

KEYNOTE SPEECHES

Day 1 Keynote speaker.



Ahmed A. Ghani

**Associate Professor Dr.
Komar University of Science and Technology
Sulaymaniyah, KRI, Iraq**

Speech title:

From Access to Excellence: Digital Education for an Inclusive and Sustainable World.



Firas Basim Ismail AlNaimi

**Associate Prof Dr
Universiti Tanaga National (UNITEN)
Smart Power Generation Center Malaysia**

Speech title:

**Advancing Sustainable Energy: Research Opportunities at
UNITEN's Smart Power Generation Center**

Day 2 Keynote speaker.



Babak Raissi

**Professor Dr.
Materials and Energy Research Center (MERC), Iran**

Speech title:

Global Standards and Innovations for Safer Lithium-ion Batteries



Abdul Salam DARWISH

**Professor Dr.
University of Greater Manchester, U.K.**

Speech title:

**Automated Sustainability: AI-Integrated Renewable Energy
Infrastructure for Smart Cities of an Innovative Future**

3rd INTERNATIONAL CONFERENCE ON SUSTAINABILITY SYSTEMS DEVELOPMENT

ICSSD2025

Erbil 20-21 July 2025

Event Program



Day-1 (20 July 2025)

Day-1 (20 July 2025)	
08:30 – 09:30	Registration
09:30 – 10:30	Session No. 1: Opening Ceremony starts at 9.30
	MC welcoming remarks [2 minutes]
	IT montage movie about ICSSD [3 minutes]
	Welcoming remarks by Patron-1 [Prof. Dr. Dhayder Abed Dahad] [2-3 minutes]
	Welcoming remarks by the Patron-2 [Prof. Dr. Mohammed HarkiEdris] [2-3 minutes]
	Chairman's presentation about ICSSD [15 minutes]
	Opening of event by Patrons-1 and -2 [2-3 minutes]
	Keynote presentation 1 [20 + 5 minutes] Speaker: Dr. Ahmed Ghani Session chairman: Prof. Miqdam T. Chaichan
	Group photo 5-7 minutes

Coffee Break & Networking [10:30-10:45]

Session 2: Research Centers Session

Chairman: Dr Sinan S. Hamdi

10:30-10:45

Keynote presentation 2, AP Dr. Firas Basim [17-20 minutes] [10:45 - 11:10]
Centers and GESRS presentations [11:10 - 12:10]
5 minutes of preparation for the center's open session
Open panel dialogue on the research and publication [12:05 - 12:45]
Invited contributors:
Prof. Dr. Hayder A. Dhahad, Prof. Dr. Amir A. Ahmad, Prof. Dr. Mohsin N. Hamzah,
Dr. Jala S. Yahya
Summing up and recommendations [12:45 - 01:00]

Lunch break & Networking [01:00 - 02:00]

Session 3: 3A [02:00 - 03:30]

Session Chair: Professor Dr. Zena Khalefa Kadhim

2:00-2:15	2:15-2:30	2:30-2:45	2:45-3:00
<p><u>ICSSD-305</u> <i>Ahmed N. Al-Dujaili</i></p> <p>Precipitation's Influence on Air Quality: Unraveling the AQI-Rainfall Dynamics</p>	<p><u>ICSSD-303</u> <i>Ali Hamzah Obaid</i></p> <p>Integrating Sustainable Development Goals into the Software Development Lifecycle: A Technical Framework</p>	<p><u>ICSSD-304</u> <i>Dr. Haval M. Salih</i></p> <p>Performance Evaluation of Sustainable Development in Construction Projects in the Kurdistan Region: Stakeholder Knowledge, Effectiveness, and End-User</p>	<p><u>ICSSD-307</u> <i>Hussein K.A. Kadhim</i></p> <p>Smart VANETs: Leveraging GRU and CNN Models for Optimized Communication and Traffic Management</p>
3:00-3:15	3:15-3:30		
<p><u>ICSSD-313</u> <i>Emad Hussen Sadiq</i></p> <p>Minimizing Power Losses in Distribution Networks Through Voltage Upgrading: A Case Study Approach</p>	<p><u>ICSSD-315</u> <i>Harwan Mohammed Taha</i></p> <p>Design of a 31-level Asymmetrical MLI with Reduced Components for Renewable Energy Applications</p>		

