

**4th INTERNATIONAL CONFERENCE ON SUSTAINABILITY SYSTEMS
DEVELOPMENT
ICSSD2026
Duhok 22-23 July 2026
Event Program**



Day-1 (22 July 2026)	
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, Professor Dr. Aree Adel [4-5 minutes]
	Welcoming remarks by Patron-2, Professor Dr. Edrees M. Harki [2-3 minutes]
	Chairman's presentation about ICSSD [~15 minutes]
	Opening of event by Patrons-1 and Patron-2 [2-3 minutes]
	Keynote presentation 1 [20 presentation + 5 minutes Q&A] Speaker: Dr Ahmed Salih Mohammed Session chairman: Prof. Miqdam T. Chaichan
	Group photo 5-7 minutes

Coffee Break [10:30-11:00]			
Day-1. Session 2: Co-organizers Session			
Chairmen: Dr Ali A. Gitan & Dr Sinan S. Hamdi			
11:00-1:00	UNITEN: Assoc. Prof. Hj. Dr Firas Basim Alnaimi [online]		
	Karabuk: Prof. Dr. Samet Uslu [online]		
	GESRS: Prof. Miqdam Tariq Chaichan		
	DPU: AP Dr Wafaa Mustafa Abdullallah		
	UoH: Prof. Dr Haroun Al- Jubori		
	Wasit 1: Prof. Dr. Sabeeh Lafta Farhan		
	Wasit 2: Prof. Dr. Thaar Al-Gasham		
	Alhadara: Ass. Prof. Dr. Ghassan Al-Doori		
EPU: Dr Ranj Sirwan Abdulah			
Lunch break & Networking [01:00 - 02:00]			
Day-1. Session 3: 3A [02:00 - 03:30]			
Session Chair: AP Dr Wafaa Mustafa Abdullallah			
2:00-2:15	2:15-2:30	2:30-2:45	2:45-3:00
<u>ICSSD-406</u> Fatima Alatar Hybrid Beamforming Method Combined with the Generalized Coherence Factor for Improved Quality in Ultrafast Ultrasound Imaging	<u>ICSSD-416</u> Hasanain J. Alsaedi Selective Harmonic Elimination in Cascaded Multilevel Inverters Using an ANN-ABC Hybrid Optimization Framework	<u>ICSSD-410</u> Dler A. Ahmed An Integrated Machine Learning Framework for Multi-Objective Optimization of Mechanical and Tribological Properties in AA5083/Fly Ash/SiC Composites	<u>ICSSD-424</u> Zaid H. Berjis A Multi-Objective Optimization Digital Twin Framework for Reliability and Sustainability in Mission-Critical IoT Systems
3:00-3:15	3:15-3:30		
<u>ICSSD-415</u> Shelan Kamal Ahmed Design and Implementation of an Unified Discrete Wavelet Transform for Cardiac Signal Enhancement Using Simulink	<u>ICSSD-444</u> Ali H. Obaid An Intelligent NLP-Based Prototyping Framework for Bridging Natural Language Requirements to CAD Executable Design Models		

Day-1. Session 3: 3B [02:00 - 03:30]
Session Chair: Prof. Dr. Zina Khalifa

2:00-2:15	2:15-2:30	2:30-2:45	2:45-3:00
ICSSD-412 (online) Hayder abdulrazaq Performance Evaluation and Entropy Formation Analysis of Low Integral Longitudinal Finned Tubes in Double Pipe Heat Exchangers	ICSSD-420 (online) Noor Alhuda B. Abbas Sustainable IoT Techniques Over Open Radio Access Networks by Power Optimization in the Uplink and Energy Harvesting Precoding in the Downlink	ICSSD-421 (online) Tassneem Mohammed Kazem Energy Aware IoT System Over RIS-Aided Open Radio Access Networks	ICSSD-422 (online) Asawer K. Kadhim A Novel Approach of Using Selective Microwave Heating for Destabilization of Water-Oil Emulsions Influenced with Inorganic Salts
3:00-3:15	3:15-3:30		
ICSSD-418 Azad Khalid Health impacts of exposure to pesticides and pollution remediation methods Review	ICSSD-419 Ari I. Hamid A Survey On Coverless Image Steganography: Methods, Metrics, And Datasets		

Tea Break [03:30 - 04:45]

Day-1. Session 4: 4A [03:45 - 05:00]

