



**UKIERI Concrete Congress**

# **Sustainable Concrete Infrastructure**

14 - 17 March 2023 (Virtual Mode)

**Dr B R Ambedkar National Institute of Technology**

Jalandhar, India

**Guru Nanak Dev Engineering College**

Ludhiana, India

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## **PROGRAMME**

<b>Opening Ceremony</b> Tuesday, 14 March 2023, 14.45 hrs		
<b>Guest of Honour</b> <b>Professor Peter C Hewlett</b> Visiting Industrial Professor, University of Dundee, Scotland, UK		
<b>Zoom Link</b> <a href="https://us06web.zoom.us/j/81582411235?pwd=ZHZxWjBjbERvMDRrOG1OLzhKZFBhdz09">https://us06web.zoom.us/j/81582411235?pwd=ZHZxWjBjbERvMDRrOG1OLzhKZFBhdz09</a>		
14.45 15.15	Welcome by the Congress Chairman. Address by the Directors of NIT Jalandhar and GNDEC Ludhiana	
15.15 16.00	Congress Opening Paper	<i>The Karma of Concrete</i> Peter C Hewlett – UK

<b>Wednesday, 15 March 2023</b>		
<b>Conference 1: Waste Materials for Building Concrete Infrastructure</b>		
<b>Session 1</b>		
<b>Time</b>	<b>Zoom Link</b>	<b>Paper Id</b>
<b>Sub-Session: 1A</b>		
<b>Session Coordinator/Chairman:</b> Kanish Kapoor/Mahesh Patel- NIT Jalandhar, India		
09.00	<i>A feasibility assessment of the use of industrial waste jarosite in concrete construction</i>	102
09.15	Afroz Ali, Rizwan Ahmad Khan - India	
09.15	<i>An experimental investigation on cohesion and angle of internal friction of crushed sand partially replaced with self-curing additive sintered fly ash lightweight aggregates</i>	105
09.30	Dada Patil, Shrishail Anadinni, Anand Shivapur, Nagraj Koppa - India	
09.30	<i>Reuse of granite dust waste for making fired clay bricks</i>	109
09.45	Osama A Omar, M. Essam El- Rafey - Alexandria	
09.45	<i>Nano-modified epoxy coatings: An effective method for sustainable construction</i>	111
10.00	Nikhil Sharma, Shruti Sharma, Sandeep K Sharma, Rajeev Mehta - India	
10.00	<i>Effect of copper slag on recycled aggregate based self-compacting concrete</i>	118
10.15	Sanjay Kumar, Anasuya Sahu, A K L Srivastava - India	
10.15	<i>A review on optimum utilization of biomedical waste in manufacturing of concrete</i>	123
10.30	M R Bhumika, T Raghavendra - India	
10.30	<i>Use of waste refractory brick in sustainable concrete: A review on mechanical and durability properties</i>	129
10.45	Kapildeo Prasad Yadav, Sudipta Ghosh, Amiya K Samanta- India	
10.45	<i>Behaviour of engineered cementitious composite (ECC) with utilization of waste materials: A review</i>	131
11.00	Harish Kumar, Babita Saini - India	
11.00	<i>Characterisation of stabilised red mud waste material for road infrastructure</i>	133
11.15	Somesh Kumar Nigam, A K Sinha, S K Madan - India	
11.15	<i>Recycling fly ash as construction material: An environmentally sustainable approach</i>	136
11.30	Bishnu Kant Shukla, Aakash Gupta, Sachin Gowda, Yuvraj Srivastav - India	
11.30	<i>Incorporation of non-conventional aggregates in concrete-a comprehensive review</i>	137
11.45	Bishnu Kant Shukla, Aakash Gupta, Sachin Gowda, Sumit Rawat - India	
11.45	<i>Application of waste glass in the production of concrete and its impact on strength and durability for green civil infrastructure</i>	139
12.00	Neha Maurya, Yuvraj Srivastav, Sumit Rawat, Yash Ranjan, Risha Srivastav, Bishnu Kant Shukla, S Varadharajan - India	
12.00	<i>Overview of the utilisation of construction and demolition waste in the production of concrete</i>	140
12.15	Yashasvi Gupta, Tanu Patel, Shrishti Singh, Shreshth Verma, Sakshi Panwar, Bishnu Kant Shukla, S Varadharajan - India	
12.15	<i>Performance of ultra-fine fly ash blended mixtures towards mechanical and durability properties of ternary concrete</i>	144
12.30	Vinay M Agrawal, Purnanand P Savoikar - India	
12.30	<i>Predictive modelling of compressive strength and resistance to chloride penetration in recycled aggregate concrete incorporating rice hush ash</i>	147
12.45	Om Prakash Singh, Kuldeep Singh Kulhar - India	
12.45	<i>Effect of SCBA and GGBFS on mechanical properties and microstructure of concrete under elevated temperature</i>	148
13.00	Satish M Palaskar, Gaurang R Vesmawala - India	
<b>13.00</b>	<b>Lunch</b>	

