5th Conference on Sustainability in Civil Engineering (CSCE'23) Department of Civil Engineering

Capital University of Science and Technology (CUST), Islamabad, Pakistan

CONFERENCE PROGRAM

ONLINE MODE (August 03, 2023)

MS Teams Joining (08:30 HRS TO 09:00 HRS)

Venue: CSCE2023 – Room 1 (Online via MS Teams)

Coordinator: Engr. M. Waqas Malik Co-Coordinator: Engr. Naseem Ali

A) Main Session (09:00 HRS TO 10:25 HRS)

INAUGURATION (09:00 HRS TO 09:15 HRS)				
Venue: CSCE2023 – Room 1 (Online via MS Teams)				
	Session Chair: Dr. Muhammad Ashraf			
	Session Co-Chair: Engra	. Iqbal Ahmed		
Time		Activity		
09:00 to 09:05	Openin	g and Recitation		
09:05 to 09:10	Welcome by the	Vice Chancellor, CUST		
KEYNOTE LEC	TURES (09:15 HRS TO 10:25 HRS)			
Venue: CSCE202	3 – Room 1 (Online via MS Teams)			
	Session Chair: Dr. Muha			
	Session Co-Chair: Engra	. Iqbal Ahmed		
09:15 to 09:35	Unlocking the Potential of Offsite Construction for Developing Economies	Dr. Wajiha Shahzad School of Built Environment, Massey University, Auckland, New Zealand		
09:35 to 09:55	State of the Art Techniques for Structural Health Monitoring of Structures	Dr. Afaq Ahmed University of Memphis, Tennessee, USA		
09:55 to 10:15	Sustainable Green Eco-technologies for the Wastewater Treatment	Dr. Hamza Farooq Gabriel Director Regional Centre for Water Tech./Trans-bound. Issues, National University of Science and Technology, Islamabad, Pakistan		
10:15 to 10:25	Closing Remarks	Dr. Imtiaz Ahmed Taj Dean, Faculty of Engineering, CUST Dr. Ishtiaq Hassan Head, Department of Civil Engineering, CUST		

Morning Break: 10:25 HRS TO 10:45 HRS

B) Oral Presentations - Technical Session I (10:45 HRS TO 13:00 HRS)

B1) Oral Presentations Parallel Session 1-1 Venue: CSCE2023 – Room 1 (Online via MS Teams) MS Teams Re-Joining (10:45 HRS TO 10:50 HRS)

Session Chair: Dr. Muazzam Ghous Sohail Session Co-Chair: Engr. Sohail Afzal

Time	Paper	First Author
10:55 to 11:15	Seismic Vulnerability Assessment of Unreinforced Masonry Buildings [KEYNOTE LECTURE]	Dr. H. Derakhshan Queensland University of Technology (QUT), Brisbane, Australia
11:15 to 11:30	Concrete Evolution: An Analysis of Recent Advancements and Innovations (Paper ID: 135)	Ali Ajwad University of Salerno, Italy
11:30 to 11:45	Reliability of Cores Test Result at Elevated Temperature in Case of Normal Strength Concrete (Paper ID: 110)	Usman Ali UET, Taxila, Pakistan
11:45 to 12:00	Enhanced Performance of Brick Aggregate Concrete Using Partial Substitution of Sand with Waste Glass and Flax Fiber Intrusion (Paper ID: 124)	Hassan Amjad NUST, Islamabad, Pakistan
12:00 to 12:15	The Behavior of Pre-Treated Crumb Rubber and Polypropylene Fibers Incorporated Mortar Subjected to Elevated Temperatures (Paper ID: 129)	Manahil Shafqat COMSATS Abbottabad, Pakistan
12:15 to 12:30	Improvement of Mechanical Characteristics of Cementitious Mortar at Initial Age by Adding Bio-Char of Santa Maria Feverfew Plant (Paper ID: 104)	Ahmed Kamal Subhani MUST, Mirpur, Pakistan
12:30 to 12:45	Micro Structural Study of Concrete with Indigenous Volcanic Ash (Paper ID: 131)	M. Iqbal Bashir UET, Taxila, Pakistan
12:45 to 13:00	Linear and Non-Linear Regression Analysis on the Prediction of Compressive Strength of Sodium Hydroxide Pre-Treated Crumb Rubber Concrete (Paper ID: 204)	Hamza Aamir, COMSATS Abbottabad, Pakistan

