prof. Tarek Abdoun, and recent advances in Al in geotechnical engineering by Dr. Mohamed Arab from CEE department. This event provided a valuable platform for sharing knowledge, fostering collaboration, and showcasing cutting-edge research and innovations in geotechnical engineering.

#### Future Engineer's Day

As part of improving the student recruitment scenario at COE, an event was organized and presented for high school students of Al Madam Municipality constituting of several schools.

Under the leadership of Prof. Maher Omar (CEE, Committee Chair) and representatives from every department worked towards this event to make it a huge success. Dr. Mantha (CEE) and Dr. Bassam (MNE) particularly were instrumental in brainstorming and preparing the presentation for the event with obvious contributions from every department.



#### University of Sharjah Scientific Open Day

The University of Sharjah Scientific Open Day provided a platform for meeting the next generation of brilliant students. The event was a delightful experience for visitors, faculty, and students, marked by fun, engagement, and enjoyment.



#### Sharjah Sustainability Award

Ph.D. student Ali Alnaqbi, with his supervisors, Dr. Waleed Zeiada (main supervisor) and Prof. Ghazi Al-Khateeb (cosupervisor), won first place in the Sharjah Sustainability Award – 12th Cycle 2023-2024, Domain: Artificial Intelligence Applications in Sustainability.





Master's student Eyad Hany, with his supervisors, Prof. Ghazi Al-Khateeb (main supervisor) and Dr. Waleed Zeiada (co-supervisor), won first place in the Sharjah Sustainability Award – 12th Cycle 2023-2024, Domain: Research in Sustainability--Post-Graduates.

# Dubai Award for Sustainable Transport (DAST) organized by Dubai's Roads and Transport Authority (RTA)

The University of Sharjah Team from the CEE Department including Dr. Waleed Zeiada and Dr. Muamer Abuzwidah along with the exceptional efforts of students Sham Marwan Miro, Ayat Jamal Ashour, and Reem Nassif Hassan won the first place of the Dubai Award for Sustainable Transport under the Best Academic Research' Award domain. This year, RTA received 168 applications from the UAE and the MENA region. The submitted research tackled the critical impacts of climate change on the performance

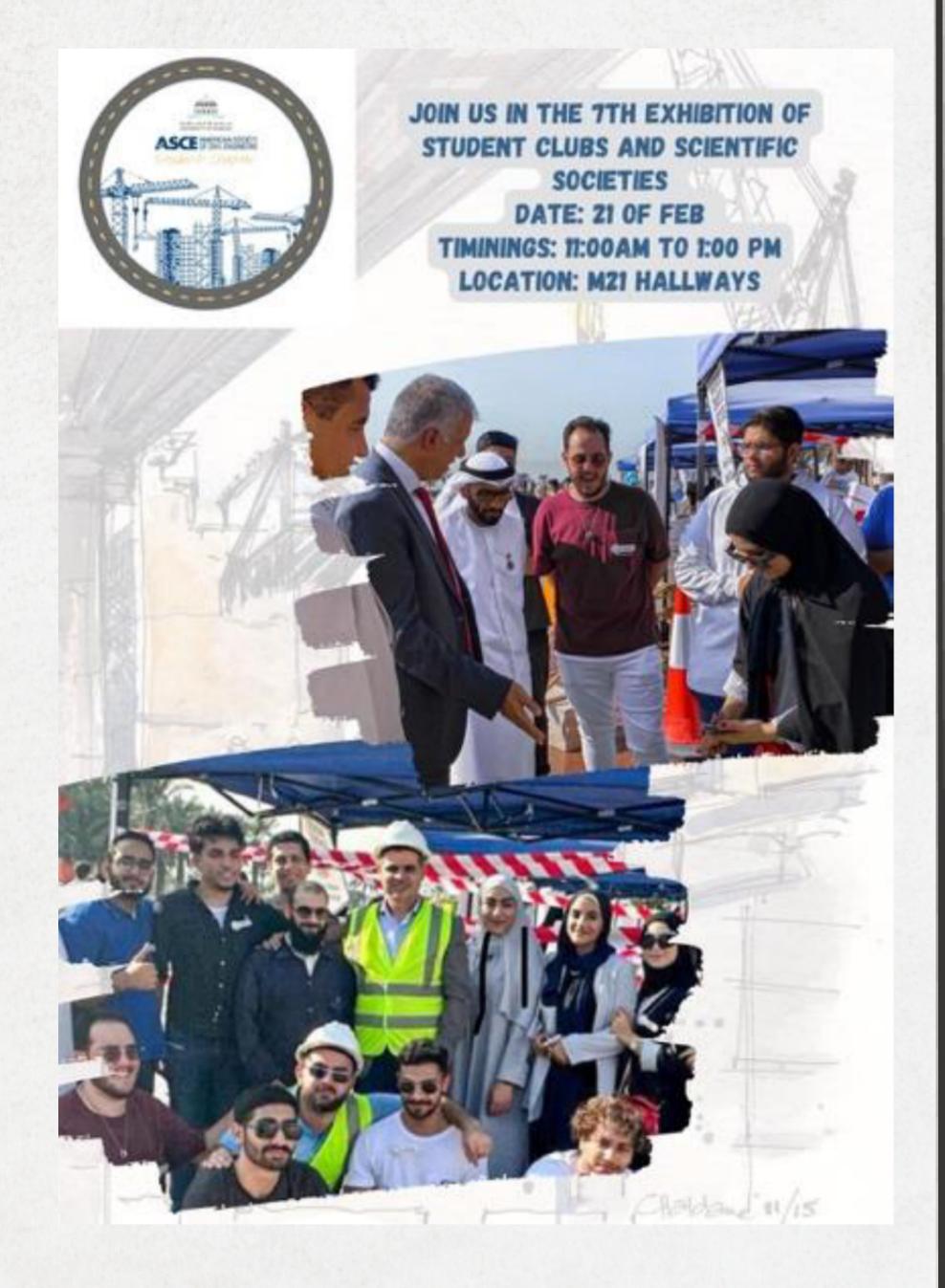


grading of asphalt binder, and consequent impacts on long-term performance, life-cycle cost analysis, and CO2 emissions of flexible pavements. This pioneering research, funded by the Ministry of Energy and Infrastructure, stands out as the first of its kind in the GCC and MENA regions, aiming to guide future sustainable practices in regions severely impacted by global warming to assure resilient road network.

#### The 7th Annual Student Clubs and Scientific Societies Exhibition

The 7th Annual Club Fair for Student Clubs and Scientific Societies at the University of Sharjah, held on February 21, 2024, marked an incredible journey for the UOS American Society of Civil Engineers (ASCE). Highlights:

- Engagement: The ASCE booth attracted attention with engaging games and delicious snacks, fostering networking opportunities for students.
- Connections: Strong connections were formed with fellow students and faculty who share a passion for civil engineering.



# Electrical Engineering

#### Promoted to Associate Prof

Sultan Bin Ahmed honors UoS's Prominent Emirati academics. Dr Khawla Alnajjar was one of them.



