

ICSEWEN21

INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY-WATER-ENVIRONMENT NEXUS IN DESERT CLIMATE 2021

Programme

DAY 1 – 22 November 2021 – In-Person Event, Live Streamed from Doha

AST (Arabian Standard Time, GMT+3)

09:00	10:00	<p>Welcome & Registration</p> <p>Opening Address: Dr. Richard O’Kennedy, Vice President, Research, Development and Innovation at Qatar Foundation; and Vice President for Research, Hamad Bin Khalifa University</p> <p>Plenary speeches:</p> <ul style="list-style-type: none"> • HE Abdullah Bin Hamad Al-Attiyah (Chairman of the Al-Attiyah Foundation) • HE Eng. Essa Bin Hilal Al-Kuwari (President, Qatar General Electricity & Water Corporation "KAHRAMAA") • HE Dr. Mohammed bin Saleh Al-Sada (Chairman of the Joint Advisory Board, Texas A&M University at Qatar) <p>Welcome Remarks: Dr. Jenny Lawler, ICSEWEN21 Chairperson, Qatar Environment and Energy Research Institute, Hamad Bin Khalifa University</p>
11:15	11:45	Coffee Break – Sponsored by Enbat Holdings
11:45	12:00	<p>Plenary Address by Dr. Marc Vermeersch, Executive Director of Qatar Environment and Energy Research Institute, Hamad Bin Khalifa University</p> <p>Panel Discussion: Opportunities & Challenges within the Energy-Water-Environment Nexus</p> <p>Panelists: Mr. Fahad Hamad Al-Mohannadi (Member of the Board of Trustees for the Al-Attiyah Foundation, former CEO of QEWC), Dr. Mohammad Saif Al-Kuwari (Environmental and Municipal Studies Institute, Ministry of Environment and Climate Change), Eng. Ahmed Alnasr (Technical Affairs, Qatar General Electricity & Water Corporation "KAHRAMAA"), Dr. Hanan Farhat (Corrosion Center, Qatar Environment and Energy Research Institute, Hamad Bin Khalifa University)</p> <p>Moderator: Dr. Richard O’Kennedy, Vice President, Research, Development and Innovation at Qatar Foundation; and Vice President for Research, Hamad Bin Khalifa University</p>
12:00	12:45	<p>Panel Discussion: Food and Water Security in Arid Environments</p> <p>Panelists: Dr. Masoud Al-Marri (Food Security Department, Ministry of Environment and Climate Change), Mr. Ghanim Al-Sulaiti (Enbat Holdings), Mr. Nasser Al-Khalaf (Agrico)</p> <p>Moderator: Mr. Nawied Jabarkhyl (Supported by Al-Attiyah Foundation)</p>
13:30	13:40	<p>Airborne Radar for Groundwater Mapping</p> <p>Mr. Mohamed Shokry, Head of Aerospace Division, Bin Omran Trading and Telecommunications W.L.L.</p>
13:40	14:30	Lunch Break
14:30	15:30	<p>Panel Discussion: Smart Sustainable Cities for Desert Climate</p> <p>Panelists: Mr. Meshal Al Shamari (Qatar Green Building Council), HE Anders Bengtscén (Ambassador of Sweden to Qatar), Eng. Abdul Aziz Ahmed Al-Hammadi (Conservation & Energy Efficiency, and District Cooling, Qatar General Electricity & Water Corporation "KAHRAMAA"), Ms. Nihal Mohamed Al Saleh (Sustainable Cities, Qatar Foundation)</p> <p>Moderator: Mr. Nawied Jabarkhyl (Supported by Al-Attiyah Foundation)</p>
15:30	16:00	<p>QNRF: Enabling Environmental Sustainability Research in Desert Climate</p> <p>Dr. Omar F. Boukhris, Senior Manager, Energy and Environment, Qatar National Research Fund (QNRF)</p>
16:00	16:10	Close of Conference Day 1
16:10	17:00	Networking Opportunity

DAY 2 – 23 November 2021 – Virtual Platform

AST (Arabian Standard Time, GMT+3)