Session 3: 3B [02:00 - 03:30]

Session Chair: Assoc. Prof. Dr. Ali Ahmed Gitan

2:00-2:15	2:15-2:30	2:30-2:45	2:45-3:00
<p><u>ICSSD-331</u> <i>Iman S. Kareem</i></p>	<p><u>ICSSD-310</u> <i>Mays Subhi Sadeq</i></p>	<p><u>ICSSD-352</u> <i>Muhammad Muhana</i></p>	<p><u>ICSSD-350</u> <i>Ali Ahmed Gitan</i></p>

Genetic Algorithm-Based Real-Time Traffic Signal Control and Monitoring Using UAV	Numerical Investigation of the Design and Operational Parameters Effects on the Performance of Mini-Turbine for Hydropower Generation	Surface Quality Improvement by Magnetic Abrasive Finishing (MAF) Method for Steel Alloys: Review	Environmental Sustainability Through Waste-to-Wealth Automotive Oil Usage in Thermal Storage System Integrated with Circulating-Air SAH
3:00-3:15	3:15-3:30		
ICSSD-346 <i>Ali R. Mahdi</i> Experimental Assessment of the Ethanol-Diesel Blends on Pollutant Emissions and Engine Behavior in Compression Ignition Engines	ICSSD-349 <i>Hind A. Sami</i> Multiphysics Simulation for Demulsification Process Utilizing Natural Demulsifiers Assisted with Ultrasonication		
Tea Break [03:30 - 04:45]			
Session 4: 4A [03:45 - 05:00] Session Chairman: Associate Prof. Dr Firas Bassim			
3:45-4:00	4:00-4:15	4:15-4:30	4:30-4:45
ICSSD-308 <i>Prof. Hussain</i> Pressure Drop Determination and Analysis in a Circular Microchannel Heat Exchanger	ICSSD-363 <i>Dina Rasol Mohammed</i> QAM-OFDM System Performance in Non-Gaussian Noise Using Various Detectors Across a Multipath Fading Channel	ICSSD-347 <i>Ashna Abduljabbar Haji</i> Enhanced Efficiency of Solar-Assist Heat Pump Using Tracking PV/T Panel: A TRNSYS Simulation Study	ICSSD-335 <i>Firas M. Younis1</i> Experimental Study of Solar-Powered Underfloor Heating in a Defined Space
4:45-5:00	5:00-5:15		
ICSSD-344 <i>Araz R. Abraham</i> Explainable Machine Learning for Soil Quality Prediction in Semi-Arid Northern Iraq			
Session 4: 4B [03:45 - 05:00] Session Chairman: Professor Dr. Abdullateef A. Chadallah			
3:45-4:00	4:00-4:15	4:15-4:30	4:30-4:45
ICSSD-345 <i>Reem K. Khadiar</i> Experimental study and optimization for desulfurization of diesel using microwave irradiation and activated carbon	ICSSD-336 <i>Haroun A. K. Shahad</i> Prediction of Flame Propagation Parameters for Different Fuels Using Chemkin and Ansys Fluent Software	ICSSD-317 <i>Miqdam T. Chaichan</i> Solar Photovoltaic System as a Sustainable Solution for Electric Load Shortage in Baghdad: A Design and Economic Study	ICSSD-325 <i>Mustafa N. A. Ameer</i> Performance Evaluation of Multiple Thermal Electric Cooler Arrangements on Cooling Efficiency

4:45-5:00			
<p><u>ICSSD-322</u> Haitham M. Ibrahim</p> <p>Modeling of Waste Heat Recovery Systems to Generate Power in the Fallujah White Cement Plant</p>			

Day 2 (21 July 2025)

Session 5: 5A [9.30 -11:00]

