



جامعة خليفة
Khalifa University

President's Memo
FEBRUARY 2022

ISSUE
64

ISYE DEPARTMENT NOW A MEMBER OF THE COUNCIL OF ENGINEERING SYSTEMS UNIVERSITIES (CESUN)



Khalifa University's Industrial and Systems Engineering (ISYE) Department joins other prominent international universities as it becomes a member of the Council of Engineering Systems Universities (CESUN). The CESUN is an organization of more than 50 universities from North America, Europe, Asia, and Australia. It was established in 2004 by top-ranked universities from around the world that offer educational and research programs in Engineering Systems. Among the member universities are MIT, Georgia Tech, Carnegie Mellon University, University of Tokyo, and Cambridge University. Khalifa University is the first from the MENA region to join the Council.

The ISYE Department is eager to be an active member of CESUN. Some of the possible plans for KU would be to undertake joint projects of mutual interest in the field of study; organize meetings, symposia, and conferences; and build relationships with related professional societies and journals. These will help put Khalifa University on the world map as one of the top universities offering a program of study and research in Engineering Systems.

[READ MORE HERE >](#)



DR. HANANE LAMAASI WINS WOMENTECH COMMUNITY AWARD AT THE WOMENTECH GLOBAL AWARDS 2021

THE WOMENTECH GLOBAL AWARDS IS THE BIGGEST EVENT THAT GATHERS WOMEN WORKING IN TECH. THIS YEAR, 1,712 CANDIDATES FROM 151 COUNTRIES COMPETED IN 16 CATEGORIES.

Postdoctoral Fellow Dr. Hanane Lamaazi of Khalifa University's Center for Cyber-Physical Systems (C2PS) was one of the amazing women recognized at the WomenTech Global Awards 2021. The event was organized by the WomenTech Network, the world's largest community for women in tech with more than 5,700 ambassadors worldwide.

Dr. Lamaazi received the Gold Award in the category WomenTech Community Award (Public

Vote) where she was voted #3 in the "Global Top 10 Community Award", #3 in "Global Top 5 Unique Profile Engagement", and top 2 in "Global Top 5 LinkedIn Engagement".

This award is in recognition of her outstanding contribution and engagement with the WomenTech Community. It also acknowledges her work and role as a valued scientific researcher in the field of Internet of Things (IoT) and emerging technologies such as artificial intelligence (AI), crowdsensing, and edge computing.

[READ MORE HERE >](#)

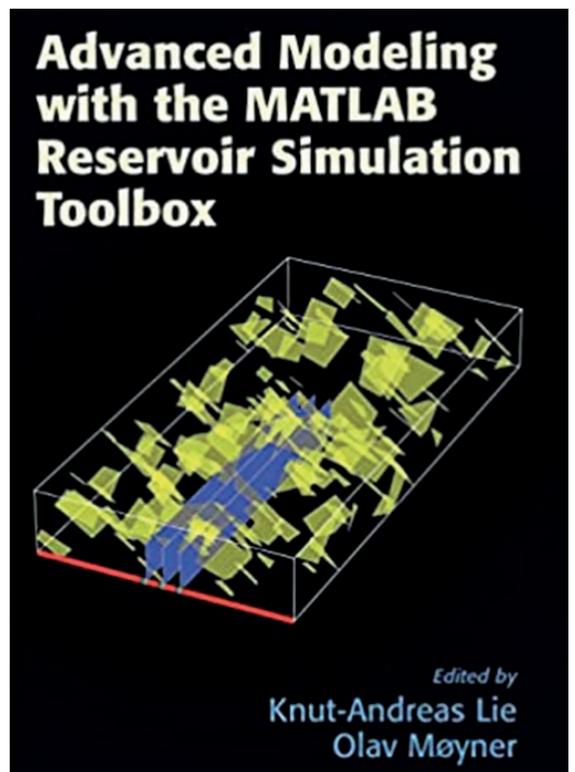


PETROLEUM ENGINEERING FACULTY DISCUSSES ADVANCED DISCRETIZATIONS IN NEW BOOK ON MATLAB RESERVOIR SIMULATION

[Dr. Mohammed Saad Al Kobaisi](#), Associate Professor of Petroleum Engineering, is sharing his expertise in advanced discretizations and has collaborated with other leading industry experts in the newly published book *Advanced Modeling with the MATLAB Reservoir Simulation*. Dr. Al Kobaisi authored Chapter 2 of the book titled "Nonlinear Finite-Volume Methods for the Flow Equation in Porous Media," which succinctly explains the formulation of nonlinear finite-volume (NFV) methods as advanced discretization schemes.