مفوضية الاعتماد الأكاديمي

مشروع المقوم المعتمد

# Participants in the Assessor Accreditation Project Organized by the Commission

Dr. Khawla Alnajjar is a member of the participants in the Assessor Accreditation Project Organized by the Commission

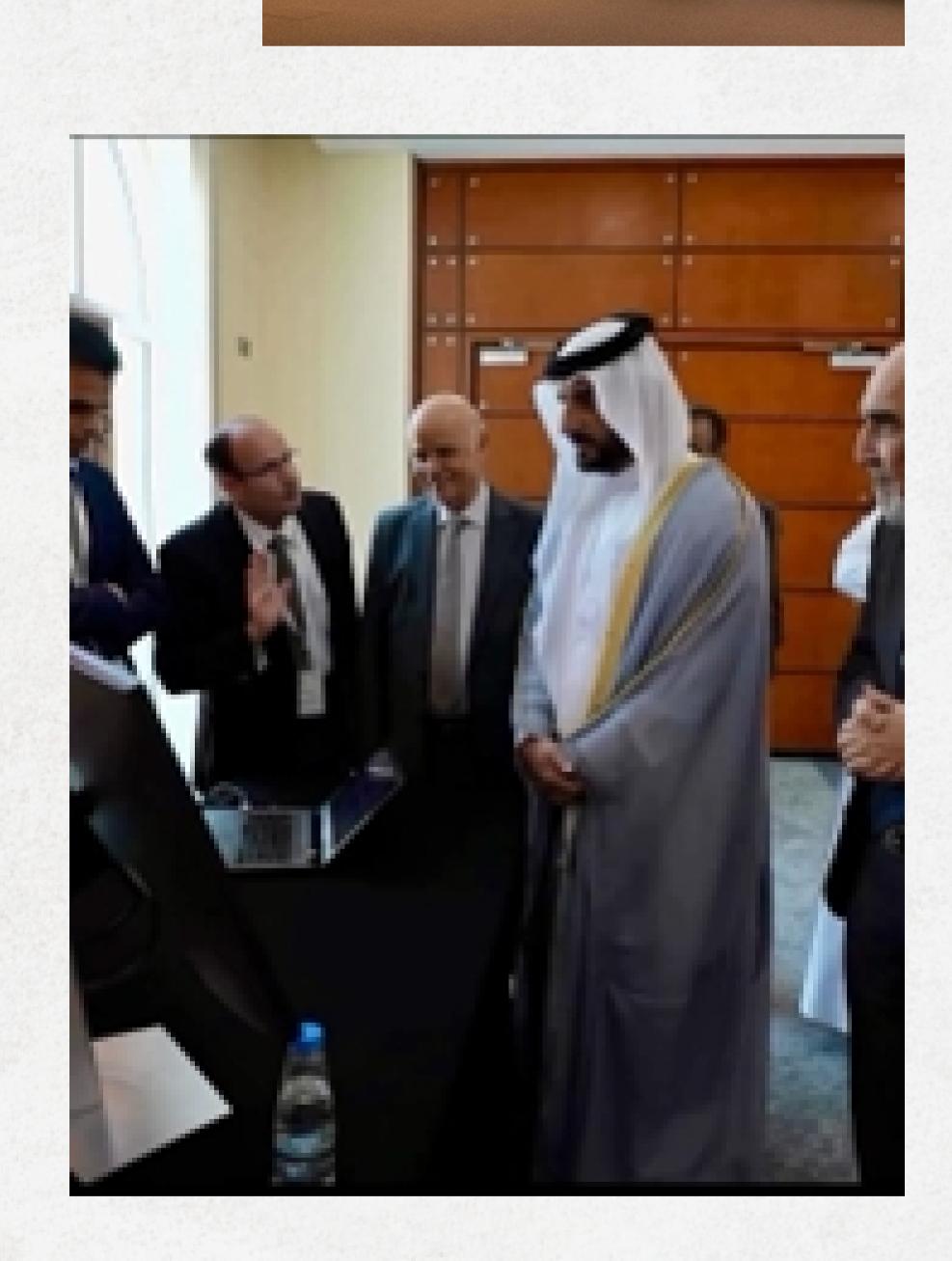
for Academic Accreditation workshops, 2023-2024.



He was honored to be a member of the organizing committee and an exhibitor along with Eng. Mena at the 16th Annual Scientific Research Forum held at the University of Sharjah on May 22. It is the privilege to present our selected and recognized Granted United States Patent in front of H.H. Sheikh Sultan bin Ahmed Al Qasimi, President of the University of Sharjah and the Chancellor Prof. Hamid Al-Naimiy and the Vice Chancellor for Research and Graduate Studies Prof. Maamar Bettayeb and to the rest of our esteemed guests.

The Patent is Titled: Smart Information Recognition for User Health Identification through Covid-19 Applications

This Invention aligns with the goals of this year's research forum, focusing on impactful research for the community for healthcare and non-healthcare sector



Dr. Khawla Alnajjar Signing an agreement with a Chinese university (Shandong Normal University) with the attendance of Sheikh Fahim Al Qasimi and Presenting in the best universities in China

Department of Government Relations- The Government of Sharjah planned to visit the Republic of China from 2 to 8 Jun 2024 to cooperate with China in many disciplines such as trade, health science, and education. The number of entities participating in the delegation reached 18 governmental and semi-governmental entities representing various sectors of Sharjah. In Education, the main focus is on promoting higher education between the two sides, attracting students to the field of studies, and signing an agreement with Shandong Normal University to establish a branch of the Chinese Confucius......

Institute in Sharjah. The Excellency Chancellor of the University of Sharjah proposed that Dr. Khawla Alnajjar be a part of the delegation to represent the University of Sharjah and the act of his excellency's behalf to govern the educational institutions according to the schedule.

Dr Khawla Alnajjar signed the MOU on behalf of the chancellor and gave a presentation and video about the University of Sharjah in universities and institutes that she went to individually in China.







#### EE Department Seminar

Dr. Muhammad Mubasshir Shaikh of the EE Department, gave a seminar titled "Modelling Solar-Terrestrial Interaction Impacting Radio Wave Propagation in Near-Earth Environment". The talk explored how space weather impacts our radio communication between space and the ground, what factors most affect this scenario and how do we measure or model these effects to improve the reliable usage of our technology in space.

#### IEEE Closing Ceremony

The Department of Electrical Engineering and the IEEE Student Section held the IEEE Closing Ceremony on May 16, 2024 in Al Bayruni Hall. The event included a speech by Prof. Amr El-Nady, Chairman of the EE Department, who expressed strong support for student activities that promote professional excellence, contribution to the community and faculty-student collaboration. Certificates and shields of appreciation were distributed to the faculty members and



students who have contributed to the success of the IEEE activities. The event also included Engineering-oriented trivia games and prizes were distributed to the winners.









#### Future Engineers Day

The UOS College of Engineering, in collaboration with Al-Madam Sharjah Municipality, hosted a Future's Engineer Day event on May 29th, 2024. Doctors and students from the Electrical Engineering (EE) department represented the college at the event.





#### EE dept. collaborated with e& enterprise for the Sharjah Airport project

On January 21, 2024, e& enterprise arranged a meeting for our EE students at the Sharjah Research Technology and Innovation Park to develop a project for Sharjah Airport. The group was led by Dr. Saeed Abdallah.



#### Best SDP2 Competition

As part of its goal of promoting the spirit of innovation among EE students, the IEEE Club organized the Best SDP2 Competition for Spring 2024 as part of the IEEE Closing Ceremony on May 3, 2023. The competition had three themes: 1) Sustainability, 2) Innovation and 3) Community Service. The winners for each theme were honored and gifts were distributed to the students.

Prof Ali Ahmed Adam Ismail's students won 1st place in the SDP\_II Competition with the theme of Sustainability. The project title is "Design and Implementation of Electrical Vehicle.

Below are the names of the students.

Baraa Mahdi Khalil

Khalil Ibrahim Ahmed

Rakan Maher Alsadaka









Prof Anwar Jarndal and his students won 1st place in the SDP\_II Competition with the theme of Innovation. The project title is "Robotics Hybrid Drone for Rescue and Surveillance Applications.

