

# 3<sup>RD</sup> INTERNATIONAL CONFERENCE ON ADVANCES IN CIVIL AND ENVIRONMENTAL ENGINEERING (ICACEE)-2024

## ICACEE-2024 Program

**Day 1 (Wednesday, 21<sup>st</sup> February 2024)**

Inauguration Session (Venue: Multipurpose Hall)		
08:30-09:00	Registration and Reception of Guests	
09:00	Ribbon Cutting Ceremony	
09:05	National Anthem on the Arrival of Chief Guest	
09:10	Recitation of Holy Quran	
09:15	Naat	
09:20	Welcome Speech of worthy VC, UET Taxila	Prof. Dr. Qaiser uz Zaman Khan
09:25	Introduction of Civil Engg. Department	Prof. Dr. Muhammad Yaqub
09:30	Introduction of Environmental Engg. Department	Prof. Dr. Faisal Shabbir
09:40	Introduction of Conference	Prof. Dr. Ayub Elahi
09:50	Address of Chief Guest	Prof. Dr. Attaullah Shah Vice Chancellor at Karakoram International University, Gilgit Pakistan
Keynote Speaker Session (10:00 to 11:40)		
10:00-10:15	Prof. Dr. Noor Muhammad	UET Peshawar
10:15-10:30	Prof. Dr. Charles Camp	The University of Memphis, USA
10:30-10:45	Dr. Asim Farooq	Pak Austria Fachhochschule: Institute of Applied Sciences and Technology, Haripur, KPK, Pakistan.
10:45-11:00	Dr. Yoshiaki Okui	Saitama University, Japan
11:00-11:15	Dr. Mohamed Hechmi El Ouni	King Khalid University, KSA
11:15-11:30	Dr. Muhammad Ali Inam	NUST, Islamabad
11.30-11.40	Dr. Wolfgang Bogacki	University of Applied Sciences, Hochschule Koblenz, Germany.
Tea Break & Poster Presentation (11:40 to 12:00)		
Papers		
No.	Paper ID	Title
1	207	Improving performance of waste engine oil modified bitumen mixture
2	209	Simulation model for vehicular traffic flow at intersection of road to reduce traffic congestion
3	218	Asphalt mix design with electronic waste aggregates
4	221	Characterizing the aggregate petrography for improvement in asphalt mix performance
5	222	Performance evaluation of plastic road
6	108	Analytical model for axial strength of frp-reinforced short columns confined with sheets and tubes
7	112	Finite element simulations of retrofitted recycled aggregate concrete columns having frp bars
8	113	Predictions of ann model for axial strength of frp-confined cfst columns
9	115	Role of waste materials in the development of a sustainable concrete
10	116	3d finite element modeling of hollow concrete compressive members having gfrp bars
11	117	Hybrid strengthening of reinforced concrete compressive members using fiber-reinforced polymers
12	121	Structural efficiency of fiber-reinforced geopolymer concrete confined with cfrp sheets