14.00		
Sub-Session: 1B		
Session Coordinator/Chairman: Kanish Kapoor/Mahesh Patel- NIT Jalandhar, India		
14.00	<b>Keynote Paper:</b> <i>Truly sustainable concrete</i>	-
14.30	Roger P West, Ahmed Alawais - Ireland	
14.30	<i>Utilization of silpozz and crusher dust as sustainable construction material</i>	149
14.45	S Jena, K C Panda - India	
14.45	<i>Utilization of waste concrete of the demolition sites in the subgrade layer of the pavements</i>	151
15.00	Mihir Baldania, Ankur Bhogayata - India	
15.00	<i>Assessment of mechanical properties and workability for pure HDPE granules reinforced concrete</i>	152
15.15	H P Ghongade, A A Bhadre - India	
15.15	<i>The impact of marble dust and steel fibre on the mechanical characteristics of high strength concrete (HSC)</i>	153
15.30	H P Ghongade, A A Bhadre - India	
15.30	<b>Keynote Paper:</b> <i>Reclaiming Fly Ash and GGBS from storage deposits for use in concrete</i>	-
16.00	M J McCarthy, T D Dyer, L J Csetenyi and T A Hope - UK	
16.00	<i>Mechanical and durability properties of slag aggregate concrete</i>	154
16.15	Bhashya V, S Bhaskar, Bharatkumar B H - India	
16.15	<i>Durability of manufactured sand (m-sand) concrete: A review</i>	155
16.30	Nirbhay Mathura, Ankit Singh Beniwal, Ram Vilas Meena - India	
16.30	<i>Workability, strength and permeation characteristics of sugarcane bagasse ash modified concrete</i>	156
16.45	Prarthita Basu, Rajesh Kumar, Mukul Das - India	
16.45	<i>Experimental inquisition on concrete properties by limited substitution of cement with metakaolin and fly ash</i>	157
17.00	V V S Sarma, Shaik Subhan Alisha, K S Sai Kumar, B S K Teja - India	
17.00	<i>Utilization of waste marble slurry along with construction and demolition waste in concrete</i>	158
17.15	Swikrit Gupta, Ram Vilas Meena, Ankit Singh Beniwal - India	
17.15	<i>Quantitative evaluation of concrete sustainability using fly ash cenosphere as fine aggregate</i>	159
17.30	M Kowsalya, S Sindhu Nachiar, S Anandh - India	
17.30	<i>Performance of concrete with sieved coal bottom ash as replacement of natural sand</i>	160
17.45	M P Kadam, Y D Patil, D N Nathe - India	
17.45	<i>Analysis of strength characteristics of concrete blocks with admixture GGBFS and rice husk ash</i>	161
18.00	Desh Deepak, Saurabh Kumar, Sneha Gupta - India	
<b>For remaining papers of Conference-1, Please see schedule of Conference-2, Conference-4 and Conference-6</b>		