Below are the names of the students.

Zuhair M. Abdulmuniem

Ali Omar Albaiti

Mustafa A. Elmallah

Prof Raouf Fareh and his students won 2nd place in the SDP\_II Competition with the theme of Community Service. The project title is "Controlled Enhanced Care- Smart Al Incubator for Preemies.

Below are the names of the students.

Aisha A. Alzarooni

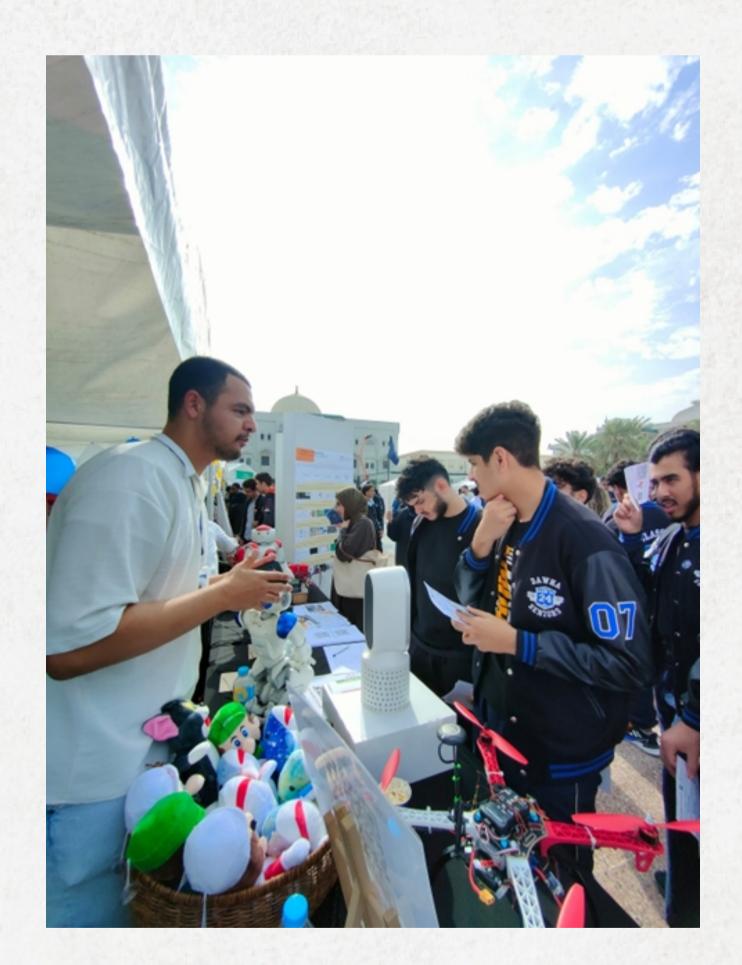
Noora F. Albannai

Khawla S. Saad

#### UoS Open Day

The EE Department and the IEEE Student Club participated in the UoS Open Day, with a booth that introduced the Electrical and Electronics Engineering program to high school students and showcased outstanding SDP prototypes.



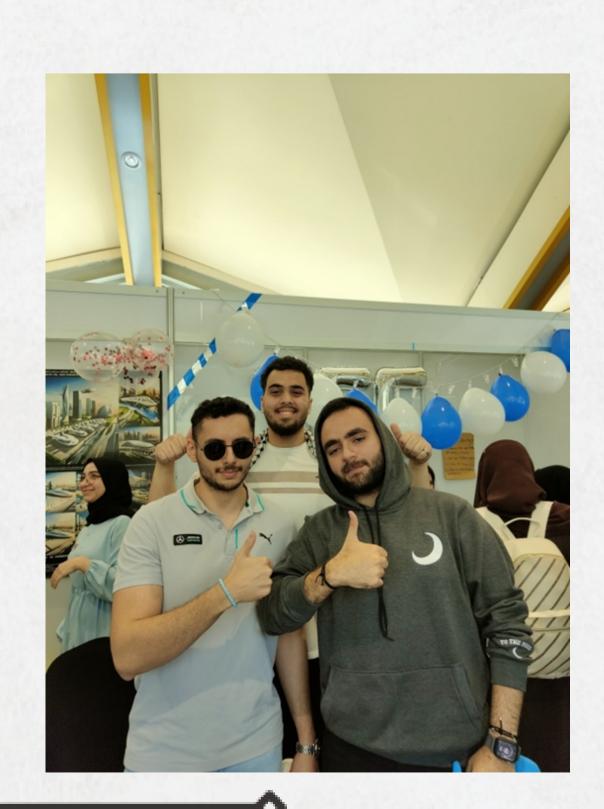




#### UoS Clubs Day

The Department of Electrical Engineering and the IEEE Student Club participated in the University of Sharjah Club's Day.





#### Design for Future Higher Education Student Competition

Ali Omar Ali Al-Baiti has won the "Design for Future Higher Education Student Competition" under the super vision of Professor Anwar Hasan Mohammed Jarndal. The event was held at the University of Sharjah on Thursday, April 25, 2024. During the competition, the students demonstrated their creative and innovative ideas to support the process of transforming education in the future.



#### IEEE UAE SDP Competition

A team from the Electrical Engineering Department won 3rd place in the 18th IEEE UAE Student Day SDP Competition. The competition took place at the United Arab Emirates University (UAEU) on June 1, 2024. The SDP competition included 45 teams from different universities in the UAE. The winning team consists of the students:

- Ayesha Siddiqua Sarfaraz
- Fadak Abbas
- Amena Khreebot



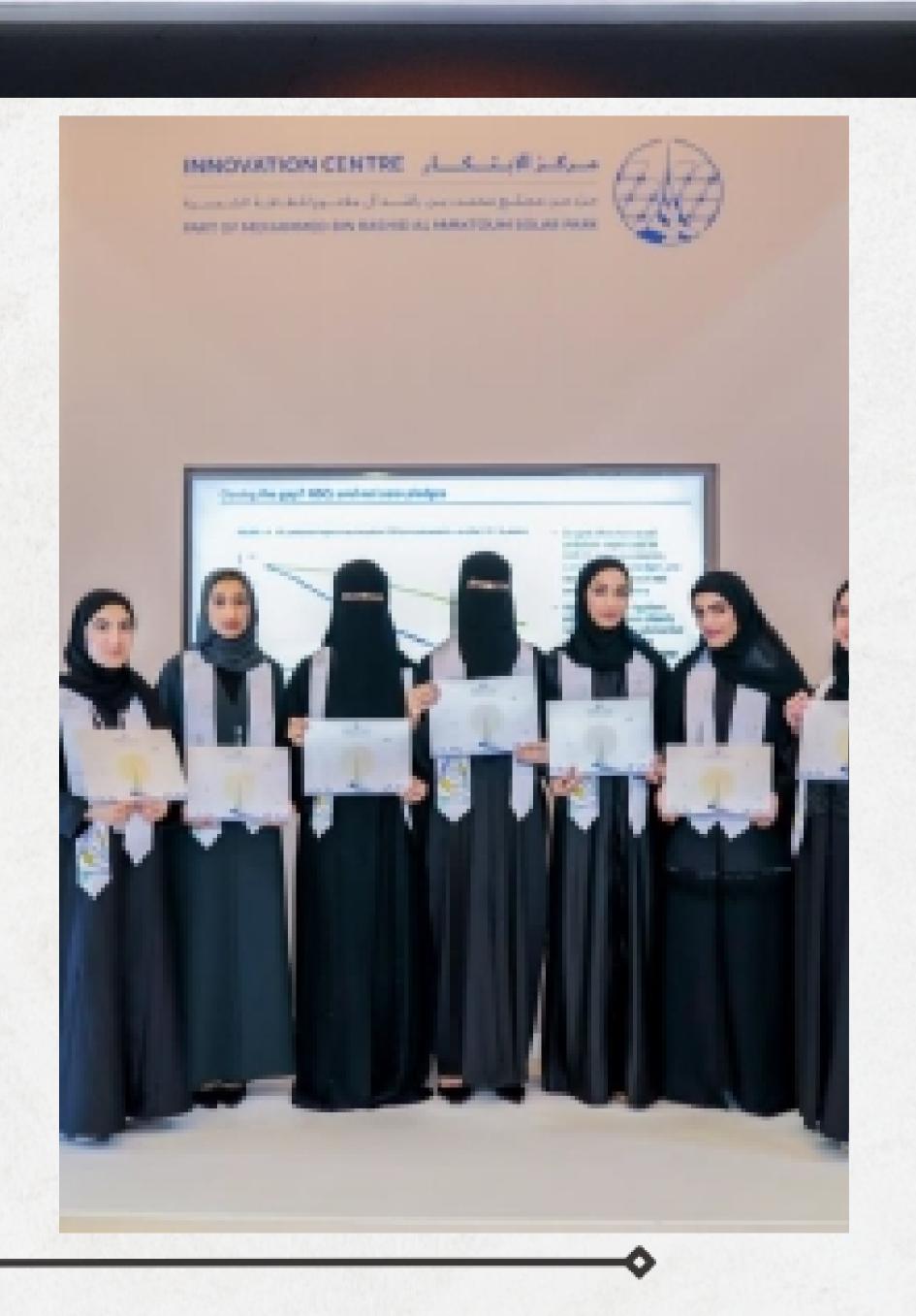
The winning project is titled "Patrol Scouts: Control of a Swarm of UAVs for Patrolling", and was supervised by Dr. Raouf Fareh.

#### CleanTech Youth Program

1- Shaima & Maitha Participated in the CleanTech Youth Program hosted by Mohammed bin Rashid Al Maktoum Solar Park and sponsored by DEWA. This program provided insightful sessions on expertise in Clean & Renewable energy and offered worthwhile site tours. During the program, they developed a project named "ShaheenTech," an autonomous drone for monitoring and cleaning solar panels. Additionally, we presented our project at WETEX and the MENA Solar Conference. They graduated from the CleanTech program in the presence of H.E Saeed Al Tayer, the Executive Director of Dubai Electricity and Water Authority.

2-Shaima and Maitha Won second place among 115 teams from all universities in the UAE in the INNOBATOR competition offered by the College of Business at UOS and SHERAA. Moreover, They had the opportunity to talk about my project and my victory on the same day as the awarding ceremony in a quick interview on Sharjah TV.





#### INNOVATOR competition

Maitha Ahmed and Shaima Ahmed Won second place among 115 teams from all universities in the UAE in the INNOVATOR competition offered by the College of Business at UOS and SHERAA. Moreover, They had the opportunity to talk about their project and victory on the same day as the awarding ceremony in a quick interview on Sharjah TV.



#### Universities Challenge competition

Maitha Ahmed and Shaima Won second place among 17 universities from the Arab world in the "Universities Challenge competition" offered by the Sharjah Government Communication Award in cooperation with the United Arab Emirates University. They were honored by His Excellency Tariq Allay, Director-General of the Media Office of the Government of Sharjah.



#### Startups Bootcamp

Maitha Ahmed and Shaima Won first place in the Startups Bootcamp among 20 teams. Sharjah Open Innovation Lab and Sharjah Research and Technology Innovation Park offered the Bootcamp.



#### "Amasi" TV show

Maitha Ahmed and Shaima had the opportunity to appear on Sharjah TV's "Amasi TV show," where we presented our project called "Smart Gloves" that translates sign language into text and speech messages. They also shared their achievement in the INNOVATOR competition.



#### UAE Al Summer Camp

Maitha Ahmed and Shaima Participated in the UAE Al Summer Camp offered by Artificial Intelligence and Dubai Economy, Remote Work Application Office, Dubai Future Foundation, and Coder HQ.



#### Panel Discussion Offered by Ras Al Khaimah Creative Hub

Maitha Ahmed and Shaima participated in a panel discussion offered by Ras Al Khaimah Creative Hub in the presence of His Excellency Afra Bakhit bin Hindi, Member of the Federal National Council. Moreover, they were one of the session's main speakers, sharing their journey and achievements.



#### Hackathon Sustainability Transport 2023

Maitha Ahmed and Shaima participated in the Hackathon offered by Dubai Road and Transportation Authority, "Hackathon Sustainability Transport 2023.



#### International Access Abilities Expo 202

Maitha Ahmed and Shaima participated and Presented their innovative project, "Smart Gloves," which translates sign language into text and speech messages at the "International Access Abilities Expo 2023" under the patronage and presence of H.H Sheikh Ahmed Bin Saeed Al Maktoum.





#### Expand North Star

Maitha Ahmed and Shaima participated and presented an innovative project, "Smart Gloves," at the largest startup event in the world, "Expand North Star," hosted by the Dubai Chamber of Digital Economy.





# Industrial Engineering and Engineering Management

#### IEEM Freshman Orientation

The IEEM Freshman Orientation was designed to introduce new students to the exciting opportunities available within the IEEM Department's BSc program. The event highlighted various activities and resources facilitated by the IISE Club, setting the stage for a successful academic journey.

This event also introduced the new study plan, the IEEM community, and potential career paths for IEEM graduates. The day included interactive sessions, games, prizes, and refreshments to foster engagement and camaraderie among the new students.



#### Dr. In-Ju Kim: Invited reviewer for the 14th Annual IEOM Conference

Dr In-Ju Kim was honoured as an invited reviewer for technical papers at the 14th Annual IEOM Conference, held in Dubai from February 11-14, 2024. He provided expert feedback, contributing to the success of the conference.

Undergraduate students Qabas Al-Jumaili, Mariam Elghobashi, and Fatma Alshamsi secured first place in the Human Factors and Ergonomics Competition at the 14th Annual IEOM Conference. Their winning paper, advised and supervised by Dr. In-Ju Kim, was presented during the conference in Dubai, February 11-14, 2024.





#### Dr Zehra Canan Araci: Participated in the Design Thinking Workshop

Dr Zehra Canan Araci participated in the Design Thinking Workshop which HH Sheikh Mohammad Faisal Al-Qasimi organised in collaboration with the Lean Analytics Association on 17 February 2024. This workshop applied Design Thinking Methodology, a non-linear, iterative process that fosters team collaboration in discovering user needs, redefining problems, and creating innovative prototypes. The workshop addressed two key challenges:

1. Ensuring excellence in innovation across research organisations in the Arabic Gulf region.

2. Transferring knowledge to the commercial, governmental, and third sectors builds a resilient culture for effectively solving society's strategic issues.

# Dr. Ali Cheaitou: Keynote Speaker at the 7th International Conference on Logistics Operations Management

Dr. Ali Cheaitou delivered a keynote speech at the 7th International Conference on Logistics Operations
Management, held in Marrakech, Morocco, from May 2-4, 2024.

His presentation, titled "Tradeoffs in Green Logistics: Insights Learned from Quantitative Models for Transportation Systems," explored the complexities of sustainable logistics.