"It was in 2019 when I first received the invitation from Chief Scientist Knut-Andreas Lie, of the SINTEF research center in Oslo, to contribute with a chapter in an upcoming book titled 'Advanced Modeling with the MATLAB Reservoir Simulation Toolbox'. I was humbled to learn that our recent works in the area of advanced discretizations were gaining traction in the scientific computing community and being cited in prestigious research centers and universities' publications (the likes of NASA Ames Research Center, Stanford University, University of Illinois at Urbana-Champaign, Institute of Applied Physics and Computational Mathematics, Communication University of China, among others). Although our developments were primarily targeting the oil and gas industry, the numerical tools we are working on at KU have applications in numerous industries and fields such as aerospace engineering, material sciences, environmental engineering, hydrology, CCUS, applied mathematics, and more," Dr. Al Kobaisi shared.

The book *Advanced Modeling with the MATLAB Reservoir Simulation* is published by Cambridge University Press and electronic copies of the book can be downloaded for free from their [website](#).



[READ MORE HERE >](#)



KU FACULTY PARTICIPATES IN “TRANSPORT CORRIDORS ON THE EAST COAST OF AFRICA IN THE CONTEXT OF THE FREE AND OPEN INDO-PACIFIC VISION” INTERNATIONAL CONFERENCE



Dr. Brendon Cannon, Assistant Professor at Khalifa University's Institute of International and Civil Security, was invited to offer the keynote lecture at the “Transport Corridors on the East Coast of Africa in the context of the Free and Open Indo-Pacific Vision” international conference.

Held on 18 November 2021 in Tokyo, Japan, the conference was organized by the Ocean Policy Research Institute of the Sasakawa Peace Foundation and the Global Infrastructure Fund Research Foundation Japan.

Dr. Cannon presented his original research that answered questions related to Japan's foreign policy in Kenya, Ethiopia and other East African states. He contrasted these with the actions of China and its Belt and Road Initiative. A question and answer session followed Dr.Cannon's keynote address and the presentations of other panelists with simultaneous translation occurring in both Japanese and English.



DR. AMMAR NAYFEH SELECTED TO BE THE DEPUTY OF THE MBRAS PUBLIC OUTREACH COMMITTEE



Khalifa University's Dr. Ammar Nayfeh, Associate Professor of Electrical Engineering and Computer Science, was selected by the Emirates Scientists Council to be the Deputy of the Public Outreach Committee of the Mohammed bin Rashid Academy of Scientists (MBRAS). Dr. Nayfeh will be working with Committee Chair Dr. Aesha Abdulla Alnuaimi, KU alumna, and the other committee members to develop and coordinate outreach activities to promote MBRAS.

The committee aims to inspire a new generation of scientists and raise awareness about scientific research in the UAE, while also promoting MBRAS members and their projects. To help achieve these goals, Dr. Nayfeh will help arrange and manage two major events in the upcoming year with support from the wider committee.

"Inspiring young people to love science is a passion of mine. It is important to start with students at a young age to build a strong scientific foundation. This will help increase the amount of students pursuing scientific majors and careers in the UAE. With this committee, our aim is to use fun, engaging, hands-on events and activities to help inspire young students scientifically. Additionally, there is a lot of amazing research being conducted in the UAE by top scientists including current MBRAS members that we will promote, which will also inspire students to explore science," Dr. Nayfeh said.

Dr. Nayfeh is regarded as an expert in nanotechnology and nano materials for future energy efficient optical electrical and photovoltaic nano devices.

[READ MORE HERE >](#)



معالي سارة الأميري
HE. Sarah Al Amiri



د. علوي الشيخ علي
Dr. Alawi Alsheikh-Ali



البروفيسور غالب الحضرمي
Prof. Ghaleb Alhadrami



سعادة د. عارف الحمادي
HE. Dr. Arif Al Hammadi



البروفيسورة لورديس فيفا
Prof. Lourdes Vega



د. أحمد المهيري
Dr. Ahmed Al Muhairi



البروفيسور سهام الدين كلداري
Prof. Sehamuddin Galadari

DR. LOURDES VEGA JOINS EMIRATES SCIENTISTS COUNCIL AS NEW MEMBER

DR. VEGA IS ALSO APPOINTED TO LEAD THE NEWLY FORMED ENGINEERING AND TECHNOLOGY ADVISORY BOARD.