Wednesday, 15 March 2023		
Conference 2: Smart and Eco-Cement Materials for Concrete Construction		
Session 2		
Time	Zoom Link	Paper Id
<b>Sub-Session: 2A</b>		
<b>Session Coordinator/Chairperson:</b> Navdeep Singh/Shailja Bawa- NIT Jalandhar, India		
09.00	<b>Keynote Paper:</b> <i>Eco friendly fibre reinforced bamboo composite for seismic/wind</i>	-
09.30	Suresh Bhalla - India	
09.30	<i>Monitoring of bacterial self-healing in concrete structures using ultrasonic guided waves</i>	205
09.45	Bhavdeep Sharma, Shruti Sharma, M Sudhakara Reddy - India	
09.45	<i>Sustainable development of mortar with low carbon admixed high volume fly ash</i>	213
10.00	Sameer Kumar Maurya, Kanchna Bhatrola, N C Kothiyal - India	
10.00	<i>Durability design of concrete structures</i>	214
10.15	S K Dhawan , Mahabaleshwara J - India	
10.15	<i>Mechanical properties of concrete with recycled face mask fabrics</i>	216
10.30	Arya R Nair, Nirmala D B - India	
10.30	<i>Effect of incorporation of high percentage of hooked steel fibres in concrete with industrial wastes like waste marble powder and rice husk ash</i>	217
10.45	Animesh Jaiswal , Priyanka Singh , S Varadharajan – India	
10.45	<i>Flexible concrete: A review</i>	218
11.00	Kumar Prashanth, Vikas Mendi - India	
11.00	<i>Study on performance of bacteria based self-healing concrete with natural fibres</i>	219
11.15	A Rajesh, A Sumathi - India	
11.15	<i>Influence of surfactant on foam generation and stabilization in cement slurry</i>	220
11.30	S Choudhury, T Jena - India	
11.30	<i>The durability of high-performance fibre reinforced concrete using rapid migration test</i>	221
11.45	A P Shelorkar, A M Bhoi, P D Jadhao - India	
11.45	<i>Comparative hydration studies of microfine SCM to achieve sustainable and durable concrete</i>	222
12.00	Nadeem M - India	
12.00	<i>Developing sustainable, low cost, fly ash based bricks using agro waste &amp; fibers</i>	223
12.15	Abhishek Kumar, Anil Kumar, Anil Kumar Chhotu, Akash Priyadarshiee - India	
12.15	<i>Experimental study to check the efficacy of adding organic additives on engineering properties of lime mortar</i>	224
12.30	Monika Yadav, Shilpa Pal - India	
12.30	<i>Impact of hook-ended steel fiber of various aspect ratios on concrete</i>	225
12.45	Ashish Kumar, Shilpa Pal - India	
12.45	<i>A review paper on self healing concrete</i>	226
13.00	Ridhi Vora, Urmil Dave, Sonal Thakkar - India	
13.00	<b>Lunch</b>	
14.00		
<b>Sub-Session: 2B</b>		
<b>Session Coordinator/Chairperson:</b> Navdeep Singh/Shailja Bawa- NIT Jalandhar, India		
14.00	<b>Keynote Paper:</b> <i>Developments in self-healing concretes</i>	-
14.30	Kevin Paine - UK	
14.30	<i>Enhancing thermal behaviour of concrete pavement by incorporating vermiculite</i>	227
14.45	Akash Kumar, Prakash Somani, Amit Sain, Arun Gaur - India	
14.45	<i>Comparative analysis between use of waste glass in rigid pavement and alkali resistant glass fibers for use in paver blocks</i>	228
15.00		