Session Chair: Professor Dr Haroun A. K. Shahad

9:30-9:45	9:45-10:00	10:00-10:15	10:15-10:30
<p><u>ICSSD-330</u> Najiba Hasan Hamad</p> <p>Enhanced thermal performance of a heat exchanger using a shell and spiral tube</p>	<p><u>ICSSD-312</u> Safaa M. Ali</p> <p>An Appraisal of the Experimental Mitigation Methods of Low-Performing S-Shaped Diffusers in the Intakes of Gas Turbines</p>	<p><u>ICSSD-316</u> Zheen K. Ali</p> <p>Detection of Parkinson's Disease from Retinal Fundus Images Using Convolutional Neural Networks</p>	<p><u>ICSSD-318</u> Ammar I. Naji</p> <p>Evaluation of the Mechanical and Corrosion-Fatigue Properties of Aluminum Matrix Composite 7075-T6 Reinforced by Fe₂O₃ Nanoparticles</p>
10:00-10:45			
<p><u>ICSSD-320</u> Sajjad K. M.</p> <p>Design of an mmWave Hybrid Beamforming Based on Riemannian Manifolds</p>			

Session 5: 5B [9.30 -11:00]

Session Chair: Assoc. Prof. Dr. Ali Abdulwahab

9:30-9:45	9:45-10:00	10:00-10:15	10:15-10:30
<p><u>ICSSD-348</u> Shaymaa H. Abdulmalek</p> <p>Numerical and Analytical Modelling for the Impact of Geometrical Arrangement and Material on Heat Generation in Lithium-Ion Battery Package</p>	<p><u>ICSSD-332</u> Hussein N. Jabbar</p> <p>A Numerical Study of the Effect of Pipe Diameter on the Natural Frequencies of the Piping System Under Flow-Induced Vibration</p>	<p><u>ICSSD-337</u> Nibras N. Khalid</p> <p>On the Carbon Nanotubes Enhanced Compressive and Flexural Strength Concrete</p>	<p><u>ICSSD-338</u> Khudir Z. Zarrag</p> <p>Enhanced Pool Boiling Thermal Performance by Using Al₂O₃ Nanofluid and Multi-Finned Dissipation Heat Sink</p>
10:00-10:45			
<p><u>ICSSD-343</u> Sara W. Nasser</p> <p>Evaluation of Self-Sensing and Mechanical Properties of Engineered Cementitious Composites Reinforced with Basalt Fiber</p>			

Coffee Break and Networking [10:45 – 11:15]			
11:15-11:45	Session 5: Keynote speech 3, Professor Dr. Abdul Salam K. Darwish Session Chairman: Professor Dr. Siddeeq Yousif Ameen		
Session 6: 6A [11:45 -01:00] [Online] Session Chair: Assoc. Prof. Dr. Ranj Sirwan			
11:45-12:00	12:00-12:15	12:15-12:30	12:30-12:45
<u>ICSSD-306 (Online)</u> <i>Elisaveta A. Safarova</i> Evaluation of porous space conversion in clay limestones as a result of hydrogen-methane mixture injection	<u>ICSSD-323 (Online)</u> <i>Anton S. Shtin</i> Arctic Citizens' Quality Of Life Sustainability By Implementing Smart Home with Digitized Microclimate Remote Sensing	<u>ICSSD-324 (Online)</u> <i>O. Kostko</i> Integration of Machine Learning with Public View to Develop a Hybrid Philosophy in Architecture Design	<u>ICSSD-326 (Online)</u> <i>Tretyakova P. A</i> Evaluation of Solar Thermal Collector Potential for Utilization in the South of Western Russia
12:45-1:00	1:15-1:30		
<u>ICSSD-339 (online)</u> <i>Samar Taha Yousif</i> An Optimized Hybrid Model for Accurate Prediction of Gas Emissions in Power Plant Turbines	<u>ICSSD-354 (online)</u> <i>Esraa E. Raof</i> Experimental study of grain flow balancer using an Unelectronic instrument in an Iraqi flour mill		
Session 6: 6B [11:45 -01:00] Session Chair: Assoc. Prof. Dr. Sundus S. Al-Azawiey			
11:45-12:00	12:00-12:15	12:15-12:30	12:30-12:45
<u>ICSSD-333</u> <i>Shayma Wail Nourildean</i> RPL Routing Protocol for IoT-Based WSN Performance Improvement Under Botnet DDoS Cyber Attacks	<u>ICSSD-334</u> <i>Shabnam Saadi-motaalleg</i> Engineering a Zinc-Alginate Crosslinked Hydrogel for Durable and Reversible Aqueous Zinc-Ion Batteries	<u>ICSSD-351</u> <i>Lina Jamal</i> EGR Meets Ethanol: Advancing Engine Performance and Emission Control in Diesel-Powered CI Engines	<u>ICSSD-319</u> <i>Miqdam T. Chaichan</i> A Techno-Economic Analysis of Solar-Powered Rankine Cycle System in Yemen
12:45-13:00			
<u>ICSSD-353</u> <i>Muhannad Zaidan Khalif</i> Fatigue Crack Growth of 516A Steel In Thick-Walled Cylindrical Tanks			
1:00 – 2:00 Lunch and Networking			
Session 7: 7A [02:00 - 3:15] [Online]			

