

Third International Conference on Construction Materials and Structures on Synergy of Materials and Structures

TIRUPATI

TIRUPATI		on Synergy of Materials and Structures									
Time		Day 2, 4th July 2025									
8:00-9:00		Registration									
Session-1 (09:00-10:20) 09:00-09:40	Plenary Talk 4				Prof Giantura B:	Plenary Talks (4 & 5): LHC CR 211		scita structuras			
09:40-10:20	Plenary Talk 5	PPC. Ganuca Ranzi, Topic:: The role of advanced analysis for the service degree of concrete and composite structures Prof. Sanuca Ranzi, Topic:: The role of advanced analysis for the service degree of concrete and composite structures Prof. Sanuca Ranzi, Topic:: The role of advanced analysis for the service degree of the religion to the role of the r									
10:20-10:40	Platinum Speaker	1. Mr. Janakiraman A - General Manager Smart Bulld, The Ramco Cements Ltd & Ramco Industries Ltd., Topic: Sustainable Products in Construction Industry 2. Mr. Anil Kumar Pillai, Scienceal Manager - Technical services, The Ramco Cements Ltd & Ramco Industries Ltd. Topic: Ramco Construction Chemicals an overview									
10:40-11: 10		High Te									
Session-2 (11:10-12:10)		Plenary Tailts (6): LHC CR 211									
11:10-11:50	Plenary Talk 6	Prof. Venkatesh Kodur, Topic: Development of Ultra High-Performance Concrete for Fire Resistance Applications									
11:50-12:10 12:10-12:20	Platinum Speaker	Presentations by Blatimus Sponsors: JSW IP Holdings Pvt Ltd. Photo Session ILIS Compart Elson									
12:20-13:40		PRODO SESSION LUL-LI GUIDA PRODY									
Session-3 (13:40-15:45)		Keynote Lectures and Technical Session 3									
,		LHC CR002	LHC CR003	LHC CR004	LHC CR103	LHC CR104	LHC CR105	LHC CR201	LHC CR202	LHC CR203	LHC CR204
13:40-14:15	Keynote Lectures	Mr. K. Senthilnsthan, Topic: Bridging innovative technologies for structural excellence (LHC CR001)		Dr. Kasi Viswanadh, Topic: Recent trends in lean and sustainable design	Mr.Damodar R. Katti, Topic: Offsite construction, simplified	Mr. Rajeev Goel, Title: Role of coatings in protecting structures	Dr. Vaibhav Singhal, Topic: Confined masonry: A resilient and affordable solution for earthquake-resistant Housing	Prof. Suresh Jain, Topic: Life Cycle Assessment (LCA) as a strategic tool for sustainable construction: methodological advancements and practical applications	Mr. Chandrasekar Srinivasan, Topic: Optimizing composite and concrete structures with HBK's new light fiber Optic Technology	Dr. Satish Jain, Topic: Prestressing and UHPC - A symbiotic relationship	Dr. Sree Nanukuttan, Topic: Transitioning concrete precast sector to a net-zero future: Materials, Methods and Manufacturing
	Themes	Theme 1: Construction technique and automation	Theme 1: Construction technique and automation/Special concrete	Theme 1: Innovations in materials processing/New age construction materials	Theme 2: Advancements in structural systems / Design advancement	Theme 1: New age construction materials /special concrete	Theme 2: Structural performance under Hazardous loadings	Theme 1: New age construction materials /special concrete	Theme 3: Smart sensors	Theme 1: Special concrete	Theme 1: Innovations in materials processing/Special concrete
	Session Chairs	Dr. Ann Francis, IIT Delhi	Dr. Sudharshan N. Raman, Monash University, Malaysia	Dr. Aysha Zeneeb Majeed, Rajagiri , Rajagiri School of Engineering and Technology, Kerala	Dr. Govardhan Bhatt, NIT Raipur	Dr. Swathy Manohar, IIT Bombay	Dr. R Senthil Kumar, NIT Trichy	Dr. Paul Shaji, MACE	Dr. Prasanna Kumar Behera	Dr. Indu Geevar, Rajagiri School of Engineering and Technology, Kerala	Dr. Vishwajith Anand, IIT BHU