8:00	8:30	Online Moderated Networking Opportunity	
8:30	9:15	Plenary Address by Dr. James Chapman , Program Manager for Environmental Science, RMIT University	
9:15	10:45	<p>Panel Discussion: Integrated Water Resources Management (IWRM) in Arid Regions With opening plenary address from Dr. Sasha Koo-Oshima, Deputy Director of Land and Water Division, FAO Panelists: Prof. Esra Aleisa (Kuwait University), Dr. Samer Adham (Conoco Phillips), Mr. Howard Bevan (Al-Attiyah Foundation), Dr. Waleed Abou El Hassan (Food and Agriculture Organization of the United Nations), Dr. Amgad Elmahdi, (International Water Management Institute) Moderator: Mr. Stephen Cole (Al-Attiyah Foundation supported)</p>	
10:45	11:00	Coffee Break	
11:00	13:00	Sustainable and Smart Building Technologies and Energy Solutions Chairs: Dr. Ameni Boumaiza, Dr. Sertac Bayhan	Wastewater Management Chairs: Dr. Oluwaseun Ogunbiyi, Dr. Zhaoyang Liu
11:00	11:40	Keynote: Prof. Dragan Boscovic – School of Computing and Augmented Intelligence, Arizona State Univ., USA Title: <i>Smart Buildings and IoT on a joint mission to enable carbon neutrality</i>	Keynote: Prof. Rong Wang , Nanyang Technological University, Singapore Title: <i>Development of low-pressure reverse osmosis (RO) hollow fiber membranes for energy efficient water reuse</i>
11:40	12:00	Bernd Heithorst et al. , <i>Reduced CO₂ Footprint of Buildings in Agro-Industrial Communities in Qatar with Improved Insulation Standards and Solar Cooling</i>	Mashaal Al-Maas et al. , <i>Developing a Protocol to Evaluate Membrane Filtration for Oil-Water Separation;</i>
12:00	12:20	Namra Mir et al. , <i>Life Cycle Assessment of construction and demolition waste-based geopolymers suited for use in 3-dimensional additive manufacturing</i>	Sabah Mariyam et al. , <i>Biochar and energy production using biosludge from gas-to-liquids process water treatment</i>
12:20	12:40	Keynote: Mr. Scott Hinson , CTO at Pecan Street, USA Title: <i>Sustainable Energy Solutions, Big Data and Decision Making for Residential Energy Systems</i>	Zhaoyang Liu et al , <i>Development of oil/water separation technologies</i>
12:40	13:00		Saad Jasim , <i>The Significance of the Reuse of Treated Sewage Effluent (TSE) for Agricultural and Industrial Applications in the GCC Region</i>
13:00	13:30	Lunch Break	
13:30	15:30	Climate Change Policy in the GCC Chair: Dr. Marcello Contestabile, Dr. Sa'd Shannak	Novel materials for Environmental Applications (1) Chairs: Dr. Fadwa El Mellouhi, Dr. Viktor Kochkodan
13:30	13:50	Keynote: Dr. Bassam Fattouh , Oxford Institute for Energy Studies, UK Title: <i>Climate Change, the Energy Transition, and GCC Oil and Gas Exporters' Adaptation Strategies</i>	Keynote: Prof. Mike Zaworotko , University of Limerick, Ireland Title: <i>Why Crystals Will Save the World?</i>