#### Future Engineers' Day (29 May 2024)

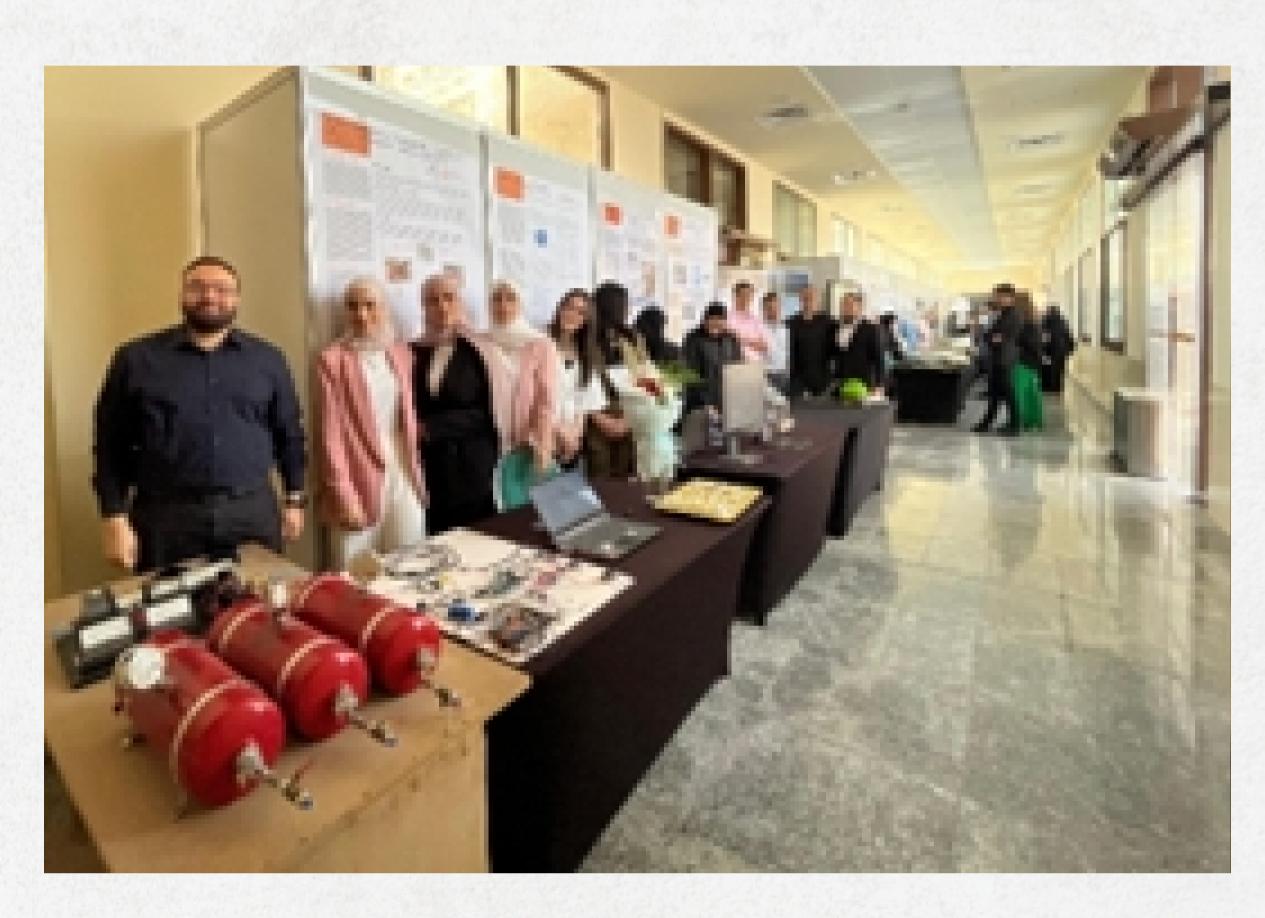
The event aimed to promote engineering culture among high school students while aligning with the Sharjah Government's directives to support students in choosing the appropriate engineering paths. The University of Sharjah College of Engineering provided an overview of its disciplines, complemented by interactive presentations, activities, and exhibitions of innovative student projects. Engr. Mohammad Khasawneh served as the IEEM Department coordinator and a speaker at the event.

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#### Senior Design Project (SDP) Exhibition

Four Senior Design Projects (SDPs) were showcased at the College of Engineering exhibition: Project 1: Design and implement a Digital Twin for real-time optimisation of a compressed air energy storage system. (Ahd Maher Shoshaa, Nada Samy Moursy, Layan Samer Ghannam) Project 2: Development of a Smart and Sustainable Irrigation system to enhance water and energy efficiency and crop performance in agriculture. (Fatima Alsuwaidi, Alya Alsuwaidi, Hessa Alrashdi)

Project 3: Transformation of a Fuel Cell System from Industry 2.0 to Industry 4.0, incorporating



Business Intelligence and Business Analytics. (Aissa Messaoudi, Abdallah Fareed, Ahmed Elsayed, Zeyad Mohamed, Kareem Al Jaghbeer) Project 4: Streamlining Warehouse Operations using LEAN principles: A Case Study at Aramex. (Nadia Qasim Abuhantash, Taima Firas Abu Shawish, Baylasan M. Baida) Project 4 was recognised as the best SDP in the Spring 2024 exhibition.

# Design Thinking Workshop by HH Sheikh Mohammad Faisal Al-Qasimi in collaboration with the Lean Analytics Association

In this workshop, participants applied Design Thinking Methodology, a non-linear, iterative process for teams to discover user needs, understand challenges, redefine problems, and ideate and create innovative prototypes collaboratively. Two challenges are addressed in this workshop:

- 1. How can we ensure the excellence of innovation in research and technology in research organizations (universities, research centers, companies) in the Arabic Gulf region?
- 2. How can we transfer knowledge to the commercial, governmental and third sectors, building a resilient culture towards solving society's strategic issues for the future in an optimal way?

# Mechanical and Nuclear Engineering

#### University of Sharjah Students Visit Hamriyah SWRO Desalination Plant

Students and faculty members from the Chemical and Water Desalination Engineering program at the University of Sharjah recently visited the Hamriyah SWRO Desalination Plant in Sharjah. As a leading program in water desalination engineering, these experiential learning opportunities are integral to shaping our graduates' expertise and understanding of real-world applications.

SEWA's ongoing support provides students with valuable real-world experiences that enhance their learning journey and prepare them for successful careers in the field.

College of Engineering Faculty Members served as chair and co-chair of the international conference.



Dr. Ihsanullah Obaidullah has served as a co-chair of the 1st international conference on Environmental Design, Material Science, and Engineering Technologies organized by IEREK (International Experts for Research Enrichment and Knowledge Exchange) and hosted by Abu Dhabi University (Dubai Campus) and co-hosted by the University of Sharjah and Instituto Marangoni.

Dr. Zafar Said from University of Sharjah served as chair of the conference.

# Dr. Muhammad Zubair, becomes the UOS representative (INSEN) & (INMM).

Dr. Muhammad Zubair, becomes the UOS representative in the International Nuclear Security Education Network (INSEN) and Institute of Nuclear Materials Management (INMM). Both Departments belongs to the International Atomic Energy Agency (IAEA).

#### Eng. Ahmad Ababneh Earns Certified Energy Manager Certification from AEE

Eng. Ahmad Ababneh got the Certified Energy Manager certificate from the Association for Energy Engineers(AEE).