14:15-14:28		Abstract ID: 9776 (A Critical review on suitability of non-destructive testing techniques for brick masonry structures)	Abstract ID: 3868 (3D Concrete Printing: A Review on the Effect of Material Proportioning and Mix Design in Rheology and Mechanical Properties)	Abstract ID: 3715 (Evaluating the influence of metakaolin based concrete reinforced with glass fiber)	Abstract ID: 6601 (Effect of concrete slab gradation on the shear Carrying Capacity of the CPS, CPS2 and CPS3 Shear Connectors: FEM Simulation Approach)	Abstract ID: 6102 (Development of an optimum one-part geopolymer concrete mix with high mechanical strength)	Abstract ID: 4219 (Comprehensive Evaluation of Stiffness Irregularities in Buildings for Advancing Building Code Provisions)	Abstract ID: 6462 (Life cycle assessment of sugarcane bagasse ash and copper slag used sustainable concrete)	Abstract ID: 8744 (An IoT based Glacial Dam Monitoring and Early Warning System)	Abstract ID : 0074 (Influence of Multi-Component Binder on Shrinkage in High-Performance Concrete: A Packing density perspective)	Abstract ID: 7785 (Mechanical properties of self-compacting concrete using micro steel fiber)
14:28-14:41		Abstract ID: 4886 (Optimization of Concrete 3D Printed Beams with Nature-inspired Voronoi Patterns for Symmetrical and Unsymmetrical Loading Conditions)	Abstract ID: 5477 (A Review on the detail study about Waste Consultation and Management during Construction of Residential Building.)	Abstract ID: 7381 (Adaptive Neuro-Fuzzy Inference System for Steady-State Chloride Diffusivity in Mortar Containing Nano Titanium Dioxide)	Abstract ID: 7664 (Structural Performance of Optimized Lightweight Hollow Core Slabs with Treated LECA, Perlite Powder and Flax Fiber)	Abstract ID: 8970 (A study on the mechanical behaviour of algae-based bio concrete block)	Abstract ID: 4232 (Seismic Performance of Oblique, Y-Shaped and Rectangular Columns using ETABS Software)	Abstract ID: 6934 (Life cycle assessment of concrete fabricated with cupola slag as aggregate)	Abstract ID: 5911 (Prospect and future o Al application on online real-time structural health monitoring of railway infrastructure: A review)	Abstract ID: 7956 (Recent Development of Ultra High-Performance Concrete and Its Scope in the Future)	Abstract ID: 7859 (A Study on the influential properties of Latex Modified Concrete incorporated with Fly ash)
14:41-14:54		Abstract ID: 3107 (PropTech: A Smart IoT-Based Health Monitoring System for Enhancing Prop Safety in Construction)	Abstract ID: 8684 (Risk Management in Construction Supply Chain Management using Lean Six Sigma Principles)	Abstract ID: 7481 (Comparison of the Load-Bearing Capacity of Tetrapod and Pentapod using Fiber Reinforced Geopolymer Concrete: An Experimental and Numerical Approach)	Abstract ID: 7676 (Nonlinear Pushover Analysis of Reinforced Concrete structure with and without infill using simplified macro-models)	Abstract ID: 1798 (The behavior of the masonry sub-assemblage under varying material properties)	Abstract ID: 4164 (Analysis of Buried Reinforced Concrete Pipelines Subjected to Blast Load)	Abstract ID: 5653 (Life cycle assessment of sugarcane bagases eath and ground granulated blast furnace slag blended binary concrete: A comparative environmental study)	Abstract ID: 7446 (Finite element analysis of CFST columns under differential temperature conditions)	Abstract ID: 1842 (Flexural Fatigue behavior of Steel Fiber Reinforced Pavement Quality Geopolymer Concrete (SFPQGC))	Abstract ID: 9874 (The Impact of Fibers on the Performance of 3D-Printed Concrete: A Systematic Literature Review