Khalifa University's [Dr. Lourdes Vega](#) now joins the prestigious Emirates Scientists Council (ESC) as a new member. Since its establishment in 2016, the Council has been working in transitioning the UAE from knowledge user to knowledge developer, positioning the country as a destination conducive to scientific research and innovation.

"I feel very honored and excited to be a member of the Emirates Scientists Council (ESC). As members of the ESC, our duties include, among others, suggesting policies that would create a stimulating environment for innovation and research in order to attract and retain a generation of scientists in various fields, providing scientific advice to the Council of Ministers when required, raising nationally and internationally awareness above the science and technology developed in the country, and effectively establishing collaborations between the public and

private sectors to make an impact in the economy and well-being of the country,"

Dr. Vega commented about her appointment. Aside from being a new member of the ESC, Dr. Vega is also leading the ESC Advisory Board on Engineering and Technology. The Board was created to support and advise the federal government in matters related to science and technology research and policy to further advance in this direction.

Describing further the Board's role and objectives, Dr. Vega said: "We want institutions to go beyond and above individual achievements. Part of our role is to also highlight, nationally and internationally, the impact engineering and technology research and innovation developed here in the Emirates has on the economy and the society. As a Board, we will propose and develop different initiatives in all these areas, including mapping the current capabilities and interests aligned with the needs of the country, successful stories, international practices, different collaborations, etc. This is a very exciting task where many scientists and engineers in the Emirates can also contribute."

[READ MORE HERE](#) >



KU RESEARCH SCIENTIST RECOGNIZED AS ONE OF THE MOST INFLUENTIAL RESEARCHERS WORLDWIDE BY CLARIVATE

Highly Cited Researcher 2021

 **Clarivate**TM



DR. YAQOOB JOINS AN ELITE OF RESEARCHERS SETTING THE PACE FOR FRESH AND PIONEERING RESEARCH.

[Dr. Ibrar Yaqoob](#), Research Scientist in the Electrical Engineering and Computer Science Department at Khalifa University, has been listed as one of the most influential researchers in the world by Clarivate.

Clarivate's Highly Cited Researchers List 2021 recognizes researchers for their contributions to innovation in science, social science, and citation analysis. The list highlights the most influential researchers who have published multiple papers frequently cited by their peers and have ranked in the top 1% of citations in their field in the Web of Science in the last decade, from 2010-2020.

Being included in the list is a huge achievement, especially at such a young age. Dr. Yaqoob, 32, notes, "Being acknowledged as a highly cited researcher worldwide based on scientific achievements by

Clarivate-Web of Science less than five years after PhD graduation is truly a great honor and an immense pleasure. It is also a worldwide recognition for my research team, which is led by Prof. Khaled Salah."

Dr. Yaqoob has been conducting cutting-edge research in the fields of Mobile Edge/Cloud Computing, Big Data, IoT, Blockchain, and Computer Networks. Life of a researcher requires a lot and he has devoted his time, intellectual effort, technical skills, commitment, and even conceded personal sacrifices to ensure his work consistently demonstrates relevant and innovative research.

[READ MORE HERE](#) >



DR. EMAD AL SHALABI RECEIVES SPE 2021 TECHNICAL REVIEWER AWARD



Dr. Emad Al Shalabi, Assistant Professor of Petroleum Engineering, was presented by the Society of Petroleum Engineers (SPE) with the 2021 Outstanding Technical Reviewer Award in the category Reservoir Evaluation and Engineering.

Every year, the SPE shows their appreciation for members who have contributed in ensuring and maintaining the technical quality of SPE's peer-reviewed journals. Only 0.1 % of 150,000 SPE members worldwide receive this award. These awardees help in making the review process a success and advancing SPE's mission to collect, disseminate, and exchange technical knowledge.



DR. ATHOL YATES SPEAKS AT GLOBAL SECURITY LEADERS' SUMMIT IN DUBAI

Dr Athol Yates, Assistant Professor and Acting Head of the Institute for International Studies and Civil Security at Khalifa University, was an invited speaker and moderator at the 23rd edition of Intersec's [Global Security Leader's Summit](#) – a gathering for global leaders in the security industry, which took place in Dubai on Sunday, 16 January 2022.

Dr. Yates moderated a panel session titled “The role of Security, the Pre Vs. the Post Pandemic World”, which included high-ranking panellists, such as Air Marshal Edward J Stringer, Former Director General Joint Force Development and Defence Academies, British Armed Forces; General Sir Nick Carter, Former Chief of the Defence Staff and Head of the British Armed Forces; and Howard Leedham, Managing Director, ESID DMCC.