13:50	14:10	Alaa Qassabi , <i>Qatar energy transition; parametrising possible options</i>	
14:10	14:30	Marcelo Neuman , <i>Cleaner Energy Generation and their opportunities for Industrial Development</i>	Sherzod Madrahimov , <i>Bridging homogeneous and heterogeneous catalysis through MOF support platforms and other efforts to obtain new class of highly active recyclable catalysts</i>
14:30	14:50	Radia Sedaoui , <i>Enabling the just and inclusive energy transition in the GCC region</i>	Aliya Banu et al. , <i>Ni promoted catalysts supported over halloysite clay for dry reforming of methane</i>
14:50	15:10	Afzal Subedar et al. , <i>My Carbon Footprint: Raising Awareness among Employees & Community for Behavior Change to Reduce the Carbon Footprint in the State of Qatar</i>	Reema Alasfar et al. , <i>Modeling and Experimental Investigation of Polymeric Membranes</i>
15:10	15:30	Laurent A. Lambert , <i>Unsupported climate ambitions: The lack of requests from the Gulf Cooperation Council countries and the broader Arab region to multilateral climate finance vehicles</i>	15:20 Coffee Break
15:20	17:00	New Sustainability Paradigms and Frameworks Chairs: Dr. Annamaria Mazzoni, Dr. Marcello Contestabile	Novel Materials for Environmental Applications (2) Chairs: Dr. Fadwa El Mellouhi, Dr. Viktor Kochkodan
15:20	15:40	Keynote: Prof. Silvana Dalmazzone , University of Turin, Italy Title: <i>Revisiting sustainability paradigms for a global ecological transition</i>	Hanane Boumeriame et al. , <i>Novel 2D/2D NiCeAl-LDH/g-C₃N₄ heterostructures for visible-light-driven photocatalytic hydrogen production</i>
15:40	16:00		Ahmed Badreldin et al. , <i>Tailoring Enhanced Alkaline and Neutral pH Saline Water Oxidation Through Early Transition Metal and S,B-Codoped CoFe Oxyhydroxides</i>
16:00	16:20	Hamzeh Tabar Jafar et al. , <i>Developing an Optimal Framework for Sustainable Power Supply Chain based on Energy- Water -Environment-Food Nexus (EWEFN) Approach</i>	Yehia Manawi et al. , <i>Novel High Performance Ceramic Membrane for Wastewater Treatment: Phosphate and Oil Removal</i>
16:20	16:40	Sima Hamadeh , <i>The role of youth to improve community literacy about the 17 SDGs: A realistic approach to construct a Futuristic Change-Maker Paradigm</i>	Piumie Rajapaksha et al. , <i>Nanofunctionalised graphene oxide hybridised electrospun membrane filters for removing pathogens and contaminants of water</i>
16:40	17:00	Crésus Hammer Kodongo Ndrou et al. , <i>Improving water access in rural and peri urban area through Multi village approach- A case of the Bimbo Municipality (Central African Republic)</i>	Belghiti Mohamed , <i>The study of partially coated ZnO for highly efficient photocatalytic degradation of pharmaceutical pollutants</i>
17:00	17:30	Exhibition & Networking	