	Sachin Kumar, Umesh Sharma - India	
15.00 15.15	<i>BaTiO<sub>3</sub> used as photocatalyst and investigation the self cleaning properties of composite</i> Naveen Thakur, S B Singh, Anshuman - India	229
15.15 15.30	<i>Current studies in the field of fresh and mechanical properties of engineered cementitious composite</i> Sahil Jaggi, Phillip Mwila Tembo, Prajina Singh, Abdullah Omar Hussien Alamodi, Pushendra Kumar Sharma - India	230
15.30 15.45	<i>Early strength development of cement composites using nano-calcium silicate hydrate (CSH) based hardening accelerator</i> Praveen Verma, Rajib Chowdhury, Anupam Chakrabarti - India	231
15.45 16.00	<i>Mix design of microbial concrete - a step towards a sustainable environment</i> Sandip Mondal, Aparna (Dey) Ghosh - India	233
16.00 16.15	<i>Comparative study of expandable polystyrene system (EPS) and sandcrete blocks as walling materials in Ghana</i> S O Ametepey, K S Akorli, S K Ansah, T Adu-Gyamfi, C Aigbavboa, E Y Frempong-Jnr - Ghana/South Africa	234
16.15 16.30	<i>Temperature sensitivity analysis on mechanical properties of phase changing material incorporated rigid pavement</i> Prakash Somani, Arun Gaur - India	235
16.30 16.45	<i>Engineering performance of CPA-modified laterized concrete</i> F O Ayodele, O R Olulope, Oluborode K D - Nigeria	236
16.45 17.00	<i>Approach to sustainable solid waste management in India</i> Shashikant Nishant Sharma, Arjun Singh Lodhi, Kavita Dehalwar - India	237
17.00 17.15	<i>A Parametric study on strength and durability of bacterial concrete with fly ash</i> Pragya Sharma, Meena Murmu, Shirish V Deo - India	242
<b>Papers of Conference-1</b>		
17.15 17.30	<i>Review of concrete properties using rice husk ash and marble dust</i> Mahesh Chandra Shah, Ankit Nainwal, Ankit Negi , Anoop Bahuguna - India	162
17.30 17.45	<i>Use of rice husk and waste marble powder in concrete for enhancement of mechanical properties and environmental benefits</i> Animesh Jaiswal, Priyanka Singh, S Varadharajan - India	163
17.45 18.00	<i>Optimization of ternary concrete made using slag and fly ash in ultra-fine form using desirability function approach</i> Vinay Mohan Agrawal, Purnanand P Savoikar - India	164

<b>Thursday, 16 March 2023</b> <b>Conference 3: Reinforced Concrete and Precast Concrete for Sustainable Infrastructure</b> <b>Session 3</b>		
Time	Zoom Link	Paper Id
<b>Sub-Session: 3A</b> <b>Session Coordinator/Chairman: Kanish Kapoor/Mahesh Patel- NIT Jalandhar, India</b>		
09.00	<b>Keynote Paper: Responding to the climate and environmental challenge: a client's perspective on the role of delivering sustainable infrastructure</b>	-
09.30	Sulo Shanmuganathan - New Zealand	
09.30	<i>Prediction of modulus of elasticity of remixed concrete</i>	302
09.45	K L Bidkar, P D Jadhao - India	
09.45	<i>Analysis &amp; design of innovative precast concrete bandhara</i>	303
10.00	Premlata D Patil, Ishwar P Sonar - India	
10.00	<i>Seismic vulnerability assessment of RC frame structures subjected to seismic excitation: A review</i>	307
10.15	Subhash Magapu, Saraswati Setia - India	
10.15	<i>Shortcomings of shear wall design as per IS 13920-2016</i>	309
10.30	Anasuya Mondal, Santanu Bhanja - India	
10.30	<i>Shortcomings of SP-16:1980 regarding design of R.C compression members</i>	310
10.45	Jayanta Nath Chowdhury, Santanu Bhanja - India	
10.45	<i>Effect of slenderness ratio on ductility of UPVC confined reinforced concrete column</i>	311
11.00	A Bandyopadhyay, A K Samanta - India	
11.00	<i>A comparative study of the seismic response of RC buildings using different shapes of RC shear walls</i>	312
11.15	Y Soviet N, Thokchom Kiranbala Devi - India	
11.15	<i>Mechanical and microstructural studies on M30 grade concrete under elevated temperature</i>	313
11.30	M Vishal, Rakshit Srivastava, K S Satyanarayanan, M Prakash, N Parthasarathi, Arvind J S - India	
11.30	<i>A detailed review on advancement and optimization in cold formed steel members for betterment in structural performance</i>	314
11.45	Akileshkumar R, Babita Saini - India	
11.45	<i>Eco- friendly precast concrete construction techniques: A methodological review</i>	317
12.00	Anamika Kumari Gautam, Gaurav Singh, Mohit Chaudhary, Vikas Narayan, Deepankar Dhariwal, Bishnu Kant Shukla, S Varadharajan, Amit Tripathi - India	
12.00	<i>A conceptual overview of stability analysis and design of Chenab railway bridge</i>	318
12.15	Nikhil Rawat, Prashant Sharma, Shatrughn Singh, Mrityunjay Govind Rao, Saurabh Singh, Bishnu Kant Shukla, Parikshit Hurukadli - India	
12.15	<i>Comparative study of long-term strength of natural fiber reinforced concrete</i>	319
12.30	Ayushi Shah, Avishek Mukherjee - Netherlands/ India	
12.30	<i>Theoretical modeling of prestressed nano-concrete sleeper</i>	320
12.45	H P Ghongade, A A Bhadre - India	
12.45	<i>Effect of inclusion of masonry infill on behaviour of sustainable rice husk concrete</i>	321
13.00	Animesh Jaiswal, Priyanka Singh, S Varadharajan - India	
13.00	<b>Lunch</b>	
14.00		
<b>Sub-Session: 3B</b> <b>Session Coordinator/Chairman: Kanish Kapoor/Mahesh Patel- NIT Jalandhar, India</b>		
14.00	<b>Keynote Paper: Failure modes and strengthening of FRP Beams: Experimental and numerical approaches</b>	-
14.30		

