

# International Conference on Sustainable Engineering Development (ICSED - 2023) Technical Session, 13-14 June 2023

Date	Time	Subject	Place/Venue
13.06.2023	11:15 AM	Registration for Authors and Delegates	Room: 11003 10 <sup>th</sup> floor Shaheed Syed Nazrul Islam Academic Building
	11:15 AM – 11:30 AM	Tea Break	Room: 11004/11005 10 <sup>th</sup> Floor, Shaheed Syed Nazrul Islam Academic Building
	11:30 AM - 1:00 PM	Poster Session	Lobby 10 <sup>th</sup> floor Shaheed Syed Nazrul Islam Academic Building
	1:00-2:00 PM	Lunch Break	Room: 11003 (Food Collection) Room: 11004/11005 (Dine) 10 <sup>th</sup> Floor, Shaheed Syed Nazrul Islam Academic Building
	2:00-4:30 PM	Technical Session (Food Engineering) Invited Speaker: Dr. Md. Mahfujur Rahman (UUM, Malaysia) ID: 4, 18, 34, 39, 62, 63, 69, 70 Chair: Prof. Dr. Md. Mostafizur Rahman Co-Chair: Dr. Md. Shofiul Azam	Room: 11001 10 <sup>th</sup> Floor, Shaheed Syed Nazrul Islam Academic Building

Date	Time	Subject	Place/Venue
	8:15-11:30 AM	<b>Technical Session (Water &amp; Environment)</b> ID: 6, 10, 11, 13, 14, 16, 20, 28, 29, 33, 44, 49, 59, 60 <b>Chair:</b> Prof. Dr. Atul Kumar Mittal <b>Co-Chair:</b> Prof. Dr. Mohammed Alauddin	Room: 11001 10 <sup>th</sup> Floor, Shaheed Syed Nazrul Islam Academic Building
	8:15-11:30 AM	<b>Technical Session (Energy Engineering)</b> ID: 8, 24, 30, 40, 41, 48, 54, 55, 64, 66, 67, 68, 72 <b>Chair:</b> Dr. Cristian Birzer <b>Co-Chair:</b> Dr. Mohammed Mahbubul Islam	Room: 11002 10 <sup>th</sup> Floor, Shaheed Syed Nazrul Islam Academic Building
	10:00-10:15 AM	Tea Break	Room: 11004/11005 10 <sup>th</sup> Floor, Shaheed Syed Nazrul Islam Academic Building
14.06.2023	11:30 AM - 3:00 PM	Technical Session (Chemical Engineering) Invited Speaker: Prof. Dr. Hossein Ganjidoust (TMU, Iran) ID: 1, 2, 7, 9, 15, 17, 43, 51, 53, 65 Chair: Prof. Dr. Md. Mostafizur Rahman Co-Chair: Dr. Mahbuba Jannat	Room: 11001 10 <sup>th</sup> Floor, Shaheed Syed Nazrul Islam Academic Building
	11:30 AM - 3:00 PM	Technical Session (ICT) ID: 19, 22, 25, 26, 31, 42, 46, 50 Chair: Prof. Dr. Md. Raisuddin Khan Co-Chair: Prof. Dr. Mohammod Abul Kashem	Room: 11002 10 <sup>th</sup> Floor, Shaheed Syed Nazrul Islam Academic Building
	1:00-2:00 PM	Lunch Break	Room: 11003 (Food Collection) Room: 11004/11005 (Dine) 10 <sup>th</sup> Floor, Shaheed Syed Nazrul Islam Academic Building



# International Conference on Sustainable Engineering Development (ICSED - 2023)

## Technical Session: Food Engineering

## Date: 13 June 2023; Time: 2:00-4:30 PM

Venue: Room: 11001, 10th Floor, Shaheed Syed Nazrul Islam Academic Building

Zoom Link:

https://bdren.zoom.us/j/61413976786?pwd=VHBvTUhHbWdGK1NpdmM0b0FvOXJEdz09

Meeting ID: 614 1397 6786 Password: 168985

Invited Speaker: Dr. Md. Mahfujur Rahman, Universiti Utara Malaysia, Kedah, Malaysia