Sustainable Petrochemical Industry*

Workshop - Part 1

*See detailed program in the "Program/Petrochemical sustainable industry" section of the ICSEWEN21 website or click the link in the above agenda <https://www.hbku.edu.qa/en/qeeri/ICSEWEN21>

DAY 3 – 24 November 2021 – Virtual Platform

AST (Arabian Standard Time, GMT+3)

8:00	8:30	Online Moderated Networking Opportunity			
8:30	9:15	Plenary presentation: HE Sh. Dr. Mohammad Al Thani , Director of Public Health Department, Ministry of Public Health (MOPH)			
9:15	10:15	Panel Discussion: Environmental Sustainability and Public Health Implications Panelists: Eng. Rashid Al-Rahimi (Qatar Scientific Club), Dr. Roberto Bertolini (Ministry of Public Health), Prof. Christine Loscher (Dublin City University), Dr. Rami Alfara (QEERI), Dr. Hend Mansoor (HBKU) Moderator: Mr. Axel Threlfall (Al-Attiyah Foundation supported)			
10:15	10:30	Coffee Break			
10:30	12:30	Desalination Chairs: Dr. Abdelnasser Mabrook , Dr. Deema Al Masri	Public Health Impacts of Environmental Pollution Chairs: Dr. Azhar Siddique , Dr. Kashif Rasool , Dr. Khaled Mahmood	Sustainability of Urban and Industrial Infrastructure (1) Chairs: Dr. Hanan A. Farhat , Mr. Mohammad Tariq , Dr. Prince Kumar	
10:30	10:50	Keynote: Mr. Friedrich Alt , Desalination Technology Research Institute – Seawater Conversion Corporation (SWCC), KSA Title: <i>Desalination technology development: trend and innovation</i>	Keynote: Prof. Susan Anenberg , George Washington University Milken Institute School of Public Health, USA Title: <i>Climate change, air pollution, and public health: from science to policy</i>	Keynote: Dr. Nicholas Laycock , Shell Pearl GTL, Qatar Title: <i>Corrosion Challenges for Stainless Steels in Hot Climates</i>	
10:50	11:10	Hassan Abdulrahim et al. , <i>Desalination & Cooling Using Innovative Dual Absorber Absorption Cycle: A Patented Process</i>			
11:10	11:30	Markus Spinnler et al. , <i>DesalChiller – Bifunctional Vapor Compression Cycle for Simultaneous District Cooling and Seawater Desalination</i>	Essa Saad Al-Kuwari et al. , <i>Drone sunshade</i>	Francisco Vouilloz et al. , <i>Corrosion of DNV450 Pipeline Steel Under Hydrodynamic Conditions in Presence of CO₂</i>	
11:30	11:50	Hammad Tahir et al. , <i>Performance Assessment of Low-Temperature Multi-Effect Desalination (MED) Unit at Higher Top Brine Temperature</i>	Hossein Shahbazi , <i>Comprehensive air pollution forecasting system</i>	Arin Shahmoradian , <i>Insulative Coatings - Fit for Purpose</i>	
11:50	12:10	Esra Aleisa et al. , <i>Assessing the Impact of Seawater Desalination Using Life Cycle Assessment: The case of Kuwait</i>	Mohammed Rami Alfara et al. , <i>Initial insights into Air Quality and Particulate Matter Characteristics in the Greater Doha Area</i>	Qing Cao et al. , <i>On the Systematic Evaluation of An Epoxy Coating for CUI Mitigation at Elevated Temperatures</i>	
12:10	12:30	Jasir Jawad et al. , <i>Pilot Testing of a High Performance Antiscalant for Advanced MED Desalination Plant</i>	Shaimaa El-Malah et al. , <i>COVID-19 Monitoring and Surveillance using Wastewater-based Epidemiology in Qatar</i>	Aiyad Gannan , <i>Gas Turbine Burner Repair & Design Improvement Using Additive Manufacturing Techniques</i>	
12:30	12:50		Omar Al-Zoubi , <i>Ultraviolet Radiation Interaction with COVID-19 Virus: Nano- Scale Resonance Frequencies</i>		
12:50	13:00	Break			
13:00	15:20	Power Systems and Smart Grids and Transportation Electrification Chairs: Dr. Mohd Zamri , Dr. Sertac Bayhan	Sustainability of Urban and Industrial Infrastructure (2) Chairs: Dr. Hanan A. Farhat , Mr. Mohammad Tariq , Dr. Prince Kumar	Sustainable Petrochemical Industry* Workshop - Part 2	
13:00	13:20	Mohd Khairun Nizam Mohd Sarmin , <i>Implementation of a Novel PMU-Based EMS System for TNB Wide-Area Intelligent System;</i>	Keynote: Mr. Ibrahim Ali Muzghi , QLGC Title: <i>Advancement in Corrosion Management to Enhance Material Durability</i>		
13:20	13:40	Nassma Mohandes et al. , <i>A Multi-Agent model for Residential households trading market of Renewable Energy in Qatar</i>			
13:40	14:00	Samah Hashim , <i>Performance analysis of a 5 kW PV grid connected system in Khartoum</i>	Mohammed S. Al-Kuwari et al. , <i>Environmental Benefits Recycled Aggregate</i>		
14:00	14:20	Keynote: Prof. Dr Saifur Rahman , Joseph Loring Professor, Virginia Tech, USA Title: <i>Role of smart grid in facilitating the integration of renewables</i>	Adel Djellali et al. , <i>Environmental Risk Limitation of Swelling Materials with Portland Cement: Case Study Tebessa City (Algeria)</i>		
14:20	14:40		Jafra Thekke Keloth et al. , <i>Analysis of Sustainability Aspects Of Facade Systems Using BIM: A Case Study For Lusail Plaza Tower</i>		
14:40	15:00	Keynote: Prof. Dr Sheldon S. Williamson , Ontario Tech. University, Canada Title: <i>Smart Fast Charging Technologies for Electrified Transportation and Autonomous E- mobility</i>	Redhwan Mohammed et al. , <i>Preliminary Study on Adopting Sustainable Materials in The Construction Industry At Qatar</i>		
15:00	15:20				
15:20	15:45	Coffee Break			
15:45	16:45	Student and Early-Stage Researcher Showcase and Competition Finals			
16:45	17:00	Exhibition & Networking			