	S B Singh - India	
14.30 14.45	<i>Structural identification after visual inspection of brick masonry tower using seismic assessment</i> Ambareesh Kumar, Kumar Pallav - India/ South Africa	322
14.45 15.00	<i>Seismic behaviour of RC building frames with masonry infills</i> Animesh Jaiswal, Priyanka Singh, S Varadharajan - India	323
15.00 15.15	<i>Statistical analysis using artificial neural networks and regression analysis of UHFRC at high temperature</i> A P Shelorkar, P D Jadhao - India	324
15.15 15.30	<i>Seismic capacity estimation for composite multi-storeyed RC buildings</i> G.Srinath, Sarmili Swain, K.Gopikrishna - India	325
15.30 15.45	<i>Noise absorption assessment of RCC building of an academic institution</i> Sahlatasneem K K, S Deswal - India	326
15.45 16.00	<i>Seismic safety assessment of buildings with self-compacting concrete reinforced with incorporated carbon fiber and CMOB as partial replacement fine aggregate</i> Biswajit Jena, Nikhil P Zade, Pradip Sarkar - India	327
16.00 16.15	<i>Inelastic behaviour of RCC structure</i> Rachana Bajaj, Shalini Yadav, Sanjivkumar Harinkhede - India	328
16.15 16.30	<i>Experimental and analytical study on the longitudinal shear bond behaviour of basalt textile-reinforced concrete composite slab</i> Aniket A Shirgaonkar, Yogesh D Patil, Hemant S Patil - India	329
16.30 16.45	<i>An experimental investigation to analyze the behaviour of chemically treated bamboo reinforcement concrete</i> Sutanuka Nath, Benny Khyriemujat, Soham Biswas, Satyaprakash Mishra - India	331
16.45 17.00	<i>Procedure to calculate the expected remaining service life of existing prestressed concrete bridge</i> Namrata Pandey, Suresh Bhalla, S K Dhawan - India	333
17.00 17.15	<i>An experimental study on behaviour of ferrocement</i> Srishti Saha , Tribikram Mohanty, Purnachandra Saha - India	334
17.15 17.30	<i>Experimental studies on confined compressive strength of stainless steel wire mesh (SSWM) wrapped concrete columns</i> P V Patel, D D Joshi, R V Makawana - India	335
17.30 17.45	<i>Damage detection techniques to enhance the sustainability of concrete infrastructures</i> Bhawna Patel, U. K. Dewangan - India	338
17.45 18.00	<i>A review: minor and major repair and retrofitting techniques in concrete structures</i> Rekha Singh, Mohit Gupta, Ankit Silot, Rohit Kumar Sharma, Deepak Kumar - India	339
<b>For remaining papers of Conference-3, Please see schedule of Conference-4</b>		

