
		Third International Conference on Construction Materials and Structures Synergy of Materials and Structures										
Time		Day 1, 3rd July 2025										
8:00-9:00		Registration										
Session-1 (09:00-10:00)		Inauguration: LHC CR 211										
		Prof. Venkatesh Kodur - Plenary Chair										
		Prof. Mike Schlaich, Topic: Responsible use of materials for bridges										
10:00-10:40	Plenary Talk (1)	High Tea										
10:40-11:10		Plenary Talks (2 & 3): LHC CR211										
Session-2 (11:10-12:30)		Prof. KVL Subramaniam, Topic : Form optimization of functionally efficient structures made by 3D concrete Printing										
11:10-11:50	Plenary Talks (2)	Prof. Narayanan Neithalath, Topic: Cementitious materials innovations towards sustainable, high performance structures										
11:50-12:30	Plenary Talks (3)	Photo Session (LHC Ground Floor)										
12:30-12:40		Lunch										
12:40-14:00		Keynote Lecturs and Technical Session 1										
Session-3 (14:00-15:45)		LHC CR002	LHC CR003	LHC CR004	LHC CR103	LHC CR104	LHC CR105	LHC CR201	LHC CR202	LHC CR203	LHC CR204	
14:00-14:35	Keynote Lectures	Mr. Amol Anand Patil, Topic: Synergizing digitization and sustainability: Advancing concrete technologies for a greener future (LHC CR001)		Dr. Manish Kumar, Topic: Role of seismic isolation in the sustainability of built infrastructure	Prof. Suriya S Prakash, Topic: Recent advancements in material and structural behavior of UHPC. (LHC CR101)		Dr. Sudharshan N Raman, Topic: Recent advances in understanding the constitutive behaviour of UHPC.	Dr. Tafsirojjaman, Topic: An innovative approach to enhance the compressive strength and ductility of glass fibre reinforced polymer (GFRP) composite bars.	Prof. P. Dinakar, Topic: Development and performance of alkali-activated concrete composites	Ms. Sneha Redla, Topic:Engineering Innovation: Building Scalable, Sustainable Infrastructure through Digitisation and Engineering Integration (LHC CR203)		
	Themes	Theme 1: New age construction materials	Theme 1: New age construction materials	Theme 1: Advancements in structural systems	Theme 1: New age construction materials /special concrete	Theme 1: New age construction materials /special concrete	Theme 1: Innovation in construction materials /New age construction materials	Theme 1: New age construction materials	Theme 1: Innovation in construction materials	Theme 2: Special structures	Theme 2: Computational mechanics / Numerical simulation	
	Session Chairs	Dr. Alexander S. Brand, Virginia Tech, US	Dr. Shihabudheen M Maliyekkal, IIT Tirupati	Dr. Svetha Venkatachari, IIT Delhi	Dr. Sameer Kumar Sarma ,IIT Jammu	Dr. Banti A Gedam, SVNIT	Dr. Greegar George, NIT Tirchy	Dr. Radhika V, SSN	Dr. Mahendra Gattu, NIT Rourkela	Dr. Himasree P.R, NATPAC	Dr. J Daniel Ronald Joseph, CSIR-CECRI	
14:35-14:47	Technical Session 1	Abstract ID: 1370 (Mechanical Performance of Electric Arc Furnace Slag-based Alkali activated paste using a one-part geopolymer technique.)	Abstract ID: 3075 (Enhancing The Workability and Mechanical properties Of Self-Compacting Concrete Using Spent Coffee Grounds As Fine Aggregates And Supplementary Cementitious Materials)	Abstract ID : 1023 (Comparative study of special moment resisting frames (SMRF) with castellated and conventional beams)	Abstract ID: 7897 (A review on impact of green materials on the properties of 3D printable concrete)	Abstract ID: 1226 (Performance assessment of high strength concrete incorporating copper slag as fine aggregate for pavement applications)	Abstract ID: 6370 (Investing the cumulative influence of basic oxygen furnace slag and basalt fiber on the durability properties of concrete)	Abstract ID: 8568 (Fresh and Strength properties of fly ash based geopolymer concrete incorporating with plastic waste replacing fine aggregate partially)	Abstract ID: 5501 (Durability enhancement of recycled fine aggregate mortar via sodium silicate and silica fume treatment)	Abstract ID: 5611 (A study on dynamic Behaviour of Natural draft cooling towers with annular Shell foundations founded on elastic medium)	Abstract ID: 1109 (Analytical and Numerical Investigation of the Flexural Behaviour of Preflex Beam under Static Loading)	