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B2) Oral Presentations Parallel Session 1-2 Venue: CSCE2023 – Room 2 (Online via MS Teams) MS Teams Re-Joining (10:45 HRS TO 10:50 HRS)

Session Chair: Dr. Shuja Safdar

Session Co-Chair: Engr. Usman Hussain

Time	Paper	First Author
10:55 to 11:15	Carbon Storage in Building Materials for a Greener Future [KEYNOTE LECTURE]	Dr. Anwar Khitab Ex-dean Faculty of Engineering, MUST, Mirpur, Pakistan
11:15 to 11:30	Critical Factors Influencing the Adoption of the Build Operate Transfer System in the GULF Areas: A Comprehensive Review (Paper ID: 303)	M. Junaid Yamin King Fahd Uni. of Pet. & Minerals, Dhahran, KSA
11:30 to 11:45	Framework for Energy Performance Measurement of Residential Buildings Considering Occupants' Energy Use Behavior (Paper ID: 305)	Nida Azhar NED UET, Karachi, Pakistan
11:45 to 12:00	Application of Plastic Aggregates in Asphalt Mix Paving for Sustainable Environment (Paper ID: 508)	Saad Mehmood UET, Taxila, Pakistan
12:00 to 12:15	Efficiency and Sustainability: Enhancing Mortar Mixtures with Waste Paper Sludge Ash (Paper ID: 122)	Asad Shafique, COMSATS Abbottabad, Pakistan
12:15 to 12:30	Improved Compressive Performance of Bio-Induced Sisal Fibers Reinforced Concrete (Paper ID: 107)	Hassan Amjad NUST, Islamabad, Pakistan
12:30 to 12:45	Developing High Performance Concrete Using Jute Fibers (Paper ID: 108)	Umer Nisar Satti HITECH University, Taxila, Pakistan
12:45 to 13:00	A Review on Effects of Project Management Practices on Cost Overrun in Construction Projects (Paper ID: 304)	Fakhar Hassan Shah Abasyn, Islamabad, Pakistan

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B3) Oral Presentations Parallel Session 1-3 Venue: CSCE2023 - Room 3 (Online via MS Teams) MS Teams Re-Joining (10:45 HRS TO 10:50 HRS)

Session Chair: Dr. Muhammad Usman Farooqi

Session Co-Chair: Engr. Iqbal Ahmad

Time	Paper	First Author
10:55 to 11:15	Prosperous Cities Transition - How Do Pakistani Cities Thrive in Future by Adopting Transit Oriented Development Model? [KEYNOTE LECTURE]	Dr. Imran Muhammad Massey University, Palmerston North, NZ
11:15 to 11:30	Model-based Relationship Between Risk-Taking Behavior of Motorcyclists and its Corresponding Factors. A Case Study at Srinagar Highway Islamabad After Making it Signal-Free Alignment (Paper ID: 506)	Haseeb Ahsan UET, Taxila, Pakistan
11:30 to 11:45	Construction, Conflict, Claim, and Compensation (4C) Case Study – Faizabad Highway Interchange Project Islamabad, Pakistan (Paper ID: 502)	Erum Aamir NUST, Islamabad, Pakistan
11:45 to 12:00	Manhole Related Road Accident Prevention Using Sustainable Methods (Paper ID: 505)	Ashar Ahmed NED UET, Karachi, Pakistan
12:00 to 12:15	Investigating the Effect of Shear Rate in the Shear Thinning Behaviour of Waste Plastic-Modified Asphalt Binder (Paper ID: 501)	Muhammad Ziad Bacha UET, Taxila, Pakistan
12:15 to 12:30	Effectiveness of Mono Sand Pile in Soft Cohesive Ground (Paper ID: 607)	Qazi Umar Farooq Islamic Uni. of Madinah, Saudi Arabia
12:30 to 12:45	Soil Improvement Using Waste Polyethylene Terephthalate (PET) (Paper ID: 606)	Tariq Saeed SCET, Taxila, Pakistan
12:45 to 13:00	Impact of Silica Fume and Biochar Treatment on the Mechanical Characteristics of Low Plastic Soils (Paper ID: 601)	Muhammad Waleed NUST, Islamabad, Pakistan