Thursday, 16 March 2023		
Conference 4: Self-Compacting Concrete in Modern Construction Era		
Session 4		
Time	Zoom Link	Paper Id
<a href="https://us06web.zoom.us/j/89095183336?pwd=bis4akxYSWhOSGx0OVI6VGVYdFpqdz09">https://us06web.zoom.us/j/89095183336?pwd=bis4akxYSWhOSGx0OVI6VGVYdFpqdz09</a>		
<b>Sub-Session: 4A</b>		
<b>Session Coordinator/Chairperson:</b> Navdeep Singh/Shailja Bawa- NIT Jalandhar, India		
09.00	<b>Keynote Paper:</b> <i>Rheology of flowable concrete with rice husk ash in a binary cement</i>	-
09.30	Bhupinder Singh, Arshdeep Singh - India	
09.30	<i>Rheology of self-compacting concrete: A critical review and future perspective</i>	403
09.45	Romio Mandal, Sarat Kumar Panda, Sanket Nayak - India	
09.45	<i>Evaluation of the rheological properties of self-compacting recycled aggregate concrete</i>	404
10.00	Romio Mandal, Sarat Kumar Panda, Sanket Nayak - India	
10.00	<i>Replacement of steel reinforcement with synthetic reinforcement fibre for concrete pavement and floor</i>	405
10.15	Manoj Didwania - India	
10.15	<i>Application of sustainable materials in self-compacting concrete: A comprehensive review</i>	406
10.30	Manshi Sharma, Manish Kumar Singh, Manish Yadav, Vipul Yadav, Satyam Gupta, Bishnu Kant Shukla, Gaurav Bharti, Parikshit Hurukadli - India	
10.30	<i>Case study on the application of BOT in infrastructure projects</i>	407
10.45	Surinder Jassal, Sudhir Arora - India	
10.45	<i>A methodological assessment of mix-designs of self-compacting concrete</i>	408
11.00	Shivanshu Shukla, Utkarsh Singh, Prakhar Singh, Md Samim, Sarthak Pandey, Amit Tripathi, Bishnu Kant Shukla, S Varadharajan - India	
11.00	<i>Review of mode choice modeling techniques in transportation planning process</i>	409
11.15	Riddhi Bhurji, Praveen Aggarwal - India	
11.15	<i>Review paper on analysis of flexible pavement</i>	410
11.30	Nitish Kumar, Praveen Aggarwal - India	
11.30	<i>Performance of self compacting concrete by utilizing of nano silica</i>	413
11.45	Chandana Roy, Tribkram Mohanty, Dilip Kumar Bera - India	
11.45	<i>Employing copper slag and PET polymer in self-compacting concrete</i>	414
12.00	Satish Waysal, Y D Patil, B Z Dholkiya, A M Bhoi - India	
12.00	<i>Behavioral study of steel fibre reinforced self compacting concrete using FEM</i>	416
12.15	Sandeep Kumar Choubey, C K Niraj - India	
12.15	<i>Effect of dosage of super absorbent polymer on self-consolidating concrete: correlation between compressive strength and rheological properties</i>	417
12.30	Venkateswarlu Kuruva, Shirish V Deo, Meena Murmu - India	
12.30	<i>Mechanical properties of self-compaction concrete containing high volume fly ash, and steel slag</i>	418
12.45	Yashwant Prabhakar Pawar, Chetan Pitamber Pise - India	
<b>Papers of Conference-1</b>		
12.45	<i>Assessment for reuse of recycled coarse aggregate as sustainable building material in concrete</i>	166
13.00	Vinay Kumar Singh, Abhishek Singh - India	
13.00	<b>Lunch</b>	
14.00		
<b>Sub-Session: 4B</b>		
<b>Session Coordinator/Chairperson:</b> Navdeep Singh/Shailja Bawa- NIT Jalandhar, India		
14.00	<i>Study on recycling of sewage sludge in the concrete industry</i>	167
14.15	Vinay Kumar Singh, Jyotika Singh - India	