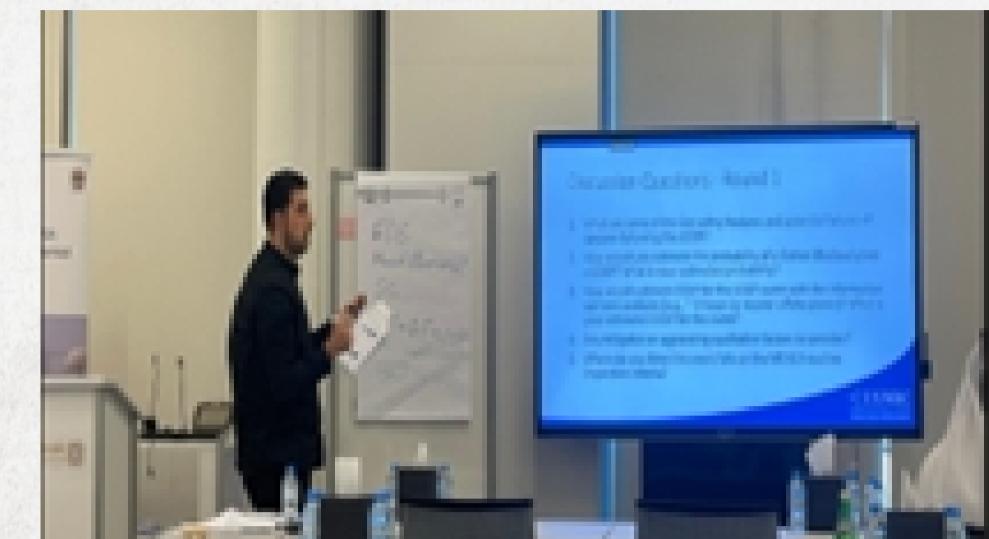
#### Eng. Ahmad Ababneh Completes Unity Certified User Artist Training

Eng. Ahmad Ababneh attended the Unity Certified User Artist Training From 19-23 May 2024.



# Eng. Ahmad Ababneh Attends National Workshop on PSA and RIDM at FANR

Eng. Ahmad Ababneh attended the National Workshop On Probabilistic Safety Assessment (PSA) applications and risk-informed decision-making (RIDM) at the Federal Authority for Nuclear Regulatory (FANR) from 3-5 June 2024.



# Collaboration with the UAE Ministry of Energy and Infrastructure and Environmental Agency Abu Dhabi

Dr. Adewale Olalekan Giwa commenced a collaboration with the UAE Ministry of Energy and Infrastructure (MOEI) and Environmental Agency Abu Dhabi (EAD) with the goal of developing an innovative tool that will leverage cutting-edge technology to ensure sustainable water management for the future.



#### UoS team visit to UAEU for potential collaboration

A team from the University of Sharjah recently visited the United Arab Emirates University to discuss potential collaborations between the two institutions. The visit featured engaging discussions and the sharing of valuable insights. The University of Sharjah team looks forward to future collaborations!



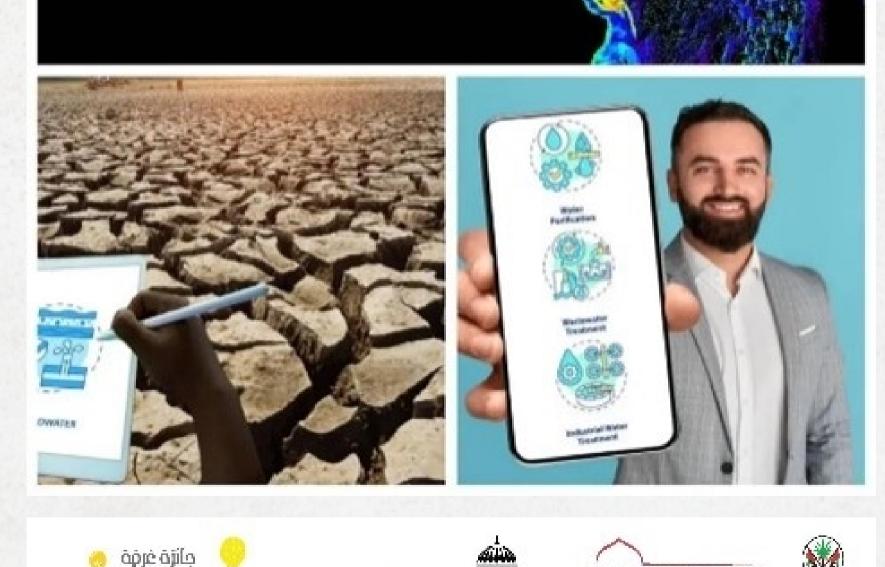
# Featured in UAE News, Zawya, TECHx Media, ESG MENA and Reuters Arabic

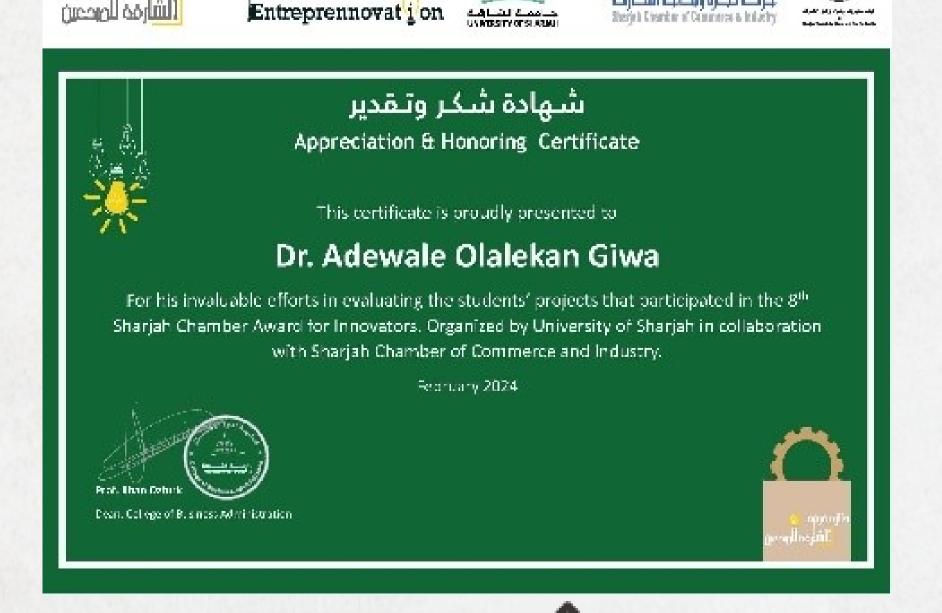
Dr. Adewale Olalekan Giwa's research contributions aimed at improving water security or water access conditions in the UAE and MENA are featured in national and international news agencies, including UAE News, Zawya, TECHx Media, ESG MENA, and Reuters Arabic.



#### Certificate of Appreciation

Dr. Adewale Olalekan Giwa was awarded a Certificate of Appreciation for his efforts in evaluating students' projects in the 8th Sharjah Chamber Award for Innovators Organized by the University of Sharjah in collaboration with Sharjah Chamber of Commerce and Industry.





# Sustainable and Renewable Energy Engineering

Visit of Huaqiao University to College of Engineering

A delegation from Huaqiao University (HQU China), introduced by Dr Di Zhang, visited the College of Engineering on 13th December 2023. The Chinese delegation discussed collaborations with the leadership of the college.



Participation in media coverage participation in support of COP 28, Held in UAE.

Prof. Ammar Alkhalidi participated in media coverage supporting COP 28 on 12th Dec 2023. In this media, they discussed the miracle of how Dubai was able to change the desert weather conditions to green living spaces and what measures Dubai has taken to avoid an increase in the city's carbon footprint. More details about the media and the topic can be found in the following links.

