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ITAS 2023

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جامعة الدوحة  
للعلوم والتكنولوجيا  
UNIVERSITY OF DOHA  
FOR SCIENCE & TECHNOLOGY



# ITAS 2023 DOHA

## International Conference on Innovation and Technological Advances for Sustainability

1-3 March 2023

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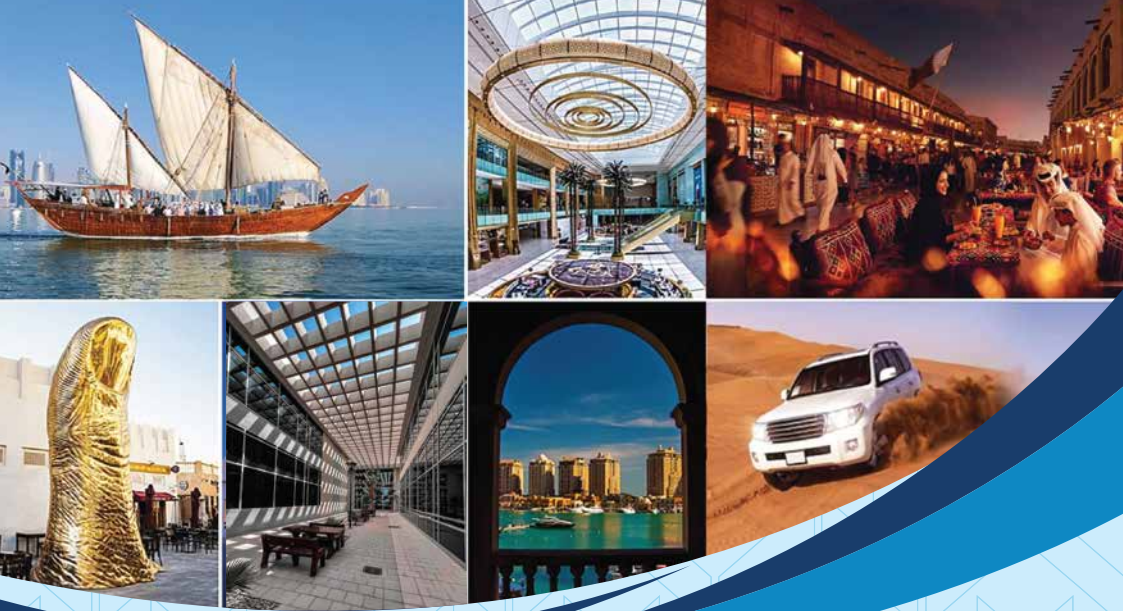


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UDSTofficial





The **International Conference on Innovation and Technological Advances for Sustainable Development** is a premier forum to explore future challenges and opportunities specifically in the area of Food Security, Environment, Climate Change, Renewable Energy, Digital Technologies and Capacity Building to achieve sustainable development.

## VENUE

The conference will be hosted by the University of Doha for Science and Technology (UDST). UDST is conveniently located in the midst of the historically colourful vicinity of Doha, Qatar. The venue is minutes drive to main attractions i.e., Souq Waqif, Gold Souq, Museum of Islamic Art, Desert, Parks, World-class Malls, Lusail Marina, Football Stadiums, and authentic cuisines. Doha, Qatar is located on the coast of the Persian Gulf and is considered a beta-level global city by the Globalization and World Cities Research Network.

Doha accommodates Education City, Hamad Medical City, and the Aspire Dome. The city was host to the Doha Sports City, Aspire Zone, Khalifa International Stadium, first ministerial-level meeting of the Doha Development Round of World Trade Organization negotiations. It was also selected as host city of a number of sporting events, including the 2006 Asian Games, the 2011 Pan Arab Games and 2022 FIFA World Cup.

Qatar brings together old-world hospitality with cosmopolitan sophistication, the chance to enjoy a rich cultural tapestry, new experiences and adventures.

Authors are invited to submit their original research work that has not previously been submitted or published in any other venue. Regular, workshop/special session, and poster papers need to be submitted via EDAS (<https://edas.info/N29949>). Advanced topics are especially encouraged to cover the three pillars of sustainability i.e., economic, environmental, and social responsibilities and implications. This conference will showcase the integration of technology with sustainable practices to promote UN-SDGs. Papers should be prepared in IEEE CS Proceedings format. IEEE formatting information: [http://www.ieee.org/conferences\\_events/conferences/publishing/templates.html](http://www.ieee.org/conferences_events/conferences/publishing/templates.html)

All accepted papers in the main tracks, workshops, special sessions and demos/posters will be published in an IEEE proceedings. Best Paper Awards will be presented to high quality papers. Selected papers will be recommended to prestigious journal Special Issues.