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13	123	Testing of natural fibers: form theory to practise
14	131	Experimental and finite element analysis of rotary friction welded aluminum rods
15	133	To evaluate the safe and economical rcc multistory building w.r.t shape and analysis method in all seismic zones of Pakistan
16	136	Strengthening of unreinforced masonry structure with fiber-reinforced polymer
17	139	Beyond ordinary concrete: a review of engineered cementitious composites' development and potential
18	142	Evaluation of mechanical performance of concrete through the integration of crumb rubber and plant residue
19	143	Numerical modelling techniques for ultra-high performance concrete (uhpc) and textile reinforced concrete (trc): a comprehensive comparative analysis case
20	144	Effect of curing conditions on bentonite concrete
21	148	Artificial neural network modelling approach to predict the effect of cfrp composites on the axial strength of rectangular and square columns.
22	149	A study on the prediction of compressive strength of geo-polymer concrete through stacking regression and random forest
23	150	Exploring pine needle fibers in concrete to mitigate flexural spalling in rigid pavements
24	152	Optimizing rcc slabs using fiber reinforced composites
25	153	Improving the concrete slab insulation by using pine needle fiber
26	154	Pnrc sustainable production of manholes covers with fiber concrete
27	155	A improving performance of concrete in canal-lining by using pine needle
28	404	Sedimentation analysis on reservoir (a case study of sukkur barrage)
29	405	Application of rational formula to estimate peak flood for a partially urbanized catchment
30	409	Study of river chenab morphology upstream panjnad barrage
31	413	Numerical simulation of three-dimensional flow in a patchy vegetated compound channel
32	414	National water policy and its likely effects on urban water management
33	418	Experimental investigation of flow behavior over a piano key weir with varying inlet to outlet crest height
34	419	Numerical modelling of flow behaviour over a circular crested trapezoidal weir
35	301	Predicting resilient modulus of subgrade soil using deep learning technique
36	302	Lateral load analysis of piled raft foundation: a review
37	306	Strength amplification of expansive soil using phosphogypsum
38	308	Reliability analysis of slope based on fellenius's and bishop's method
39	309	Applications of artificial neural networks for the prediction of subgrade cbr values
40	503	Towards the use of rainwater and fog water harvesting systems – a sustainability approach
41	511	A review of indoor air cleaning technologies
42	512	Towards the use of rainwater and fog water harvesting systems – a sustainable approach
43	513	Nature-based solution for the treatment of wastewater using wetlands
44	514	Use of natural coagulants (moringa oleifera) for drinking water
45	515	Development and application of low-cost filtration system for the treatment of greywater of a mosque
46	517	Characterization and composition analysis of fruit vegetable waste co-digested with buffalo dung for methane production

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47	601	A review on advances in mapping landslide susceptibility		
48	702	The influence of artificial intelligence on practices in construction cost estimation		
<b>Technical Sessions in Parallel (12:00-13.30)</b>				
<b>Venue</b>		<b>Multi Purpose Hall</b>		
<b>Session Title</b>		<b>Structures/Transportation</b>	<b>Session Coordinator</b>	<b>Engr. Rameez Sohail</b>
<b>Session Chairs</b>		<b>Prof. Dr. Imran Hafeez</b>	<b>Prof. Dr. Faisal Shabbir</b>	
<b>Papers</b>				
<b>No.</b>	<b>Paper ID</b>	<b>Title</b>		
1	201	The Star Rating Of An Urban Arterial Road Using Irap Methodology		
2	202	Suitability Of Subgrade Material For Pavement Designs In Waterlogged Areas: A Study In Peshawar, Pakistan		
3	203	Practices Of Traffic Congestion Pricing Policies – Implications And Challenges For Cities In Pakistan		
4	101	Strength Evaluation Of Ordinary Concrete Having Crumb Rubber Pre-Treated With Caustic Soda And Bleaching Powder Solutions		
5	103	Estimation Of Ground Motion Parameters For Structural Design Using Woo Approach For Pakistan: Preliminary Results		
6	104	Finite Element Modelling Of Structural Behavior Of Doubly Restrained Concrete Compressive Members		
7	105	Effect Of Crumb Rubber On The Behaviour Of Opc-Based Concrete		
<b>Venue</b>		<b>TITE-Civil Engineering Department</b>		
<b>Session Title</b>		<b>Structures</b>	<b>Session Coordinator</b>	<b>Dr. Rana Waqas</b>
<b>Session Chairs</b>		<b>Prof. Dr. Fiaz Tahir</b>		
<b>Papers</b>				
<b>No.</b>	<b>Paper ID</b>	<b>Title</b>		
1	106	Modification Of Cellular Lightweight Concrete By Using Additives		
2	107	Influence Of Naoh Concentration On Mechanical Properties Of Fly Ash-Slag Based Geopolymer Concrete		
3	109	Compressive Behavior Of Square Masonry Columns Strengthened With Nsm Steel And Gfrp Reinforcement		
4	110	Pine Needle Reinforcement In Concrete: A Sustainable Approach For Enhancing Mechanical Properties		
5	111	The Optimizing High-Performance Concrete Using Scms: A Comprehensive Analysis Of Mechanical And Durability Propert		
6	114	Enhancement Of Concrete Compressive Strength By Introducing Ngps In A Mix With Partially Substituted Recycled Coarse Aggregate For Natural Coars		
7	145	Prediction Model For The Performance Of Fly-Ash Based High-Strength Concrete At Elevated Temperature		
<b>Venue</b>		<b>Environmental Engineering Department</b>		
<b>Session Title</b>		<b>Environmental</b>	<b>Session Coordinator</b>	<b>Dr. Abaid Ullah</b>
<b>Session Chairs</b>		<b>Dr. Sadia Nasreen</b>	<b>Dr. Saimar Pervez</b>	
<b>Papers</b>				
<b>No.</b>	<b>Paper ID</b>	<b>Title</b>		
1	501	Deforestation in Pakistan: Causes, Consequences, and Sustainable Solutions		
2	502	Unveiling the Silent Threat; Pesticide Pollution in Pakistan's Agricultural Soils		
3	504	Eco-toxicity of soil and contamination of soil due to e-waste and recycling activities		
4	505	Understanding Heavy Metal Contamination in Soil: A Comprehensive Risk Assessment		
5	506	Effective Strategies for Plastic Waste Management		
6	507	Evaluation of the physical and chemical properties of drinking water in Higher Educational Institutions in Islamabad		