#### Session Chair: Prof. Dr. Md. Mostafizur Rahman

Paper ID	Title
Invited Speaker	Towards Sustainable Halal Food Engineering: The Role of Biosensors
4	Physicochemical, and Antioxidant Properties of Fresh and Boiled Onion Flower Stalk
18	Development of Instant Green Tea by Foam mat drying technique and their quality evaluation for commercial application
34	Extraction of high-value collagen from fish waste
39	Impact of slightly acidic electrolyzed water in combination with ultrasound and mild heat on safety and quality of fresh cut cauliflower
62	Formulation and Quality Evaluation of Plain Muffins Using Red Gram and Cabbage Powders as Nutritional Supplements
63	A Brief Analysis of the Manufacturing Process for Two Antibiotics in a Multinational Pharmaceutical Company in Bangladesh
69*	Comparative Study of Sparse Canonical Correlation Analysis (SCCA) on High Dimensional Data
70	Development and Quality Assessment of Composite Biscuits Fortified with Potato and Corn flour

#### Session Co-Chair: Dr. Md. Shofiul Azam

\*ID 69 could be shifted to Information & Communication Technology session

## Technical Session: Water & Environment

#### Date: 14 June 2023; Time: 8:15-11:30 AM

Venue: Room: 11001, 10th Floor, Shaheed Syed Nazrul Islam Academic Building

Zoom Link:

https://bdren.zoom.us/j/61413976786?pwd=VHBvTUhHbWdGK1NpdmM0b0FvOXJEdz09

Meeting ID: 614 1397 6786 Password: 168985

#### Session Chair: Prof. Dr. Atul Kumar Mittal

#### Session Co-Chair: Prof. Dr. Mohammed Alauddin

Paper ID	Title
6	Runoff estimation in the Dakatia river basin, Bangladesh using SCS-CN method in the GIS-RS platform
10	Challenges with Solid Waste Management in The SAARC Countries: A Structured Review
11	Land use land cover changes and their impact on land surface temperature using remote sensing technique in Gazipur Sadar, Bangladesh
13	GIS and AHP-Based Flood Susceptibility Mapping of Halda Basin, Bangladesh
14	Flood Management and Impacts Assessment in Northwest of Bangladesh: A Perspective Study on Bhurungamari Upazila, Kurigram
16	Assessment of Future Drought Condition Over Bangladesh Under CMIP6 Climatological Projections
20	Typical Employee Health Impact of a Ceramic Industry in Bangladesh: A Case Study
28	Assessment of future groundwater potential zones using multi-criteria decision-making technique: A case study at Karnaphuli River Basin, Bangladesh
29*	Comparison of AC Breakdown Properties of Kraft Paper Impregnated with Shea Nut Oil and Mineral Oil for Transformer use
33	Effect of Oblique Flow on Groin Area and its Remedial Measures
44	Investigation of the Effective Coagulation Dose on Textile Wastewater Quality
49	A CFD modeling of the Effect of Trees on Urban Air Pollution Dispersion from Road Traffic Emission in Dhaka City Canyon
59	Locally-crafted Prefabricated Dwellings of "Ghorer Hat" in Munshiganj: An Investigation into Local Housing Provision and User Preference
60	Feasibility Study of Rainwater Harvesting for Academic and Residential Consumption in Mymensingh Engineering College, Bangladesh

\*ID 29 could be shifted to the Energy Engineering session

[Tea Break: 10:00-10:15 AM]

## Technical Session: Energy Engineering

# Date: 14 June 2023; Time: 8:15-11:30 AM

## Venue: Room: 11002, 10th Floor, Shaheed Syed Nazrul Islam Academic Building

Zoom Link:

https://bdren.zoom.us/j/69218103964?pwd=bE14TStIQStxOHk2Wi9CVUx4U0pZZz09

#### Meeting ID: 692 1810 3964 Password: 279922

## Session Chair: Dr. Cristian Birzer

## Session Co-Chair: Dr. Mohammed Mahbubul Islam

Paper ID	Title
8	Selecting Optimal Sites for Solar Power Plants in Bangladesh using a GIS and AHP based Multicriteria Decision Analysis (MCDA)
24	Effect of Sulfonation on Polystyrene based Proton Conductive Membrane Doped with Phosphorous Pentoxide
30	A Critical Analysis of Microgrid Performance for Renewable and Conventional Energy Sources with Economic and Environmental Impacts
40	SMR Reactors and the Future of Nuclear Energy: A Critical Review of Prospects and Challenges
41	Fabrication of Lanthanum doped Calcium Copper Titanate (CCTO)Electroceramic for Energy Storage Application
48	A Numerical Analysis on Enhance Heat Transfer and Fluid flow in Double U-Shape Geothermal Heat Exchanger using Nano-fluid
54	Experimental Analysis of Motorcycle Swing Arm Modified by Aluminum Alloy
55	Performance Evaluation of a Hybrid Solar Cabinet Dryer
64	Design and Construction of a Solar Base Home Automation System with Bluetooth Module
66	Vibration of An Aircraft Wing Due to Rotating Unbalance in The Gas Turbine Propulsion Engine
67	Analysis of Heat Transfer Performance through Inline and Staggered Grooved Microchannel using Lattice Boltzmann Method
68	Characterization of Biocrude oil produced from Hydrothermal Liquefaction of Water Hyacinth
72	Financial Analysis of Grid-Tied Solar Park's Feasibility in Coastal Area

[Tea Break: 10:00-10:15 AM]

## Technical Session: Chemical Engineering

## Date: 14 June 2023; Time: 11:30 AM -3:00 PM

## Venue: Room: 11001, 10th Floor, Shaheed Syed Nazrul Islam Academic Building

Zoom Link:

https://bdren.zoom.us/j/61413976786?pwd=VHBvTUhHbWdGK1NpdmM0b0FvOXJEdz09

Meeting ID: 614 1397 6786 Password: 168985

# Invited Speaker: Prof. Dr. Hossein Ganjidoust, Tarbiat Modares University, Tehran, Iran

#### Session Chair: Prof. Dr. Md. Mostafizur Rahman

Paper ID	Title
Invited Speaker	Microplastic Identification in Urban Environment
1*	Factors of Failure by Using IoT in project management
2	Removal of toxic methylene blue from aqueous solution by using high performance fish scale activated carbon
7	Study the Structural, Magnetic, and Electrical properties of nanocrystalline Mn doped Ni-Cu ferrites
9	Waterless Chemical Effect on Indigo Dyeing with cost saving
15	Evaluating the Concentration of a Solute in an Aquifer Using the Finite Element Technique
17	Removal of toxic congo red (CR) dye by sugarcane bagasse Nanocellulose- TiO <sub>2</sub> nanoparticles composite from aqueous solution
43	Performance Evaluation and Mechanism Analysis of Adsorption of MB Dye and Textile Wastewater by Powdered Activated Carbon
51	Synthesis of Schiff base and its metal complex for biological applications
53	Imine Synthesis and its metal complex: An application as antimicrobial agent
65	Experimental Study on Treatment of Unconfined Aquifer to Recycle by Using Eco-friendly Natural Adsorbent

Session Co-Chair: Dr. Biplov Kumar Roy

\*ID 1 could be shifted to Information & Communication Technology session

[Lunch Break: 1:00-2:00 PM]

# Technical Session: Information and Communication Technology

# Date: 14 June 2023; Time: 11:30 AM -3:00 PM

Venue: Room: 11002, 10th Floor, Shaheed Syed Nazrul Islam Academic Building

Zoom Link:

https://bdren.zoom.us/j/69218103964?pwd=bE14TStIQStxOHk2Wi9CVUx4U0pZZz09

#### Meeting ID: 692 1810 3964 Password: 279922

## Session Chair: Prof. Dr. Md. Raisuddin Khan

## Session Co-Chair: Prof. Dr. Mohammod Abul Kashem

Paper ID	Title
19	Analysis of Empirical Mode Decomposition to Recognize Similarity and Dissimilarity Species According to Their Mitochondrial
22	Agribot: A Multipurpose Intelligent Robotic solution for Maximizing Crop Yields in Large Agricultural Projects
25	A Comprehensive Analysis of The Self Balancing Characteristics of Long- Distance Jumping Robots
26	A Comprehensive Review of IoT-enabled Crop Yields and Sustainability Improvements in Bangladeshi Agriculture
31	An Investigation and Critical Analysis of Common Replication Strategies in the Distributed Cloud Computing Storage Framework
42	Analyzing the Effectiveness of Random Data Poisoning Attacks on Nonlinear Regression Learning Models: An Evaluation with Existing Defense
46	Challenges and Opportunities of Big Data and Predictive Analytics for Effective Supply Chain Management
50	Design and Implementation of a Face Detection-Based Door Controlling System for Improved Home Security

[Lunch Break: 1:00-2:00 PM]