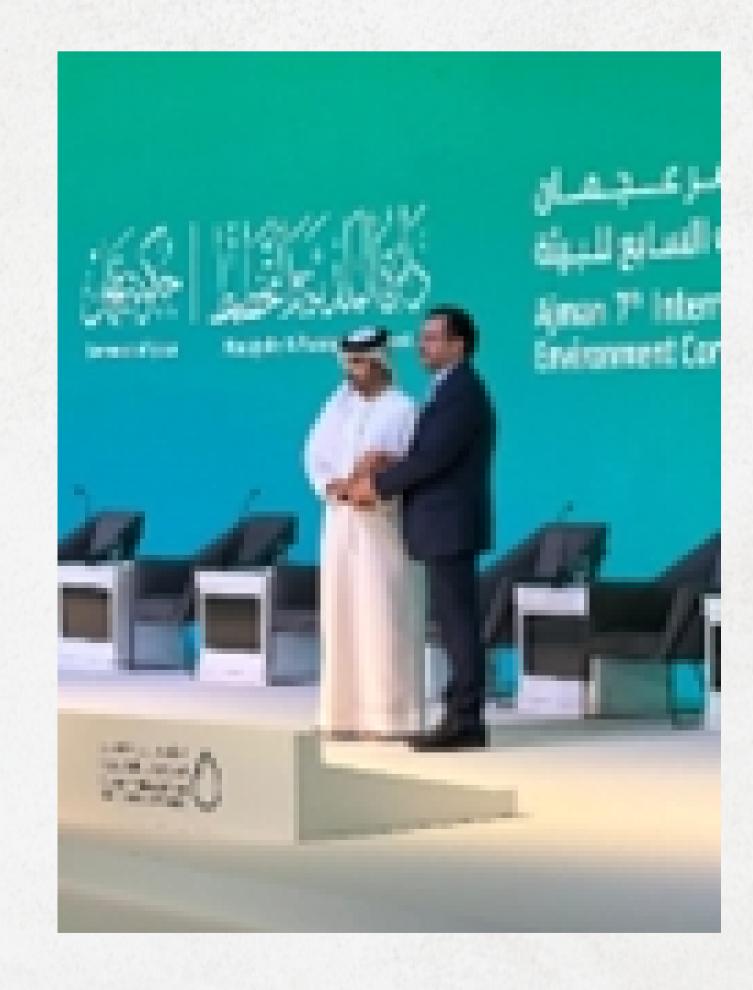
https://www.channelnewsasia.com/sustainability/dubai-cop28-water-scarcity-science-technology-climate-desalination-sustainability-3982346 https://www.youtube.com/watch?v=6VvouNw8zHE

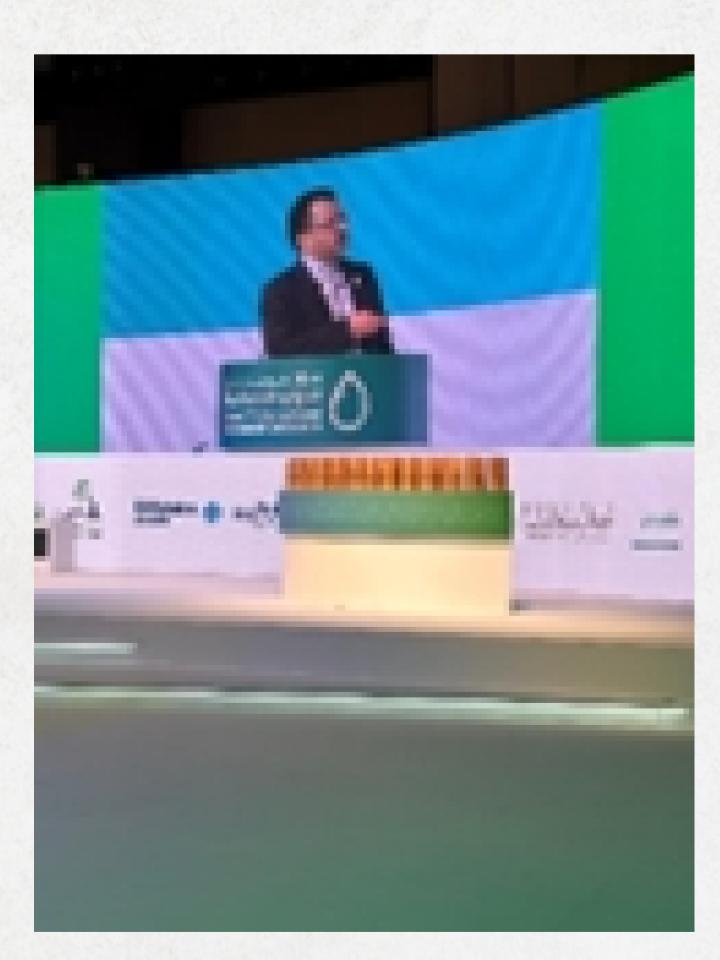
# Participating as a speaker at the Ajman Sustainable Development International Forum (ASDIF 2023)

Dr. Ahmed Amine Hachicha presented a talk on "The Role of Hybrid PV Thermal Collectors in Combating Climate Change" at the Ajman Sustainable Development International Forum, which was held on 7th of December 2023 with a focus on Sustainable Development & Innovative Solutions for Climate Change: Mitigation and Adaptation aligned with the COP28 goals.

## Ajman 7th international Environment Conference on Climate Neutral City 2050

Faculty members from the SREE department, Dr. Ahmed Abu Khalil and Dr. Tareq Salameh participated in Ajman's 7th International Environment Conference on Climate Neutral City 2050 on the 5th of Mars. Dr. Ahmed was speaker in this conference and give a presentation titled by Challenges in the integration of renewable energy systems for climate change mitigation and future grid stability.





#### RIC2D & SIGS 2D Materials in Decarbonization Symposium AUH.

The director of EPSR Center Prof. Abdul Ghani Olabi, and Prof. Mohammad Ali participated in RIC2D & SIGS 2D Materials in Decarbonization Symposium AUH which was held on 29th January 2024.



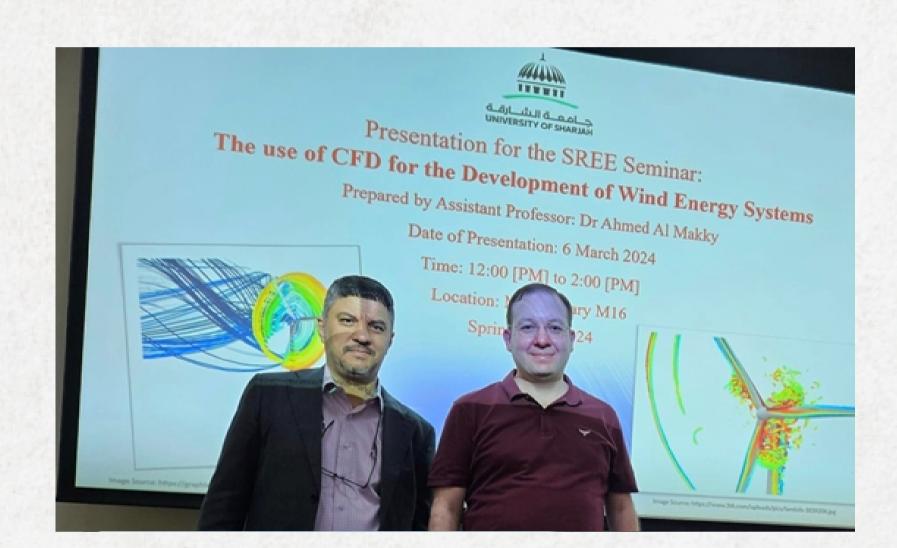
#### Power Electronics in Power Systems

Dr. Ahmed Abu Khalil conducted a seminar during the seminar activities of the SREE department on the 11th of December 2023. The seminar was about the use of power electronic components in power systems.