14:47-14:59		Abstract ID: 5539 (The impact of ECC on enhancing shear performance of beam-column joints in earthquake-prone structures)	Abstract ID: 4321 (Effect of molar ratios on the strength and microstructural properties of slag-waste glass binary geopolymer)	Abstract ID: 1410 (Comparative study of static & dynamic seismic analysis of G+30 story RCC building in different seismic zones of India as per IS 1893:2023 draft code)	Abstract ID: 0473 (Influence of curing regimes on the compressive strength of calcined bauxite aggregate UHPFRC)	Abstract ID: 1217 (A computational approach for the production of bagasse ash, rice husk ash, and fly ash based sustainable ternary cement)	Abstract ID: 8130 (Enhancing the performance and sustainability of biopolymer mortar using nano silica additives)	Abstract ID: 8585 (Acid resistance analysis of lightweight concrete: Comparing geopolymer and conventional mixes using 100% SFA as coarse aggregate)	Abstract ID: 5580 (Impact of different calcium sources on biocementation in mortar)	Abstract ID: 6978 (Analytical Study on Buckling behavior of Horizontal Axis Wind Turbine Tower)	Abstract ID: 6925 (Damage Assessment of Spliced Steel Plate Girders through FE Modelling)- computational/ shm	
14:59-15:11		Abstract ID: 1267 (Effect of thermal exposure on the Interfacial bond characteristics of novel natural fiber reinforced UHTCC)	Abstract ID: 4128 (Influence of Polypropylene fiber on the mechanical, durability and microstructural properties of concrete using XRD Analysis)	Abstract ID: 1902 (Stress-strain behavior of Concrete Filled Steel Tube (CFST) Column)	Abstract ID: 7994 (Flexural Performance of Concrete Beams Reinforced with Date Palm Rachis - Towards a Sustainable Construction)	Abstract ID: 4728(Lean Concepts Implementation in Precast Plant to Enhance Productivity)	Abstract ID: 5844 (Study on self-compacting properties replacing natural river sand with bottom ash)	Abstract ID: 5859 (Cane sugar admixture in air-lime based mortars to improve setting time and plasticity)	Abstract ID: 1155 (Effect of sugarcane bagasse ash addition and curing temperature on the mechanical properties and microstructure of fly ash-based geopolymer concrete)	Abstract ID: 8436 (Parametric Study of Gravity-Based WTG Foundations with Variable Anchor Bolt Lengths)	Abstract ID: 7256 (Finite Element-Based Damage Detection of a Cellular Cantilever Girder)/ computational/numerical	
15:11-15:23		Abstract ID: 0762 (Enhancing concrete mechanical performance using fish scale fiber powder as a partial replacement to cement)	Abstract ID: 5158 (Experimental Insights into Mortar Composites Using Agro and Industrial Waste Ash)	Abstract ID: 2017 (Numerical and experimental assessment of hybrid RCC columns with GFRP and steel reinforcement)	Abstract ID: 2771 (Nano clay as a cementing material for Ethiopian construction industry)	Abstract ID: 2907 (Experimental and analytical study on the compressive behavior of graphene oxide-based self compacted concrete filled steel tube)	Abstract ID: 3582 (A review on ternary blended cementitious concrete and mortar incorporating sugarcane bagasse ash and fly ash)	Abstract ID: 9016 (Ultra-Sensitive Sustainable Cement for better strength, fire safety and health monitoring of structures)	Abstract ID: 6004 (Beneficiation of steel slag as an SCM using mechano-chemical activation: A review of the effect of process parameters)	Abstract ID: 9485 (Assessment of Telecom Lattice Tower for Supporting Small Vertical Axis Wind Turbine)	Abstract ID: 3267 (Experimental and Numerical Investigation of Core-Skin Composite Plate for Complex Hydrodynamic Loading)	
15:23-15:35		Abstract ID: 1402 (Enhanced pozzolanic activity of carbonated recycled concrete aggregates: Microstructural and chemical investigation)	Abstract ID: 4891 (Performance of Bacteria based Multiple Additives Used for Quinary Blended Self-Healing Concrete)	Abstract ID: 4086 (Study on Ultra-High Performance Concrete under Fire : An Overview)	Abstract ID: 0311 (Effect of clay brick dust on mechanical properties of fly ash-based geopolymer concrete)	Abstract ID: 9879 (Life Cycle Assessment of Residential and Commercial Buildings: A Comparative Study of Environmental Impacts)	Abstract ID: 7853 (Carbon sequestration in cementitious composites containing activated biochar: development and evaluation of engineering properties)	Abstract ID: 8464 (Study on strength properties of surface coated recycled aggregate concrete)	Abstract ID: 7599 (An analysis utilizing systematic reviews of the behavior of metakaolin in pervious concrete)	Abstract ID: 8514 (Dynamic Analysis and Design of High Rise Buildings (G+48) Connected With Sky Bridge (Sky Garden).)	Abstract ID: 8355 (Numerical Simulation of Damage Growth in Quasi-Brittle Material with Pre-Existing Damage using Bond-Based Peridynamics)	