14.15 14.30	<i>Influence of coal bottom ash and copper slag as a fine aggregate substitute on the characteristics of mortar</i> Akshaykumar M Bhoi, Yogesh D Patil, Satish M Waysal - India	168
14.30 14.45	<i>Study on use of sewage sludge in conventional clay bricks</i> Vinay Kumar Singh, Sapana Jaiswal - India	169
14.45 15.00	<i>Eco-friendly concrete by using E-waste and silica fume as filler material</i> S Ganesh, Pushpendra Kumar Sharma, Amit Kumar Dhir - India	170
15.00 15.15	<i>Compressive strength and surface hardness of concrete with non-destructive testing</i> Vinay Kumar Singh, Amit Kumar - India	171
15.15 15.30	<i>The influence of partially replacing pit sand with quarry dust on the compressive strength of sandcrete blocks</i> Akorli K S, Aigbavboa C O, Ametepey S O, Gyamfi T A - South Africa	172
15.30 15.45	<i>Analysis of various properties of concrete for selecting replacement materials and fibers to create a quaternary blended high strength concrete – state of art review</i> Garikapati Deepthi, Karan Singh, Yeluri Sesha Chowdary - India	175
15.45 16.00	<i>An experimental study on the effect of recycled aggregate on the mechanical properties of concrete</i> Deepankar Badoni, Vipul Nawani, Aman Garg, Swapnil Ghodke - India	177
<b>Remaining papers of Conference-3</b>		
16.00 16.15	<i>The impact of mortar thickness and strength on the brick masonry prism: An investigation</i> Anshoo Yadav, Shilpa Pal - India	340
16.15 16.30	<i>Earthquake resistant techniques: A review</i> Karan Moolchandani , Abhay Sharma, D. Kishan - India	341
16.30 16.45	<i>Assessment of physical properties and durability of fiber reinforcement concrete by using recycled coarse aggregate</i> Vinay Kumar Singh, Pawan Kumar Tiwari - India	342
16.45 17.00	<i>Investigating the standard sizes of steel reinforcement used in the Ghanaian construction industry</i> S O Ametepey, K S Akorli, S K Ansah, C Aigbavboa, E Y Frempong-Jnr - Ghana/South Africa	343
17.00 17.15	<i>Analysis of underground R.C.C. bunker subjected to blast load</i> Balsukuri Mahesh, Pronab Roy - India	344
17.15 17.30	<i>Reinforced cement concrete slab under projectile impact load-A review</i> Abhishek Minhas, Seema - India	345
17.30 17.45	<i>Comparative study on analysis and design of diagrid structure over conventional structure</i> Jagruti Nikam, Abhijit Pawar, Viraj Neve, Lokesh Patil, Vineet Patel - India	351
17.45 18.00	<i>Seismic response of RC framed irregular structures</i> D. Annapurna, Ezatullah Yaqubi, P. Anuradha, K L Radhika – India	353