Lunch and Prayer Break (13:00 HRS TO 14:00 HRS)

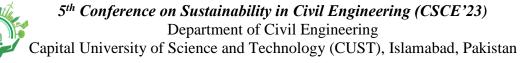
C) Oral Presentations - Technical Session II (14:00 HRS TO 16:00 HRS)

C1) Oral Presentations Parallel Session 2-1 Venue: CSCE2023 – Room 1 (Online via MS Teams) MS Teams Re-Joining (14:00 HRS TO 14:05 HRS)

Session Chair: Dr. Nafeesa Shaheen Session Co-Chair: Engr. Faiza Khalid

Time	Paper	First Author
14:10 to 14:30	Sustainable Use of High-Performance-Fiber-Reinforced Cementitious Composites [KEYNOTE LECTURE]	Dr. Mizan Ahmed Curtin University, Perth, Australia
14:30 to 14:45	Flexure Response of Stainless Steel Reinforced Concrete (SSRC) Beams Subjected to Fire (Paper ID: 210)	Javaria Mehwish Brunel University, London, UK
14:45 to 15:00	Comparative Seismic Response Analysis of a Multi-Storey Building With and Without Base Isolators Under High Magnitude Earthquake (Paper ID: 209)	~
15:00 to 15:15	Assessing the Flexural Strength of a Beam Using Waste Plastic as a Partial Substitute for Coarse Aggregate (Paper ID: 125)	M. H. M. Awan HITECH, Taxila, Pakistan
15:15 to 15:30	Predicting the Residual Flexural Capacity of Fire Exposed Reinforced Concrete Beams Using Gene Expression Programming (Paper ID: 201)	Raheel Asghar COMSATS Abbottabad, Pakistan
15:30 to 15:45	Effect of Bio-Char of Santa Maria Feverfew Plant on Physical Properties of Fresh Mortar (Paper ID: 105)	Waleed Nasir khan MUST, Mirpur, Pakistan
15:45 to 16:00	Behavior of Retrofitted GPC Columns Under Eccentric Loading (Paper ID: 114)	Shahzaib Farooq UET, Taxila, Pakistan

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C2) Oral Presentations Parallel Session 2-2 Venue: CSCE2023 – Room 2 (Online via MS Teams) MS Teams Re-Joining (14:00 HRS TO 14:05 HRS)