## KEYNOTE SPEAKERS



### PROFESSOR DANIELLA TILBURY

Commissioner for Sustainable Development and Future Generations  
HM Government of Gibraltar  
Honorary Fellow, University of Cambridge  
Previous - Vice-Chancellor (President) and CEO, University of Gibraltar

Prof. Daniella Tilbury is an educator and sustainable development leader; she was the first woman in Gibraltar to hold the title of university professor. She was also awarded the position of inaugural Vice-Chancellor and CEO of the University of Gibraltar and became Gibraltar's first Commissioner for Sustainable Development in May 2018. Daniella Tilbury's international and policy work has contributed significantly to the progress of sustainability as a key agenda for the future of higher education.



### PROFESSOR REHAN SADIQ

Executive Associate Dean  
Co-director of Digital Learning Factory Initiative  
Co-lead of Life Cycle Management Laboratory  
University of British Columbia

Dr Rehan Sadiq, is a Professor of Civil Engineering and Distinguished University Scholar at the University of British Columbia, and currently holds a Provost and VP Academic Pro tem position. He is also a co-director of Digital Learning Factory Initiative and a co-lead of Life Cycle Management Laboratory at UBC. Dr. Sadiq is a world-leading researcher in the areas of asset management of water supply systems, environmental risk analysis and lifecycle assessment of built environment.

### Research Papers (Long Paper)

Research paper (8-6 pages) should explore novel models, theory, or a specific technology problem and propose a complete solution to it, with experimental results.

### Work-in-Progress Papers (Short Paper)

Works-in-Progress (WIP) (6-4 pages) papers are expected to present either work currently in progress or less developed but highly innovative ideas.

### Poster papers (4 - 2 pages)

Some papers originally submitted as full papers can be accepted as short papers or posters during the review process. In such cases, the authors will need to reduce the paper accordingly when preparing the camera-ready version.

**This International Conference is seeking papers for the following tracks, closely aligned with the UN-SDGs:**

### Track 1 Environment & Climate Change

**Chair - Dr. Marliā Mohd Hanafiah**  
Centre for Tropical Climate Change System, UKM

1. Climate Change – Adaptation and Mitigation
2. Climate and Environmental Modelling
3. Air and Water Pollution Control Strategies
4. Sustainable Building Design – Modern Urbanization
5. Environmentally Efficient Systems and Design
6. Environmental Engineering
7. Ecological Issues and their Prevention
8. Drought and Forest Fires from Climate Change Prospective
9. Environmental Degradation and Remedy

### Track 2 Food Security & Sustainability

**Chair - Dr. Aitzaz Farooque**  
University of Prince Edward Island, Canada

1. Climate-Smart Agriculture Technologies
2. Minimizing Post Harvest Losses
3. Interventions to Improve Soil and Crop Productivity
4. Greenhouse and Hydroponics Cultivations
5. Agriculture Water Management
6. Irrigation Systems
7. Best Management Practices for Sustainable Agriculture
8. Greenhouse Design and Optimization

### Track 3 Renewable Energy Sources

**Chair - Dr. Tharinya Supasa**  
ASEAN Centre for Energy

1. Innovative PV Systems
2. Bioreactors for Energy Application
3. Harnessing Offshore Winds for Energy Applications
4. Implications of Renewable Energy
5. Energy Audit and Design of Sustainable Cities
6. Design of Efficient Solar and Wind Energy Systems
7. Challenges to Adopt Technologies

### Track 4 Digital Technologies for Sustainable Development

**Chair - Dr. Yacine Atif**  
University of Skovde, Sweden

1. Applications of Artificial Intelligence and Deep Learning for Sustainable Development
2. Sensing and Control Systems to facilitate UN-SDGs
3. Artificial Intelligence-assisted Drinking Water Management
4. Drones and their Application for Sustainable Development
5. Application of Computer Science and IT
6. Mechatronics and Automation for UN-SDGs

### Track 5: Capacity Building and Innovation solutions for sustainable development

**Chair - Dr. M. Razi Nalim**  
Indiana University – Purdue University, USA

1. Wastewater Treatment Technologies
2. Waste into Value-added Products
3. Economic Barriers to Sustainable Development
4. Social Responsibility and Implications
5. Capacity Building and Educational Prospective for UN-SDGs
6. Bio-circular Economy for Sustainability

### Submission Deadlines:

- Paper submission: 30 November, 2022
- Decisions announced: 10 December, 2022
- Registration: 25 January, 2023
- Camera-ready Papers due: 25 January, 2023
- Conference : 1-3 March, 2023

Papers be submitted through the online submissions site – <https://edas.info/N29949i>