Session Chair: Professor Dr. Muhannad Zaidan			
2:00-2:15	2:15-2:30	2:30-2:45	2:45-3:00
<p><u>ICSSD-328 (Online)</u> <i>Ebtehal Chasseb Jbary</i></p> <p>Experimental Assessment of a Novel Design Approach of PTC Fitted with Aluminum Tubes on the Reflector Surface as a Preheater</p>	<p><u>ICSSD-329 (Online)</u> <i>Prof. Larisa Vazhenina</i></p> <p>Development of Innovative Perforation Technology for Enhanced Oil Recovery In Multi-Productive Formation Fields</p>	<p><u>ICSSD-321(Online)</u> <i>Alaa H. Younus</i></p> <p>Environmental Remediation of Bacterial Pollutants Using Silver Nanoparticles</p>	<p><u>ICSSD-309 (Online)</u> <i>Gufran M. Fahad</i></p> <p>An Appraisal of the Noninvasive Electroencephalography Signal Acquisition</p>
<u>3:00-3:15</u>		<u>3:15-3:30</u>	
<p><u>ICSSD-341 (online)</u> <i>Falah Dakheel</i></p> <p>High-Resolution Load Forecasting in Smart Grids Using Optimized LSTM: A Real-World Evaluation</p>	<p><u>ICSSD-327 (Online)</u> <u>Rimma N. Abdrashitova</u></p> <p>Schematization and Analysis of Oil and Gas Technogenesis of the Underground Hydrosphere of the West Siberian Mega Basin</p>		
Session 7: 7B [02:00 - 3:00]			
Session Chair: Professor Dr. Muna Kassim			
2:00-2:15	2:15-2:30	2:30-2:45	2:45-3:00
<p><u>ICSSD-359</u> Dr. Sinan S. Hamdi</p> <p>Electrochemical Study of Graphite Nanosheets with Carboxymethyl Cellulose as Corrosion Inhibitor for Low Carbon Steel in Saline Environment</p>	<p><u>ICSSD-312</u> <i>Prof Hussain on GT intake</i></p> <p>An Appraisal of the Experimental Mitigation Methods of Low-Performing S-Shaped Diffusers in the Intakes of Gas Turbines</p>	<p><u>ICSSD-361</u> Prof Hussain on GT intake</p> <p>A Review on the Mitigation Methods of S-Shaped Diffusers in the Gas Turbines Intakes: Numerical Attempts</p>	<p><u>ICSSD-362</u> Prof Hussain on GT intake</p> <p>Experimental and Numerical Visualization of the flow separation in aggressive S-shaped diffusers</p>
Coffee Break [3:30-3:45]			
Closing Ceremony 3:45			