15:35-15:47		Abstract ID: 5655 (Influence of calcium nitrate on the fresh, mechanical and microstructural qualities of self-compacting concrete with ground granulated blast furnace slag as a mineral additive)	Abstract ID: 7548 (A Review on the Influence of Adverse Exposure Conditions on the Mechanical Properties and Microstructure of GFRP Rebars)	Abstract ID: 1253 (Torsional and Bending-Torsional Resistance of GFRP Reinforced Concrete structures: A Critical Review)	Abstract ID: 8215(Enhancing Concrete Durability with Crystalline Materials: A Microstructural and Performance Study)	Abstract ID: 2041 (Investigation of bond behaviour between epoxy coated steel rebar and concrete)	Abstract ID: 635 (Influence of Incinerated Bottom Ash (IBA) as partial replacement of fine aggregate on mechanical and flexural properties of high-strength concrete)	Abstract ID: 9334 (Sustainable cement mortar: evaluating the strength and thermal behaviour of glass powder and microfine blends)	Abstract ID: 7732 (An experimental study on performance of encased stone columns filled with repurposing materials)	Abstract ID: 7848 (Shear behaviour of masonry panels strengthened by bamboo sticks)	Abstract ID: 2507 (Finite element analysis of helical wire rope isolator for small-amplitude vibrations)	
15:47-16:15		High Tea										
Session-4 (16:15-17:30)		Technical Session 2										
	Themes	Theme 1: New age construction materials	Theme 1: New age construction materials	Theme 1: Advancement in structural system	Theme 1: New age construction materials /special concrete	Theme 1: New age construction materials /special concrete	Theme 1: New age construction materials/ Innovations in construction materials	Theme 1: New age construction materials	Theme 1: Innovations in construction materials	Theme 2: Special structures	Theme 2: Computational mechanics / Numerical simulation	
16:15-16:28		Abstract ID: 9777 (Quantitative Assessment of Material Waste Management in Indian Building Industry)	Abstract ID: 7287 (A Review on High Temperature Performances of Various Crumb Rubber Modified Binders Produced by Methodical Techniques and Materials)	Abstract ID: 4501 (A study on seismic performance of precast hollow core slab and transfer slabs)	Abstract ID: 3717 (The effect of permeable formwork on the mechanical properties of polyolefin fiber reinforced concrete)	Abstract ID: 8258 (Effect of curing conditions on compressive strength of blended cement mortar specimens)	Abstract ID: 8632 (Influence of colloidal silicon dioxide on fly ash geopolymer aggregate)	Abstract ID: 9942 (Advancing sustainable construction with cassava peel ash and corn cob ash-based cement mortars)	Abstract ID: 3824 (Various parameters influencing early-age carbon curing and their effects on the properties of cementitious material)	Abstract ID: 4098 (A comprehensive review of international codes for double-skinned non-corrosive tube confined concrete columns)	Abstract ID: 2398 (Feasibility study on stress block parameters of high strength concrete)	

16:27-16:39	Technical Session 2	Abstract ID: 3918 (Investigation of the Combined Effect of Supplementary Cementitious Materials and Various Nano-Materials on Geopolymer Mortar)	Abstract ID: 6097 (Examining the impact of Portland cement on the geotechnical behaviour of red mud)	Abstract ID: 4517 (Influence of aspect ratio on flat and profiled cold-formed steel-concrete composite shear walls under monotonic lateral loading)	Abstract ID: 1625 (Eco-friendly one-part geopolymer composites: influence of PVA and glass fibers on mechanical and durability properties)	Abstract ID: 7967 (Effect of bacterial immobilization in natural fibers on early-stage strength and porosity of biomortar)	Abstract ID: 6151 (Influence of high silica modulus on strength and microstructural properties to produce the Cast-in-situ geopolymer concrete)	Abstract ID: 7450 (Effect of coarse particles and autoclave treatment on mechanical properties of compacts made from concrete waste)	Abstract ID: 8236 (Utilization of municipal solid waste incinerated fly ash and bottom ash in the construction of sustainable pavement)	Abstract ID: 2162 (Influence of geometry on the buckling behavior of GFRP channel sections: A numerical study)	Abstract ID: 9040 (Fractional models for viscoelasticity of polyurethane: A survey)