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7	508	Assessment of Water Quality of the Boreholes and Boys Hostels: A Case Study of International Islamic University Islamabad, Pakistan		
<b>Lunch/Prayer Break (13:30 to 14:15)</b>				
<b>Lunch Venue</b>		<b>Multi Purpose Hall</b>		
<b>Technical Sessions in Parallel (14:15 to 15:30)</b>				
<b>Venue</b>		<b>Multi Purpose Hall</b>		
<b>Session Title</b>		<b>Structures/Water</b>	<b>Session Coordinator</b>	<b>Engr. Rameez Sohail</b>
<b>Session Chairs</b>		<b>Prof. Dr. Ayub Elahi</b>		<b>Prof. Dr. Naeem Ejaz</b>
<b>Papers</b>				
<b>No.</b>	<b>Paper ID</b>	<b>Title</b>		
1	102	Performance Evaluation of Ordinary Concrete having Crumb Rubber Treated with Alkaline Solution		
2	118	Strengthening of Concrete Columns using NSM GFRP Bars		
3	119	Performance of self-compacting concrete containing bottom ash and nano-particles		
4	146	Recycled Aggregate Concrete Made with Various Types of Effluents		
5	402	Monitoring Ungauged Manchar Lake (Pakistan) Using Icesat-2 Data		
6	403	Sloping Perspectives: Investigating Flow Hydrodynamics in Vegetated Open-Channels under Varying Bed Slope		
7	406	Comparative Study Of Drip And Ring Basin Irrigation Methods For Young Mango And Jujube Orchard At Farmers' Field In Tando Allahya		
<b>Venue</b>		<b>TITE-Civil Engineering Department</b>		
<b>Session Title</b>		<b>Transportation</b>	<b>Session Coordinator</b>	<b>Dr. Rana Waqas</b>
<b>Session Chairs</b>		<b>Prof. Dr. Naveed Ahmad</b>		
<b>Papers</b>				
<b>No.</b>	<b>Paper ID</b>	<b>Title</b>		
1	204	Analysis of Students' Travel Mode Choice Behaviour: A Case Study in Oman		
2	205	Advances in Micromechanical Modelling of Asphalt Mixtures in Flexible Pavements and their Potential use in the Design Process: A Review		
3	211	To Analyze the Role of CPEC in Fostering Economic Growth in Pakistan: Case Study of Pakistan		
4	212	Train Approach Warning System (Taws) In Pakistan Railways		
5	213	Designing A Framework For The City Lahore, Mentioning The Main Transit Lines And Modes, Modal Share, And Modal Split And New Transit Line Recommendation		
6	214	Utilization Of Sustainable Materials To Enhance The Ageing Resistance Of Asphalt Binder		
7	215	Sustainable Development of Pakistan Railways Being an Environment-friendly Mode of Transportation		
<b>Venue</b>		<b>Environmental Engineering Department</b>		
<b>Session Title</b>		<b>Environmental</b>	<b>Session Coordinator</b>	<b>Dr. Abaid Ullah</b>
<b>Session Chairs</b>		<b>Dr. Muhammad Ali Inam</b>		<b>Dr. Sadia Nasreen</b>
<b>Papers</b>				
<b>No.</b>	<b>Paper ID</b>	<b>Title</b>		
1	141	Comparative Study of Concrete Structural Properties using various		
2	147	The Experimental Investigation of Mechanical Properties of Basalt Fiber Reinforced Recycled Aggregate Concrete (BF-RAC)		
3	509	Synergistic Polyethersulfone/poly [2- (dimethyl amino) ethyl methacrylate] Fabricated Membranes: Unveiling Superior Ultrafiltration and Antifou		
4	510	The Use of Environmental-Friendly Phase Change Material in Building Construction		
5	516	Designing and installation of Two Groundwater Recharging Wells at UET Taxila		
6	603	Mapping Groundwater Potential Zones in Quetta Region, Balochistan, Pakistan using Geospatial Techniques		
7	605	Assessment of Pakistan's Water Storage Changes Using GRACE Satellite		
<b>Evening Programs</b>				