Session Chairman: Ass. Prof. Dr. Mohammed Radhy

3:45-4:00	4:00-4:15	4:15-4:30	4:30-4:45
ICSSD-434 Miqdam T. Chaichan Boosting Solar Collector Performance for Heating: Al ₂ O ₃ /CuO/MWCNT/ZnO Mono- and Hybrid Nanofluids Deliver Exceptional Thermal Gains	ICSSD-433 Shorooq Hassan Abdullah Preparation of Aromatic-Decorated Reduced Graphene Oxide Nanosheets via Chemical Reduction	ICSSD-446 Mohammed Al-Hassany Influence of Buckthorn Seed Particle Size on Mechanical and Thermal Properties of Epoxy-Based Composite Materials	ICSSD-426 Raid Salih Jawad Characterization of Nanofiltration Membrane (RE1812-50, NE1812-70, HPA150 and PPT9908)
4:45-5:00			
ICSSD-450 Sinan S. Hamdi The Impact of Alumina Nanoparticles Based Low Salinity Fluids on Wettability and Oil Mobility Enhancement			

Day-1. Session 4: 4B [03:45 - 05:00]

Session Chair: Assis. Prof. Dr. Sundus Al-Azawey

3:45-4:00	4:00-4:15	4:15-4:30	4:30-4:45
ICSSD-448 Hussain H. Al-Kayiem	ICSSD-408 Jaber O. Dahloos	ICSSD-425 Raed S. Rahi	ICSSD-427 Mustafa N. Abd-Al Ameer

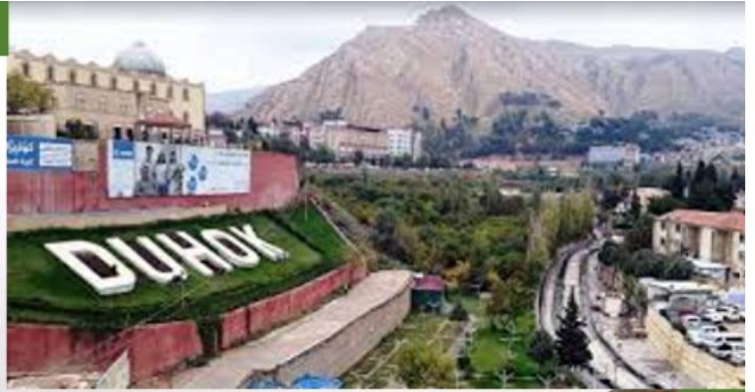
Hydrothermal modeling and Performance Analysis of a ribbed double-pipe heat exchanger	Design methodology and performance analysis of a 29.9 kW grid-connected solar photovoltaic system in Sulaymaniyah - Kurdistan	Improving the Performance of Air-Cooled Chiller System by Integrating the Thermal Energy Storage of PCM: Experimental Study and TRNSYS-16 Transient Simulation for Hot-Arid Climate	Performance Evaluation of a Peltier-Based Thermal Management System: The Effect of Using Hybrid Coolants on Cooling Efficiency and Power Consumption
4:45-5:00			
ICSSD-454 Mohammed Ahmed Thermal Performance Comparison of Solar Water Heater Conventional with Twisted U-Bend Tube Heat Exchanger Using Nanofluids: A Numerical Study			

Day-2 (23 July 2026)			
Session Chair: Prof. Dr. Siddeeq Amin			
9:00 – 10:30	Session 5:		
	Keynote speech 2: Prof. Dr. Elena Magaril/Dr Ernest [25 + 5 minutes]		
	Keynote speech 3: Prof. Dr. Abdul Salam Darwish [25 + 5 minutes]		
	Special speech: Dr. Khalil Mohsen [ICSSD-440] [15 + 5 minutes] Rating the Impact of Geopolitical Risks in the Strait of Hormuz on the Sustainability of Iraq Public Expenditure: (2004Q1–2024Q4)		
Coffee Break [10:30 – 10:45]			
Day-2. Session 6: 6A [10:45 -1:00]			
Session Chair: Pro. Dr. Haroun A.K. Shahad Al-Jenaby			
10:45-11:00	11:00-11:15	11:15-11:30	11:30-11:45
ICSSD-402 (online) Hind Hussein Abbood Study the apoptosis assay of hybrid Nanocarriers using an immunofluorescence apoptosis cell	ICSSD-403 (online) Alaa Al-Badri Thermal Performance of Parabolic Trough Solar Collector Using Circular, Semi-Oval, and Triangular Cross-Section Absorber Tubes	ICSSD-428 (online) Andrey V. Kiselev Heatmap for Energy Decentralization Assessment: a Case Study for Russian Federation	ICSSD-432 (online) Lina J. Talib The Impact of Nanoparticles as Fuel Additives on the Performance and Emissions of Diesel and Biodiesel Engines: A Comprehensive Review of Recent Advances
11:45-12:00	12:00-12:15	12:15-12:30	12:30-12:45
ICSSD-417 (online) Ernest Baba Ali Sustainable Development of the Energy Sector in the Context of the Transition to a Circular Economy	ICSSD-435 (online) Awaad Kadhim Al Sarkhi Roles of Project Planning and Management in Electrical Power Generation	ICSSD-401 Safaa Dheyaa Appreciation and Treatment of Heavy Elements of Groundwater Wells in Karbala Province / Iraq	ICSSD-443 Mohammed S. Abd Al-Razaq Performance Evaluation of Solar Water Heating System Integrated with Waste Tires Crumbs and Sensible Thermal Energy Storage