16:39-16:51		Abstract ID: 2143 (Feasibility of Using Copper Slag in Low-Molarity Geopolymer Mortar)	Abstract ID: 9751 (A Regression Model for Predicting Construction Waste in Residential Building Project in India)	Abstract ID: 8449 (Enhancing bamboo-concrete bond strength: physical surface modification through pin insertion)	Abstract ID: 6584 (Utilization of spent bentonite & de-oiled spent bentonite as sustainable alternatives to cement in mortar applications)	Abstract ID: 4811 (Exploring the effect of activated carbon and calcium carbide residue on CO ₂ capture in concrete)	Abstract ID: 7716 (The influence of ultra-fine fly ash on binding characteristics of fly ash blended cement)	Abstract ID: 8500 (Influence on Physical properties and Non-destructive tests of Sustainable Hybrid Sisal/Glass Fiber Cementitious Composites)	Abstract ID: 9031 (Investigating the impact of surface texturized recycled aggregates on concrete behaviour)	Abstract ID: 1428 (Enhanced material circularity in buildings, a BIM enabled decision framework)	Abstract ID: 9723 (Development of a 3D microplane damage plasticity model for quasi-brittle concrete)
16:51-17:03		Abstract ID: 7443 (Enhancing the workability retention of sustainable fly-ash concrete incorporating an organic acid)	Abstract ID: 8203 (Mechanical and durability behaviour of concrete with waste glass powder as a sustainable aggregate alternative)	Abstract ID: 5661 (Improvement of bond strength of concrete using skin reinforcement confinement)	Abstract ID: 0227 (Sustainable concrete production using industrial ETP and phosphate sludge: A feasibility analysis)	Abstract ID: 4179 (Transforming Fly Ash into Sustainable Construction: The Role of Artificial Aggregate)	Abstract ID: 8605 (Studies on the effect of marginal material strength using Taguchi analysis.)	Abstract ID: 8851 (Geopolymer concrete with metakaolin and fly ash: A study on mechanical properties)	Abstract ID: 9932 (Experimental investigation of mechanical properties of cement concrete with partial replacement of coarse aggregate by shredded plastic and cement by fly ash and silica fume)	Abstract ID: 9374 (Calibration and application of finite element method models of historic masonry structures on a local historic building)	Abstract ID: 1582 (Kesavan Influence of shear stud patterns in punching shear capacity of RC flat slab-column edge connections)
17:03-17:15		Abstract ID: 3969 (Mimicking the cementitious mechanism of ancient roman concrete using lime-based binder incorporating pumice and calcined clay)	Abstract ID: 6366 (Utilization of waste materials in cementitious mortar for sustainable construction)	Abstract ID: 4364 (Synergy of limestone powder and self-compacting concrete: A study on segregation resistance)	Abstract ID: 0335 (Effectiveness of accelerated curing methods in enhancing the properties of high-strength self-compacting concrete incorporating sustainable materials)	Abstract ID: 5349 (Experimental investigation on mechanical and microstructural characteristics of sisal and glass fiber reinforced recycled aggregate concrete)	Abstract ID: 7622 (Buckling analysis of hybrid cellular steel beams)	Abstract ID: 4066 (Reducing Non-Value Added (NVA) activities through lean tools in road construction)	Abstract ID: 7363 (Strength properties of sisal-fiber-reinforced geopolymer concrete)	Abstract ID: 1034 (Enhancing UHPC compressive strength prediction using KAN and ANN modelling with explainable AI analysis)	Abstract ID: 5012 (Impact of wind-driven rain (WDR) on building geometries in high-risk areas: A CFD simulation approach)
17:15-17:27		Abstract ID: 2549 (Mapping performance of mortar while replacing fine aggregate with coal-based byproduct)	Abstract ID: 2426 (Towards Net-Zero : Methods for CO ₂ Capture using Sustainable Materials)	Abstract ID: 8957 (Damage analysis of ultra-high performance fibre reinforced concrete through acoustic emission under fatigue loading)	Abstract ID: 7299 (Enhancing concrete strength through partial replacement of fine recycled concrete aggregates with class f fly ash)	Abstract ID: 5949 (Performance Evaluation of Fly Ash-Based Geopolymer Mortar Activated by Sodium Hydroxide and Micro Silica)	Abstract ID: 2526 (A Rheological analysis of cement paste incorporating Graphene oxide as an additive)	Abstract ID: 8768 (Experimental Evaluation of Tensile Properties of Unidirectional Glass, Basalt, and Carbon Fiber Fabrics for Structural Strengthening Applications)	Abstract ID: 7937 (Mechanical strength and heat modulation in concrete panels with phase change materials)	Abstract ID: 8399 (Forensic study on concrete structure: Investigating causes and failures)	
17:27-17:39		Abstract ID: 1311 (Development of a High-Strength Binder from Industrial Waste with Carbon Sequestration Potential)	Abstract ID: 3998 (Comprehensive On-Site Strategies for Waste Reduction in Construction Projects in India)		Abstract ID: 8052 (Optimizing the Rheological and Fresh properties of a 3D Printing Mortar mix for a Sustainable and Stable construction)	Abstract ID: 4790 (Experimental investigation on the use of stainless fiber on the mechanical properties of ultra-high-strength self-compacting geopolymer concrete)					