Session Chair: Engr. Talha bin Tahir Session Co-Chair: Engr. Umair Ahmed

Time	Paper	First Author
14:10 to 14:30	The Use of Ground Penetrating Radar (GPR) to Improve Sustainability in Pavement Engineering Projects [KEYNOTE LECTURE]	Dr. Robert Evans Nottingham Trent Uni., Nottingham, UK
14:30 to 14:45	Effect of Indigenous Volcanic Ash as Partial Replacement of Cement on Mechanical Properties of Concrete at Elevated Temperature (Paper ID: 112)	Hashmatullah, UET, Taxila, Pakistan
14:45 to 15:00	Composite Fibers in Concrete: Properties, Challenges, and Future Directions (Paper ID: 119)	Samiullah Khan COMSATS Abbottabad, Pakistan
15:00 to 15:15	Evaluation of Seismic Response of 3D Building Frame With and Without Base Isolation using Finite Element Analysis (Paper ID: 208)	Fahad Ali BUITEMS, Quetta, Pakistan
15:15 to 15:30	Effects of Different Aggregate Gradations on Rutting Susceptibility of Hot Mix Asphalt (HMA) (Paper ID: 504)	Ashar Ahmed NED UET, Karachi, Pakistan
15:30 to 15:45	Response Surface Methodology Based Optimized Mix Design for Self-compacting Concrete Blended with Metakaolin Waste (Paper ID: 109)	
15:45 to 16:00	Utilizing Corn Cob Ash and Bauxite as One Part Geopolymer: A Sustainable Approach for Construction Materials (Paper ID: 117)	Raheel Arif COMSATS Abbottabad, Pakistan

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C3) Oral Presentations Parallel Session 2-3 Venue: CSCE2023 – Room 3 (Online via MS Teams) MS Teams Re-Joining (14:00 HRS TO 14:05 HRS)

Session Chair: Engr. Muhammad Zaheer Session Co-Chair: Engr. Talha Ahmed

Time	Paper	First Author
14:10 to 14:30	Role of Civil Engineering in Sustainable Development [KEYNOTE LECTURE]	Dr. S. Sreedhar Reddy University of Nizwa, Nizwa, Oman
14:30 to 14:45	Validation of Chlorine Decay Equation for Water Quality Analysis in Distribution Networks (Paper ID: 406)	Rehan Jamil Universiti Sains Malaysia
14:45 to 15:00	Designing the Remote and Sustainable Water Management System (Paper ID: 402)	Hadia Tariq NUST, Islamabad, Pakistan
15:00 to 15:15	Application of Nonstationary in Climate Variability – A Case Study of South Punjab, Pakistan (Paper ID: 401)	M. Usman Khan UET, Lahore, Pakistan
15:15 to 15:30	Exploring the Potential of Moss Concrete as an Eco-Friendly Solution to Mitigate Urban Heat Island Effect (Paper ID: 116)	Muhammad Awais COMSATS Abbottabad, Pakistan
15:30 to 15:45	Treatment of Domestic Wastewater with Anaerobic Fluidized Membrane Bioreactor (An-FMBR) and Control of Membrane Fouling With Addition of GAC (Paper ID: 705)	Kamran Manzoor NUST, Islamabad, Pakistan
15:45 to 16:00	Scour Reduction Around Bridge Abutments Using Industrial By-Products as a Countermeasures - An Experimental Approach (Paper ID: 405)	Rana Adnan Amir UET, Taxila, Pakistan

Afternoon Break: 16:00 HRS TO 16:10 HRS

D) Poster Presentations - Technical Session III (16:10 HRS TO 16:45 HRS)

D1) Poster Presentations Parallel Session 3-1 Venue: CSCE2023 – Room 1 (Online via MS Teams) MS Teams Re-Joining (16:10 HRS TO 16:15 HRS)

Session Chair: Engr. Usman Hussain Session Co-Chair: Engr. Sohail Afzal

Time	Paper	First Author
16:15 to 16:20	Innovative Solutions for Sustainable Building Strengthening: Glass Fiber Reinforced Concrete (Paper ID: 214)	Faheem Ahmed Gul Nanchang Inst. of Tech. Jiangxi, China
16:20 to 16:25	The Effect of Plastic Fibers on the Mechanical Properties, Ductility and Environmental Performance of Concrete – A Review (Paper ID: 113)	Arshad Qayyum COMSATS Abbottabad, Pakistan
16:25 to 16:30	Synthesis and Dispersion Mechanism of Nanomaterials in Cement-Based Composites: A State of the Art Review (Paper ID: 106)	Hassan Amjad NUST, Islamabad, Pakistan
16:30 to 16:35	Project Management Practices in Construction Projects and their Role in Achieving Sustainability - A Comprehensive Review (Paper ID: 306)	Fakhar Hassan Shah Abasyn, Islamabad, Pakistan
16:35 to 16:40	Strength Prediction of Various Beams Through the Artificial Neural Network (Paper ID: 202)	M. Mahtab Ahmad UET, Taxila, Pakistan
16:40 to 16:45	Exploring Vibration Measurement Precision: A Comparative Analysis of a DIY, Low-Cost Acceleration Measurement Unit versus a Premium Standard Accelerometer System (Paper ID: 206)	Usama bin Tariq UET, Taxila, Pakistan