14:54-15:07	Technical Session 3	Abstract ID: 6009 (Time history analysis of G+20 building using STAAD Pro and ETAB: A comparative study)	Abstract ID: 8833 (An Approach to Achieve High Strength Concrete Using Particle Packing Models: A Review)	Abstract D: 2416: Study on Mechanical Properties of Bituminous Mixture using Titanium-dioxide,	Abstract ID: 8155: (Analysis of flexural behavior of built-up stainless steel members using the continuous strength method)	Abstract ID: 6513 (Performance Assessment of Self-Healing Mortar: Unveiling Biomineralization and Structural Enhancements)	Abstract ID: 2432 (Efficacy of base isolation system in mitgating seismic response of irregular buildings with and without re-entrant corners)	Abstract ID: 8352 (Life Cycle Assessment and Rehabilitation Strategies for a Seashore Bridge in Mumbai)	Abstract ID: 6986 (Experimental investigation on self-sensing performance of different grades of concrete using MWCNT)	Abstract ID: 1995 (Experimental in investigation on the production of geopolymer concrete by blending cinder and fly ash aggregates)	Abstract ID: 8984 (Experimental Study of the Thermal Properties of admixtures based Fibre Reinforced Concrete (TPABFRC))
15:07-15:20		Abstract ID: 9945 (Implementation of the last planner system in urban housing projects a case study)	Abstract ID: 8891 (Parameter weighting for 3D concrete printing using AHP and Fuzzy AHP)	Abstract ID: 3388 (Scientometric Review on Geopolymer Concrete using egg shell powder)	Abstract ID: 9147 (A Critical Review of Cold-Formed Light-Gauge Steel Lateral Load Resisting Systems)	Abstract ID: 6835 (Rubberized GeoPolymer Concrete)	Abstract ID: 2054 (Numerical Simulations of Load-Deformation Behaviour in Botted Lap Joints Under Fire and Post-Fire Conditions)	Abstract ID: 125 (Optimization of DNA shaped steel fiber for enhanced mechanical properties in concrete)	Abstract ID: 2936 (Damage Evaluation of Reinforced Concrete Beams of Various Concrete Grades using a Piezoelectric-Based EMI Technique)	Abstract ID: 0273 (Development and Characterization of Sustainable Geopolymer Concrete Using Fly Ash and GGBFS)	Abstract ID: 3836 (Influence of calcium lactate and Bacillus subtilis bacteria on properties of self-healing concrete)
15:20-15:33		Abstract ID: 0442 (Mechanical and Microstructural Studies of Plastic in Municipal Solid Waste with Graphene Oxide Reinforcement)	Abstract ID: 1072 (Experimental Insights and Predictive Modelling of Uniaxial Compressive Behaviour of HFRC Columns)	Abstract ID: 2715 (Influence of TRC Wrapping on the Load-Carrying Capacity of Concrete Columns)	Abstract ID: 9407 (Performance Assessment of Trapezoidal-Profiled Cold-Formed Steel-Concrete Composite Shear Walls Under Monotonic Lateral Loading)	Abstract ID: 6853 (Assessing the Effects of Superplasticizer Dosage and NaOH Molarity on Self Compacting Alkali Activated Concrete)	f Abstract ID: 0501 (Seismic fragility assessment of shear failure dominated columns supporting a tank)	Abstract ID: 6469 (Innovative Permeable Concrete Paver Block for Sustainable Urban Development)	Abstract ID: 5533 (Steel Material Behavior in Blast-Resistant Structures)	Abstract ID: 6844 (Effect of Waste Plastic on the Flexural Fatigue Performance of Pavement Quality Concrete)	Abstract ID: 3807 (A Review on 3D Concrete Printing: Technologies, Applications, and Sustainability)
15:33-15:45		Abstract ID: 2783 (Conceptual Frameworl for Construction Material Management using Construction 4.0 Technologies)	Abstract ID: 7013 (A Study on the Rheological Behaviour of Cement Paste in High-Strength Concrete Mixes)	Abstract ID: 1332 (Influence of fibers on mechanical and shrinkage behavior of seawater concrete)	Abstract ID: 2397 (Enhancing Tunnel Construction Efficiency through Construction-Stage Analysis and Formwork Optimization)	Abstract ID: 5343 (Development and Performance Assessment of Non-Conventional Mortar Using Quarry Dust and GGBS in Masonry Applications)	Abstract ID: 0562 (Seismic Performance Evaluation of Irregular Low, Mid, and High-Rise Buildings: Indian Standards vs. Site-Specific Spectra)	Abstract ID: 1744 (Mapping Industrial Waste Sources in Telangana Using GGIS: Strategies for Sustainable Waste Management)	Abstract ID: 9441 (UAV-Driven Structural Health Monitoring: A Comprehensive Review of Technologies and Applications	Abstract ID: 0491 (Durability and Microstructural Analysis of Purnice Ughtweight Aggregate based Concrete)	Abstract ID: 2231 (Experimental investigations on fresh and hardened properties of concrete by incorporating urea)