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Site Seeing tour of Khanpur Dam (optional)	16:00 to 18:00
Conference Dinner (For Faculty and Guests)	19:00 to 22:00

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Day 2 (Thursday, 22<sup>nd</sup> February 2024)

Technical Sessions in Parallel (9:00 to 10:30)			
<b>Venue</b>		<b>Multi Purpose Hall</b>	
<b>Session Title</b>		<b>Structures/Transportation</b>	<b>Session Coordinator</b> <b>Engr. Rameez Sohail</b>
<b>Session Chairs</b>		<b>Prof. Dr. Imran Hafeez</b>	<b>Prof. Dr. Muhammad Yaqoob</b>
<b>Papers</b>			
<b>No.</b>	<b>Paper ID</b>	<b>Title</b>	
1	216	Sustainable Roadside Parking Solutions in Urban Areas	
2	217	A Comparative Study of Traditional Methods of Train Detection and Innovative Approaches Using Image Processing	
3	219	Risk-Taking Behaviour of Pedestrians on National Highways	
4	120	Experimental and numerical investigation of short concrete columns reinforced with BFRP bars under concentric loading	
5	122	Research Article Adopting Saw Dust for Insulative Block Masonry in Simple Frame Structure as Energy Conservation Product	
6	124	Self- Geopolymer Composites for Sustainable Development: A Compacting Review	
7	125	Improving The Design And Performance Of Rigid Pavements With Fiber Concrete	
<b>Venue</b>		<b>TITE-Civil Engineering Department</b>	
<b>Session Title</b>		<b>Structures</b>	<b>Session Coordinator</b> <b>Dr. Rana Waqas</b>
<b>Session Chairs</b>		<b>Prof. Dr. Faisal Shabbir</b>	
<b>Papers</b>			
<b>No.</b>	<b>Paper ID</b>	<b>Title</b>	
1	126	Economizing Beam Reinforcement With Concrete Having Hybrid Fiber Length	
2	127	Behavior of FRC to Enhance Concrete block, Pavers and Kerbstones Performance	
3	128	Experimental Exploration Of Pine Needle Reinforcement In Concrete Under Compression	
4	129	Comparative Analysis of Energy Consumption of Multistorey Residential Building – A Case Study of using Conventional Burnt Clay Bricks Vs Innovative Cellular Light Weight Concrete (CLC) Blocks	
5	130	Effects of Hybrid Fibers on Mechanical Behavior of Nanocomposites	
6	132	Life Cycle Analysis of Plain Cement Concrete Vs Green Concrete of Different Waste Pozzolanic Materials at Different Settings	
7	134	Performance Evaluation of Pre-Damaged Fire Effected Deep Beams	
<b>Venue</b>		<b>Environmental Engineering Department</b>	
<b>Session Title</b>		<b>Environmental</b>	<b>Session Coordinator</b> <b>Dr. Abaid Ullah</b>
<b>Session Chairs</b>		<b>Dr. Saimar Pervez</b>	<b>Dr. Sheraz Ahmed</b>
<b>Papers</b>			
<b>No.</b>	<b>Paper ID</b>	<b>Title</b>	
1	703	Implementing Circular Economy Principles in Construction Waste Management: A Conceptual Framework for Maximizing Resource Efficiency and Minimizing Environmental Impact"	
2	704	Integration of Circular Economy Principles: Impact on Project Quality Assurance in Construction Industry of Pakistan	
3	705	Geospatial Integration of Primavera P6 in Engineering Project Management: A Case Study of Imarat Group in Pakistan	
4	706	Developing a BIM-based asset management framework for urban infrastructures	
5	707	Exploring Relationship between Price Escalation Components using Regression Analysis – A Case Study of Pakistan Construction Sector	
6	708	Role of Quantity Surveyors in Waste Reduction in Road Construction Projects – A Study in Pakistan	
7	709	The Design and Implementation of an ESP-32 IoT-Based Fall Prevention early warning system for workers	