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D2) Poster Presentations Parallel Session 3-2 Venue: CSCE2023 – Room 2 (Online via MS Teams) MS Teams Re-Joining (16:10 HRS TO 16:15 HRS)

Session Chair: Engr. Faiza Khalid

Session Co-Chair: Engr. Talha bin Tahir

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Time	Paper	First Author
16:15 to 16:20	Effect of Bentonite & Polypropylene Fibers on Fresh and Hardened Properties of Fly Ash Based Geopolymer Concrete (Paper ID: 128)	Shahid Zaman UET, Taxila, Pakistan
16:20 to 16:25	Effect of Heat on Self-Compacting Concrete with Partial Substitution of Foundry Sand as Fine Aggregate and Addition of Propylene Fibers (Paper ID: 133)	Rizwan Ghafoor UET, Taxila, Pakistan
16:25 to 16:30	Performance of Self-Compacting Concrete with Incorporation of Silica Fume And Coal Bottom Ash (Paper ID: 130)	M. Shawaiz Hassan UET, Taxila, Pakistan
16:30 to 16:35	Structural Performance of E-waste Concrete Reinforced with different fibres (Paper ID: 111)	M Safwan Naeem UET, Taxila, Pakistan
16:35 to 16:40	Durability characteristics of self-compacting concrete with partial substitution of foundry sand as fine aggregate and addition of propylene fibers (Paper ID: 137)	M Umer Malik UET, Taxila, Pakistan
16:40 to 16:45	Bacterial Self-Healing for Sustainable Concrete: A Comparative Study of Vegetative and Spore-Forming Bacteria (Paper ID: 126)	M Abdullah Akmal UET, Taxila, Pakistan

D3) Poster Presentations Parallel Session 3-3 Venue: CSCE2023 – Room 3 (Online via MS Teams) MS Teams Re-Joining (16:10 HRS TO 16:15 HRS)

Session Chair: Engr. Muhammad Zaheer Session Co-Chair: Engr. Umair Ahmed

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Time	Paper	First Author	
16:15 to 16:20	Bridge Pier Scour Reduction Investigation Using Different Vegetation Elements as Countermeasure (Paper ID: 407)	Sajjad Hussain UET, Taxila, Pakistan	
16:20 to 16:25	Experimental Investigation of Square-shaped Sacrificial piles on Scour Depth of Compound bridge Pier (Paper ID: 408)	M. Nawaz Sharif UET, Taxila, Pakistan	
16:25 to 16:30	Optimizing Traffic Flow at Sangjani Toll Plaza in Islamabad: A Simulation Study using Different Lane Patterns (Paper ID: 510)	Umer Sabahuddin Gill <i>UET</i> , <i>Taxila, Pakistan</i>	
16:30 to 16:35	Slope Stability Analysis and Design using Numerical Techniques: A Case Study (Paper ID: 605)	Ahsan Javed UET, Taxila, Pakistan	
16:35 to 16:40	Evaluation of Strength Parameter of Indigenous Soil Under Varying Surcharge Load (Paper ID: 609)	Hazrat Bilal UET, Taxila, Pakistan	

E) Closing Ceremony (16:45 HRS TO 17:00 HRS)

Venue: CSCE2023 – Room 1 (Online via MS Teams) Session Chair: Dr. Majid Ali (Conference Chair)

Session Co-Chair: Engr. Shaheed Ullah (Conference Secretary)