15:45-16:15	High Tea			•		·		•			
Session-4 (16:15-17:30)	Technical Session 4			1							
	76	Theme 1: Construction technique and	Theme 1: Construction technique and	Theme 1: Innovations in materials	Theme 2: Advancements in structural	Theme 1: New age construction	Theme 2: Structural performance under	Theme 1: New age construction	There 2. Character I has like a series along	Thomas to Consolid accounts	Theme 1: Innovations in materials

16:15-16:27	Technical Session 4	Abstract ID: 1266 (Optimization and Performance Evaluation of Recycled Fine Aggregate Replacement for 3D Concrete Printing)	Abstract ID: 063 (A Case study based review paper for "Advancements in Geotechnical Monitoring Techniques for NATM Tunneling in the Himalayan Terrain)	Abstract 10: 7875(Efficacy of Ferrochrome Slag Sand in M40 and M100 Concrete Eventually in Long-Term Curing)	Abstract ID: 7170 (Experimental and Numerical Study on the Behaviour of Ultra-High-Performance Reinforced Concrete (UHPRC) Rectangular Slender Columns Subjected to Uni-axial Loading and Blaxial Bending)	Abstract ID: 7124 (Sustainable Construction: Enhancing Concrete Performance with Rick-Husk Ash, Copper Slag, and Basalt Manufactured Sand)	Abstract ID: 1494 (Effectiveness of Tuned Mass Dampers for Wind Response Control of Tall Chimneys)	Abstract ID: 5065 (Advancing Concrete Technology by Two-Step CO2 Mineralization for Enhanced Performance and Sustainability)	Abstract ID: 6884 (Influence of Electrode Placement on Conductivity Measurement in Self Sensing Concrete: A review)	Abstract ID: 3997 (A Review on High Performance Alkali Activated Concrete With Hybrid Fibres)	Abstract ID: 3712 (Development and Performance of One-Part Alkali-Activated Concrete for M40 Grade Applications)
16:27-16:39		Abstract ID: 1268 (A review on the investigation and comparative study of industrial by-products in geopolymer brick production)	Abstract ID: 653 (Bridging the Gap: Maturity Meters vs. Traditional Compressive Strength Tests)	Abstract ID: 5016 (Characteristics study on Fiber-Reinforced Mortars for Masonry Application)	Abstract ID: 7872 (inelastic reserve strength of cold formed steel lipped Zee sections - A Direct strength method approach)	Abstract ID: 7568 (Impact of Waterproofing Admistures on the Properties of Artificial Lightweight Aggregates)	Abstract ID: 1517 (Dynamic Behavior of Multi-Storey Buildings with Various Bracing Systems)	Abstract ID: 8058 (Sustainable Porous Concrete Solutions for Groundwater Recharge and Stormwater Management)	Abstract ID: 70 (GEOFREQ®-2020 TM an instrument management system for real time structural health monitoring)	Abstract ID: 2691 (Flexure and Fracture Characterization of UHPC: Experimental and DIC-based Investigation)	Abstract ID: 8140 (Influence of single and hybrid activators on the performances of high-volume fly ash cement pastes)
16:39-16:51		Abstract ID: 2945 (A comprehensive review of the durability characteristics of eco-friendly geopolymer concrete derived from various precursors)	Abstract ID: 7484 (Influence of Sugarcane Bagasse Ash Integrated With Rice Husk Ash on the Mechanical Properties of Concrete)	Abstract ID: 4114 (Graphene Oxide Dispersion Problem and Its Solution for the Development of Nano-Alkali-Activated Binder)	Abstract ID: 8573 (Seismic performance evaluation of buildings with steel moment-resisting frames designed with different capacity ratios)	Abstract ID: 7592 (Performance Optimization of M30 Grade Self-Compacting Concrete Incorporating Slag Aggregates: A Multi-Code Analysis of Mechanical Properties.)		Abstract ID: 0651 (Sustainable Geopolymer Mortar: Strength and Durability Enhancement Using Copper Slag)	Abstract ID: 5720 (Single frequency filtering analysis of dynamical systems with breathing cracks)	Abstract ID: 6923 (Development of a novel cool concrete pavement for mitigating urban heat island effect)	Abstract ID: 8648 (investigation on the effect of Coffee Husk Ash as activator in one-part Geopolymer System)