Dr. Yates also delivered a speech during a Leadership Session on “Why do some imported 'best practice' Western security practices work and others don't?” In his presentation, he noted that a key reason behind the UAE's and other Gulf states' rapid development in recent years has been their ability to identify 'global best practices' and implement them.

Dr. Yates shares several examples of this: In the early 2000s, most UAE governments imported and applied strategic planning and quality management. While in education, the sector adopted a National Qualifications Framework, and an accreditation processes for tertiary institutions. And new national security arrangements were recently adopted, including the creation of the National Security council and specialist security agencies like the signals intelligence agency and NCEMA.

While some imported Western security practices work in the Gulf, Dr. Yates points out that others do not.

“Every country has its own ideas, customs, and social behavior, which in aggregate we call a national culture. National culture determines how a nation does things, that includes security. If an imported practice conflicts with national culture, problems arise,” Dr. Yates explained.

“Thus, the answer to the question, 'Why do some imported Western security practices work in the Gulf while others don't?', is because practices which are based on cultural norms and align with those in the Gulf can be readily imported with little change. Conversely, practices which are not based on Gulf norms will have to be substantially modified or will not work.”



Right to Left: Air Marshal Edward J Stringer, Former Director General Joint Force Development and Defence Academies, British Armed Forces; General Sir Nick Carter, Former Chief of the Defence Staff, head of the British Armed Forces; Howard Leedham, Managing Director, ESID DMCC; Dr. Athol Yates



STUDENT ACHIEVEMENTS



KHALIFA UNIVERSITY'S HONORS DAY

IN PARTNERSHIP WITH



Wednesday, 22 December 2021 at 4:00 pm

457 STUDENTS RECOGNIZED IN KHALIFA UNIVERSITY'S HONORS DAY 2021

Khalifa University celebrated the accomplishments of its highest achieving sophomore, junior, and senior students in this year's Honors Day 2021, which was held on Wednesday, 22 December.

Organized by the Student Success Department, Honors Day recognizes the academic achievements of our students, highlighting their hard work and commitment. During the event 457 KU students who have shown excellence were honored, and 244 of these students were inducted as new Golden Key Honor Society members. The Golden Key Honors Society is an international honors organization that celebrates and supports collegiate scholars around the world. KU's Golden Honors Society Chapter is the first in the Middle East, reaffirming the

University's commitment to help students realize their full potential while setting the standards of academic excellence in the region.

During the event a special recognition was given to Golden Key member Natnael Berhane Debru, a junior Physics student. Natnael was awarded the Golden Key Undergraduate Achievement Award that recognizes Golden Key members for their excellence in their undergraduate studies. Aside from being a Golden Key member, Natnael was also on the President's List for both Fall 2020 and Spring 2021 terms.



[VIEW HONORS DAY 2021
CEREMONY](#)



KU STUDENTS LEARN THROUGH EXPERIENCE AND SHARE DURING FIRST EXPERIENTIAL LEARNING SYMPOSIUM



The Center for Teaching and Learning (CTL) sponsored KU's first annual Experiential Learning (ExL) Symposium. The Symposium allowed students to reflect on their out-of-classroom learning experiences and showcase their learning to the KU community. The Symposium highlighted the many programs offered at KU that engage in experiential learning.

The Symposium underscores KU's commitment to providing engaging experiential learning opportunities to students to help them develop real-world skills. Learning by doing and then reflecting on the experience is central to experiential learning, and KU supports students in this endeavor by creating an environment that nurtures creative inquiry and reflection. Three-thousand dirhams were awarded to the Symposium's top three winners.

Dr. Ahmed Al Shoaibi, SVP of Academic and Student Services, opened the Symposium by congratulating students on their willingness to share their experiential learning experiences and insights to provide peers with a sense of how they can grow and develop themselves.

Eighteen students presented their experiential learning experiences, ranging from freshman to postgraduates. They shared various experiences tied to internships, volunteering activities, study abroad opportunities, fieldwork, and research. Most participants presented their work individually, while a few presented as a group.