*See detailed program in the "Program/Culture Event" and "Program/Petrochemical sustainable industry" section of the ICSEWEN21 website or click the link in the above agenda
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AST (Arabian Standard Time, GMT+3)

8:00	8:30	Online Moderated Networking Opportunity		
8:30	9:15	Plenary presentation: Prof. Michael Woodhouse , Researcher IV-Economic/Financial Analysis, National Renewable Energy Laboratory Title: Research and Development Priorities to Advance Solar Photovoltaic Lifecycle Costs and Performance Chair: Dr. Veronica Bermudez (Qatar Environment and Energy Research Institute, Hamad Bin Khalifa University)		
9:15	10:45	Panel Discussion: Smart Sustainable Energy Systems in Desert Climates Panelists: Prof. Mauro Pravettoni (Solar Energy Research Institute of Singapore), Prof. Stefaan De Wolf (King Abdullah University of Science and Technology), Dr. Antonio Sanfilippo (QEERI), Dr. Gilles Poulain (TotalEnergies), Mr. Abdul Aziz Ahmed A. Z. Al Mahmoud (Qatar General Electricity & Water Corporation "KAHRAMAA") Moderator: Mr. Eithne Treanor (Al-Attiyah Foundation supported)		
10:45	11:00	Coffee Break		
11:00	13:00	Solar Energy Applications Chairs: Dr. Antonio Sanfilippo , Dr. Brahim Aissa	Environmental Sensing Chairs: Dr. Nicolas Barth , Dr. Subramanian Ramachandran	Pollution Control: from Detection to Mitigation Chairs: Dr. Yehia Manawi , Dr. Zlatan Tsvetanov
11:00	11:20	Keynote: Prof. Christophe Ballif , director of the Photovoltaics and Thin Film Electronics Laboratory, École Polytechnique Fédérale de Lausanne	R. Subramanian et al. , <i>Evaluation of low-cost sensors for monitoring ambient particulate matter in Qatar</i>	Keynote: Dr. Ciprian Briciu-Burghina , Dublin City University Water Institute, Ireland Title: <i>ColiSense - an optochemical sensor for the rapid detection of faecal indicator bacteria in freshwater and coastal bathing areas</i>
11:20	11:40	Title: <i>PV Technology Progress and new PV products applied for urban cities</i>	Nicolas Barth et al. , <i>Calibration of low-cost air quality sensors for the measurement of NO2 pollution under Qatar's harsh service conditions</i>	
11:40	12:00	Guido Willers et al. , <i>Approach for mitigation of soiling based on direct humidity sensing</i>	Hugues Preud'Homme et al. , <i>Ultra-Short Transient with First Multi Quadrupole ICPMSMS is Fast Enough to tackle all Challenging Direct Analysis of Highly Interfered Ultra Trace Elements</i>	Rana Sawaya et al. , <i>Mercury prediction in groundwater of Naameh Landfill (Lebanon) using an Artificial Neural Network (ANN) model</i>
12:00	12:20	Mohamad Firdaus Bin Che Ismail et al. , <i>Unmanned Aerial Vehicles and Artificial Intelligence based Inspection for Power Assets</i>	Julius Bacani et al. , <i>The Application of Leak Detection and Repair (LDAR) Program in Qatargas: Success Story of Achieving Sustainable Reduction in Fugitive Methane Emissions</i>	Farhan A. Khan et al. , <i>Environmental management of large-scale LNG project development</i>