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Tea Break (10:30 to 11:00)			
Tea Venue		Multi Purpose Hall	
Keynote Speaker Session (11:00 to 12:45)			
11:00-11:15	Prof. Dr. George Wardeh	Department IUT of Cergy, Pontoise, France	
11:15-11:30	Dr. Hamza Farooq Gabriel	NUST, Islamabad	
11:30-11:45	Dr. Wei Sun	Sun Yat-Sen University, China	
11:45-12:00	Prof. Dr. Anwar Khitab	MUST, Mirpur	
12:00-12:15	Dr. Manousos Valyrakis	University of Thessaloniki, Greece	
12:15-12:25	Dr. Takuya Inoue	Hiroshima University, Japan	
12:25-12:40	Dr. Sobia Arshad	HITECH University, Taxila	
12.40-12.50	Dr. Yu Wang	University of Salford, Manchester, UK	
Technical Sessions in Parallel (12.45 to 13.45)			
Venue		Multi Purpose Hall	
Session Title		Structures/Transportation	Session Coordinator
Session Chairs		Prof. Dr. Usman Ghani	Engr. Rameez Sohail
		Prof. Dr. Faiz Tahir	
Papers			
No.	Paper ID	Title	
1	137	Effects Of Blast Furnace Slag And Walnut Shell As Partial Replacement Of Fine Aggregates On Properties Of Concrete – A Review	
2	138	Hazard Material Free Geopolymer Binder For Concrete	
3	140	Response Evaluation of PC/RC Pipe-Rack Structure under Strong Seismic Events	
4	151	The Role and Importance of Structural Health Monitoring in Under Developing Countries Like Pakistan	
5	407	Efficiency Of Water Supply System Of Kaghan Valley During High Influx Of Visitors	
6	410	Simulation Of Surface Runoff For River Kunhar Watershed (Pakistan) Using Swat Model	
7	412	Rainfall Trends in Punjab Rainfall Trends and Water Resources: An In-depth Analysis of Punjab, Pakistan	
Venue		TITE-Civil Engineering Department	
Session Title		Water	Session Coordinator
Session Chairs		Prof. Dr. Naeem Ejaz	Dr. Rana Waqas
Papers			
No.	Paper ID	Title	
1	415	Flash Drought Monitoring In Pakistan Using Machine Learning Techniques And Multivariate Drought Indices	
2	416	Enhancing Discharge Capacity of Piano Key Weir by Varying Number of Cycles	
3	417	Intercomparison of different methods for Flood Frequency Analysis: A case study of Nallah Mahal District Bagh AJK	
4	420	FLASH Flood prediction of Panjkora River, KPK, using Artificial Neural Networks (ANN) and Support Vector Machine (SVM)	
5	421	A Comprehensive Study on Rainfall Frequency Analysis for Sustainable Water Resource Management in District Khushab, Pakistan	
6	304	Effect of Salt Solutions on Geotechnical Behaviour of Bentonite-Fly Ash Admixtures for Their Application as Liner Material	
7	307	Enhancing the Stability of Clay Soils through Chloride Compounds	
Closing Session (13:45 to 14:15)			
13:45-13:55	Chief Guest Speech	Prof. Dr. Wasim Khaliq Director General National Institute of Transportation National University of Sciences & Technology Risalpur Campus	
13:55-14:05	Closing Remarks by worthy VC UET Taxila	Prof. Dr. Qaiser uz Zaman Khan	

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14:05-14:20	Prize Distribution & Closing Ceremony
<b>Lunch (14:20 to 15:00)</b>	
<b>Lunch Venue</b>	<b>Multi Purpose Hall</b>