STUDENT ACHIEVEMENTS



SAAD ALKHARJI,
Junior, majoring in Computer Engineering, won **1,500 AED.**

TOPIC:
A MEETING OF FUTURE GLOBAL LEADERS



HOUR ALMADHAANI,
Master's in Engineering Systems & Management, won **500 AED.**

TOPIC:
ENERGY SAVING



KHADEIJAH ALHANTOOBI,
Senior, majoring in Aerospace Engineering, won **1,000 AED.**

TOPIC:
PEACE + FREEDOM INTERNSHIP WITH SOLARSHIP

The Symposium's winners also shared insight from their experiences.

Exl's 1st place winner, Saad Alkharji, a Junior majoring in computer engineering, spoke about his study abroad experience at Tsinghua Global Summer School. He noted that "I learned about Kolb's cycle by participating in the Experiential Learning Symposium. It's a very useful tool that helped me reflect deeply on my experience and allowed me to share it clearly with everyone."

Please add the name of the university where he did his Exchange.

The 2nd place winner, Khadeijah Alhantoobi, a senior majoring in aerospace engineering, talked about her internship experience at SolarShip inc. and said, "Your communication circle will grow in the industry by participating in the symposium, which is a great thing."

The 3rd place winner, Hour Almadhaani, a Master's in engineering systems & management student, spoke about her study abroad experience at the Colorado School of Mines. She said, "I highly recommend students join the study abroad program. It will allow them to get valuable skills and experiences that will benefit them in their field of study and their work in the future as well."

In addition to the Symposium winners, Abdulrahman Alzaabi, senior from the BSc in Mechanical Engineering program, presented on his volunteer experience at the Cleveland Clinic, Abu Dhabi. He said, "I would recommend this opportunity to my peers. Not only do you share what you've learned, but you get to know how your 'learning by doing' experiences are very critical to your development journey."

Dr. Ludovic Dumeé, Assistant Professor in Chemical Engineering, Dr. Marko Gacesa, Assistant Professor in Physics, and Dr. Ashley Ater Kranov, Manager, Quality Assurance and Accreditation, served as judges in the Symposium.

All presenters received a certificate of participation and a digital program of the Symposium.

PUBLISHED PAPERS

Published Papers in Q1 Journals

To view the link to the published article, please click

[VIEW HERE](#)



 **Title** Nanojunction Material Effect on the Photoelectric Response of Single-Wall Carbon Nanotube Rectennas

 **Journal** ACS Omega

 **KU Authors** Dr. Lina Tizani, Research Associate, System-on-Chip Center (SoCC); Dr. Yawar Abbas, Research Scientist, Department of Physics; Dr. Baker Mohammad, Professor of Electrical Engineering and Computer Science and SoCC Faculty; and Dr. Moh'd Rezeq, Associate Professor of Physics and SoCC Faculty

 **Title** C3PU: Cross-Coupling Capacitor Processing Unit Using Analog-Mixed Signal for AI Inference

 **Journal** IEEE Access

 **KU Authors** Dr. Dima Kilani, Postdoctoral Fellow, System-on-Chip Center (SoCC); Dr. Baker Mohammad, Professor of Electrical Engineering and Computer Science and SoCC Faculty; Dr. Yasmin Halawani, Postdoctoral Fellow, System-on-Chip Center (SoCC); Mohammed F. Tolba, Research Associate, System-on-Chip Center (SoCC); and Dr. Hani Saleh, Associate Professor of Electrical Engineering and Computer Science and SoCC Faculty

 **Title** Metallated Isoindigo–Porphyrin Covalent Organic Framework Photocatalyst with a Narrow Band Gap for Efficient CO₂ Conversion

 **Journal** ACS Applied Materials & Interfaces

 **KU Authors** Dr. Dinesh Shetty, Assistant Professor of Chemistry and Dr. Abdul Khayyum Mohammed, Postdoctoral Fellow, Industrial and Systems Engineering Department

 **Title** SIT1 Transporter as a Potential Novel Target in Treatment of COVID-19

 **Journal** Biomedical Concepts

 **KU Authors** Dr. Sabina Semiz, Professor of Molecular Biology and Genetics

 **Title** Vertebrae at the Thoracolumbar Junction: A Quantitative Assessment Using CT Scans

 **Journal** Journal of Anatomy

 **KU Authors** Dr. Natalie Keough, Assistant Professor of Anatomy and Cell Biology

 **Title** Reflective Writing and the Self-Perceived Development of Intrapersonal Communication Skills among First-Year University Students in the UAE

 **Journal** Reflective Practice

 **KU Authors** Dr. Tanju Deveci, Associate Professor of English and Dr. Mark Wyatt Associate Professor of English

**THANK
YOU**

www.ku.ac.ae