12:20	12:40	Keynote: Prof. Malik Maaza , Title: <i>Smart nanomaterials for green air-conditioning & concentrated solar power applications</i>	Keynote: Prof. Albert Presto , Carnegie Mellon University, USA Title: <i>Novel techniques for quantifying urban air pollutant exposures</i>	Dylan O'Flynn et al. , <i>Pharmaceuticals in surface waters: An overview of influencing sources and monitoring strategies</i>
12:40	13:00			
13:00	13:30	Lunch Break		
13:30	15:30	Material Selection for Sustainable Power Plants Chair: Dr. Afrooz Barnoush , Dr. Prince Kumar , Mr. Abubaker Abdelmagid	Global Environmental Change Chairs: Mr. Mohammed Ayoub , Dr. Rami Alfarrar	Food Security and the Energy-Water-Environment Nexus Chairs: Dr. Abdulkarem Amhamed , Dr. Annamaria Mazzoni
13:30	14:10	Keynote: Dr. Reza Javaherdashti , Eninco Engineering, Netherlands Title: <i>Corrosion and Microbial Adhesion on PV Solar Panels and Their Prevention via Coating Options</i>	Keynote: Prof. Jean Sciare , The Cyprus Institute, Cyprus Title: <i>Monitoring and Predicting Air Pollution and Greenhouse Gas emissions in the Eastern Mediterranean Middle East region: Challenges and Opportunities</i>	Keynote: Dr. Elena Vallino , Polytechnic of Turin, Italy Title: <i>Water-food nexus and vulnerability in a globalized world</i>
14:10	14:30	Afrooz Barnoush et al. , <i>Hydrogen Embrittlement: The Game Changing Factor In The Applicability Of High Strength Alloys In Hydrogen Economy</i>	Syed Faisal et al. , <i>Coral Management Program to protect Qatar's rich marine biodiversity.</i>	Naem Mazahrih et al. , <i>Impact of Reclaimed Wastewater on Alfalfa Crops production Under Different irrigation Systems;</i>
14:30	14:50	Abitha Ramesh et al. , <i>Critical Deposit Loading Thresholds For Under Deposit Corrosion In Steam Generators</i>	Habeebu Rahman Kadavan , <i>Longitudinal and sectoral analysis of Greenhouse gas emission by nations in MENA region with special reference to Qatar</i>	Snigdhendubala Pradhan et al. , <i>Biochar: A unique bio-resource for climate-smart agriculture and water food energy nexus</i>
14:50	15:10	Vsevolod Razumovskiy et al. , <i>Hydrogen Embrittlement Of Ni-Base Alloys: A Multiscale Study</i>	Saad Jasim , <i>Managing Adaptation and Mitigation measures to secure Sustainability under Climate Change</i>	Jill Soedarso et al. , <i>Utilization of industrial biosludge in Qatar: A risk assessment approach</i>
15:10	15:30	Abdulwahab Ibrahim et al. , <i>Failure Analysis Of Incoloy 800 Water Immersion Heating Element</i>	Kishwar Ali , <i>Spatio-temporal changes in Qatar in the wake of global climate change - with special reference to the floristic diversity of the country</i>	José Luis Vicente-Vicente et al. , <i>Can a shift to regional and organic diets in Qatar reduce greenhouse gas emissions from the food system?</i>
15:30	15:55	Coffee Break		
15:55	16:05	Prize-giving Ceremony (Best Presentation and Early-Stage Researcher Awards)		
16:05	16:30	Closing Address, Dr. Jenny Lawler Conference Chair & Dr. Marc Vermeersch , QEERI Executive Director		

Qatar STEM Innovation Session featuring National Innovation Showcase, QRDI Landscape Presentation (Sponsored by Qatar Scientific Club)