Day-2. Session 6: 6B [10:45 -1:00]			
Session Chair: Prof. Dr. Hussain Al-Khafaji			
10:45-11:00	11:00-11:15	11:15-11:30	11:30-11:45
ICSSD-452 Mohammed S. Mohammed Influence of The Fiber Laser Welding Power on the Microstructural Topography and Strain-Hardening Capacity of Super Duplex Stainless Steels (SDSS)	ICSSD-414 Tawfeeq Kadhem Salman Effect of Annealing Temperatures on the Mechanical Properties of Ti-Base Composite Coatings	ICSSD-445 Mohammed H. Rady Analysis of Microhardness and Density of Friction Stir Welding for Aluminum Alloys AA6061 with AA5083 Using the ANOVA Technique Applied mechanics	ICSSD-453 Sinan S. Hamdi Thermal Performance Enhancement of Cooling Emulsions Using Carbon Nanotube Based Nanofluids
11:45-12:00	12:00-12:15	12:15-12:30	12:30-12:45
ICSSD-429 Maarib A. Awad Xenogeneic Grafting Strategies for Burn Wounds Coverage and Soft Tissue Defect Restoration in Diabetic Foot Medical	ICSSD-437 Rafid S. Sarhan An Efficient Hybrid Parallel Processing Method for Lane Detection and Prediction in Autonomous Driving [Traffic and transport]	ICSSD-411 Akram H. Abed Smart VANETs: Leveraging GRU and CNN Models for Optimized Communication and Traffic Management	ICSSD-423 Shaafan A. Taher Enhancing Sustainable Road Infrastructure Management in the KRI through ICT: A Proposed Framework for Implementation
1:00 – 2:00 Lunch and Networking			
Day-2. Session 7: 7A [02:00 - 03:15]			
Session Chair: Dr. Shaymaa Hashim			
02:00-02:15	02:15-02:30	02:30-02:45	02:45-03:00
ICSSD-439 Miqdam T. Chaichan Biodiesel–High-Sulfur Diesel Blends in CI Engines: Integrated Energy–Exergy Assessment and Load Effects	ICSSD-413 Tawfeeq Kadhem Salman Converting Solid Waste into Sustainable Energy: An Integrated Waste-to-Energy Approach for Industry and Environment	ICSSD-447 Sundus S. Al-Azawey Analysis of a solar chimney fitted with innovated mix-flow wind turbine	ICSSD-430 Intisar Abdul Ghani Khudhur Assessing Mental Health Needs among Families in communities with higher density for Sustainable Community Health Development
Day-2. Session 7: 7b [02:00 - 03:15]			
Session Chair: AP Dr. Raed A. Jessam			
02:00-02:15	02:15-02:30	02:30-02:45	02:45-03:00
ICSSD-442 Prof. Haroun Improving Thermal Storage Performance by Compound Mechanical Vibration and Nanomaterials Additive Methods	ICSSD-449 Hussain H. Al-Kayiem Smart Thermal Management System of an Overheated Automotive Engine	ICSSD-438 Hassan Hameed Al-Dulaimi Internal Combustion and Fuel Cell Propulsion Technologies for UAV Applications: A Review	ICSSD-431 Emad Hussien Sadiq Power losses reduction and voltage enhancement by conductor upgrading for low voltage distribution networks Electrical power
Coffee Break [03:00-03:15]			
Closing Ceremony 03:15			

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ICSSD2026 will be here



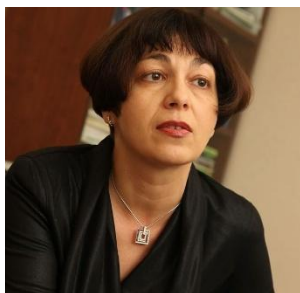
KEYNOTE SPEECHES

Day 1 Keynote speaker.



Ahmed Salih Mohammed
Professor Dr.
University of Sulaimani, Iraq

Speech title:
**Sustainable Smart Materials for Structural Health Monitoring:
Enhancing Piezoelectric Performance for Structural Safety and
Durability**



Elena Magarel
Professor Dr.
Head of the Department of Environmental Economics
Ural Federal University, Ekaterinburg, Russia

Speech title:
**Sustainable Development of the Energy Sector in the Context of the
Transition to a Circular Economy.**

Day 2 Keynote speaker.



Abdul Salam Darwish
Professor Dr.
University of Greater Manchester, U.K.

Speech title:
**Wind Energy Technology Advancement and the Role of Green AI:
Sustainability Impacts and Future Directions**