16:51-17:03		Abstract ID: 2599 (One-Part Geopolymerization: A Step Towards Sustainability)	Abstract ID: 4748 (Effect of temperature on concrete with different types of coarse aggregate)	Abstract ID: 6921 (A Particle Packing Approach for High Strength Concrete: A Comprehensive Review)	Abstract ID: 5697 (Exploring the Evolution and Applications of Ultra-High Performance Concrete (UHPC) in Modern Construction)	Abstract ID: 7810 (Estimation of CO2 Footprint and Embodied Energy of Alkali-Activated Concrete)	Abstract ID: 8094 (Cost Versus Seismic Performance Of Reinforced Concrete Buildings Designed For Oliferent Force/Response Reduction Factors)	Abstract ID: 7569 (Enhancing Mechanical Properties of Recycled coarse Aggregate with Graphene oxide: A Sustainable Approach)	Abstract ID: 2791 (Assessing Sand and Gravel Demand in India: Trends, Forecast, and The Need for Alternatives)	Abstract ID: 8576 (Advancing Precast Construction: A Comprehensive Analysis of Benefits, Challenges and Pathways for Its Adoption)	Abstract ID: 2675 (Temperature-Dependent Mechanical Properties of Colf-Formed Steel Sections of Varying Thicknesses)
17:03-17:15		Abstract ID: 3053 (Investigations on printability of alkali-activated 3D printabile mixtures with concrete demolition waste as aggregates)	Abstract ID: 6412 (Utilisation of stone dust as a partial replacement of fine aggregate in concrete)	Abstract ID: 3883 (Polypropylene Fiber Reinforced High Performance Cementitious Composites: Insights into Strength, Microstructure and Durability)	Abstract ID: 3901 (Advances in the Strut-and-Tie Model for Structural Analysis and Design)	Abstract ID: 9184 (Long-Term Shrinkage and Creep Properties of High-Performance Concrete: Experimental Studies and Existing Material Modeling)	Abstract ID: 8188 (Studies on Synergistic Effects of Steel Sludge Powder and Other Industrial By-Products in Foam Concrete)	Innovation: Granite Waste Powder as a	Abstract ID: 1215 (Damage studies in laminated composite plates using AE Technique)	Abstract ID: 4191 (Experimental investigation on Mechanical Properties of Lightweight Concrete Using Pumice Aggregate as Partial Replacement of Coarse aggregates)	Abstract ID: 9229 (Experimental Investigation on geopolymer concrete using recycled fine aggregate)
17:15-17:27		Abstract ID: 7699 (Modular structural crane mounted platform technology for jetty or berth superstructure)		Abstract ID: 2205 (Production of Rice husk Ash Cement- A Sustainable Approach)	Abstract ID: 7048 (Evaluation of Building Code Requirements for Earthquake Performance of RC Buildings with Mass Irregularity)	Abstract ID: 3090 (Study of durability and mechanical properties for utilization of manufactured geopolymer fly ash aggregate as a coarse aggregate in concrete)	Abstract ID: 0853 (Experimental Investigations on the Flexural Behaviour of Steel Square Hollow Section (SHS) Beams Subjected to Elevated Temperatures)	Abstract ID: 5579 (Evaluating the Pozzolanic Reactivity of Natural Pozzolans)	Abstract ID 1138 (Al-Based Image Recognition for Crack Pattern Detection in Structural Health Monitoring)	Abstract ID: 9866 (Optimization studies on Improving Specialized Concrete Properties for Nuclear Facilities)	Abstract ID: 7125 (A study on foundry sand as a partial replacement of fine aggregate for corrosion resistance in concrete)