#### The use of CFD for the Development of Wind Energy Systems

Dr. Ahmed Al Makky conducted a seminar titled The Use of CFD for the Development of Wind Energy Systems on the 6th of March. The workshop aimed to expose SREE students to the latest CFD tools used to resolve wind turbine energy systems technological issues. This is during the phase development stage.



#### Research Lab Facilities and Practical Technologies Applied in Real Net-Zero

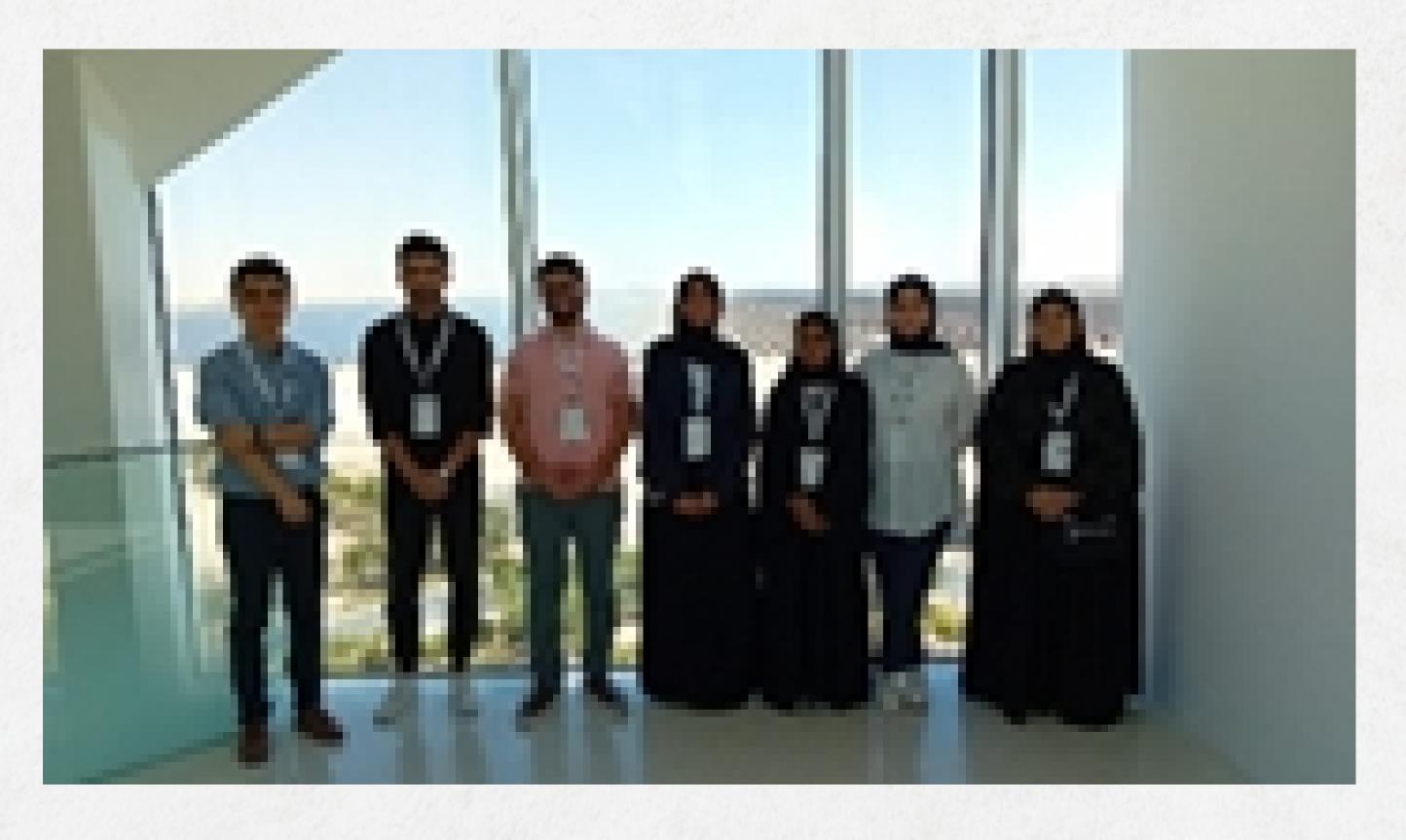
During the seminar activities conducted in the SREE department, coordinated by Dr. Tareq Salameh, Dr. Takao Katsura from Hokkaido University was invited as an external speaker from Japan, and he presented one seminar titled Research Lab Facilities and Practical Technologies Applied in Real Net-Zero Energy Building in Hokkaido. At the end of the seminar, Dr. Katsura was awarded a certificate signed by the head of the SREE department, Prof. Abdul Hai Al Alami, and given by Prof. Ibrahim El-Sharkawy.





#### 1st place in DEWA's second cycle of CleanTech Hackathon

Dr. Di Zhang, Associate Professor and SREE members went to Hackathon UAE 2024, at DEWA Solar Innovation Centre (Part of Mohammad Bin Rashid AlMaktoum Solar Park) Dubai on 21th February 2024.





#### Sharjah Sustainability Award

A group of students supervised by Dr Di Zhang, won the Sharjah Sustainability Award under Environmental Resources Conservation and Protection category on 2nd of May. The students are Alya Almemari, Fatima Ahmed, Abdulrahman Wadi and Oussama Jamal.

# SREE Students Won Third Place in the 11th Undergraduate Research & Innovation Competition

The Students of SREE Sarah Khalifa Saeed Moftah Alkaabi, Shamma Essa Mohamed Hassan Alblooshi, and Daniah Imad A Al Ali won third place in the 11th Undergraduate Research & Innovation Competition organized by Abu Dhabi University by the project titled Hydrogen Production from Date Palm Leaves which held on 23/05/2024 under supervision of Dr. Tareq Salameh with 77 universities participating with close to 600 projects from across the GCC and MENA region, the competition was indeed very tough, as each team presented was very competent in every aspect.



#### Renewable Challenge

On 22nd April 2024, the 21st Renewable Challenge was held under the presence of the dean of the College of Engineering, Prof. Abdul Wahab Bin Mohammad, and chair of the SREE department, Prof. Abdul Hai Al Alami. The course instructor, Dr. Shek A. Rahman, Associate Professor, and the SREE club coordinator, Dr. Di Zhang, organized the event for 10 projects in



renewable energy. The evaluation committee consisted of Dr. Tareq Salameh, Dr. Di Zhang, and Dr. Ahmed Al Makky.

#### SREE Members went to visit the Hatta Dam in Dubai

Prof. Abdul Ghani Olabi and the SREE club students had visited Hatta Dam in Dubai on 14th January 2024 during the activity of the SREE club.



#### 1st place in DEWA's second cycle of CleanTech Hackathon

A UOS team from the Department of Sustainable and Renewable Energy Engineering (SREE) won the 1st place in DEWA's second cycle of CleanTech Hackathon, by developing a proposal "SolCharge" aiming to incorporate solar energy directly into day-to-day electric vehicle (EV) applications. The SREE team members are Siefeddin Tahayneh, Mariam Amr Abdellatif and Fadi Mohammad, under the supervision of Dr Di Zhang.