Friday, 17 March 2023		
Conference 5: Advances in Geopolymer Concrete and Applications		
Session 5		
Time	Zoom Link	Paper Id
<b>Sub-Session: 5A</b>		
<b>Session Coordinator/Chairman:</b> Kanish Kapoor/Mahesh Patel- NIT Jalandhar, India		
09.00 09.30	<b>Keynote Paper:</b> <i>Essential laboratory and analytical instrumental studies for development of geopolymers and some Indian field demos on geopolymer concretes</i> N P Rajamane - India	-
09.30 09.45	<i>One part alkali-activated materials for construction - A review</i> Kaku Mahendra, Mattur C Narasimhan - India	501
09.45 10.00	<i>Fatigue and fracture behavior of geopolymer concrete</i> Mo Maaz, Rizwan Ahmad Khan, Rahul Sharma - India	502
10.00 10.15	<i>Influence of fibres characteristics on the engineering properties of geopolymer concrete- A review</i> M A Ansari, M Shariq, F Mahdi - India	505
10.15 10.30	<i>Effect of graded fiber on slump value of geopolymer concrete</i> G C Behera , M Das, J Jena , D Rohidas - India	506
10.30 10.45	<i>Geopolymer mortar under elevated temperature</i> Y Deepti, Partha Ghosh , Somnath Ghosh - India	508
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12.00 12.15	<i>The study on various temperature condition of fly ash based geopolymer mortar</i> Banoth Gopalakrishna, Dinakar Pasla - India	519
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12.30 12.45	<i>Sustainability of sintered flyash aggregate: A review</i> Lomesh Mahajan, Monali Kirange, G A Suryawanshi, C. P. Patel, Sariputt Bhagat - India	521
12.45 13.00	<i>Development of geopolymer concrete using fly ash and phosphogypsum as a pavement composite material</i> Bheem Pratap, Somenath Mondal, B Hanumantha Rao - India	523
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14.00 14.30	<b>Keynote Paper:</b> <i>Geopolymer Concrete: Development and Applications</i> Dinakar Pasla - India	-
14.30 14.45	<i>Waste incorporation in paver block production</i> Amaresh Tripathy, Prasanna Kumar Acharya, Natnael Manaye, Alok Kumar Das - India	524

14.45 15.00	<i>Experimental investigations on the strength and durability characteristics of ternary blended geopolymer binder using waste glass powder</i> Subhash Chandran N, P Manikandan, V Vasugi - India	526
15.00 15.15	<i>A review article on self-compacting geopolymer concrete</i> Nafisa D Shaikh, Niraj D Shah - India	527
15.15 15.30	<i>Effect of alkali activated solution on compressive strength of geo-polymer concrete</i> Hetavi Patel, Hasmita Mehta, Parthiv Trivedi, Tejas Joshi, Sonal Thakkar, Urmil Dave - India	528
15.30 15.45	<i>Geopolymer mortars compressive strength is influenced by the ranking of fine aggregate and chemical content</i> Pathan Fayaz, Shaik Subhan Alisha, P.Rohit, Vinay Kumar Jain Bohra - India	529
15.45 16.00	<i>Early strength development of self-compacting geopolymer mortar using binary and tertiary blends of industrial wastes</i> Sonal Thakkar, Shivanjali Rawat, Abhishek Chanda - India	530
16.00 16.15	<i>Experimental study on geopolymer concrete</i> M Anitha, Anshul Garg, T S Ramesh Babu - India	531
16.15 16.30	<i>A review on geopolymer aggregate</i> G Shahanawaz, T Raghavendra, Nirupama, Sunilkumar - India	533
16.30 16.45	<i>Analysis of microstructural properties and durability characteristics of geopolymer mortar</i> S Sharmila, N Natarajan, S Dineshkumar - India	534
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17.00 17.15	<i>A review of characteristics of GGBS, crumb rubber and rice husk ash on fabrication of geopolymer concrete</i> Yeluri Sesa Choudary, Karan Singh, T S Ramesh Babu, Garikapati Deepthi - India	537
17.15 17.30	<i>Durability properties of rubber aggregates based geopolymer concrete- a review</i> Yeluri Sesa Choudary, Karan Singh, T S Ramesh Babu, Garikapati Deepthi - India	538
17.30 17.45	<i>Incorporating copper slag as fine aggregate in fly ash geopolymer concrete</i> Akshaykumar M Bhoi, Ajay P Shelorkar, Yogesh D Patil - India	539
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Conference 6: 3D Printing as the Future of Sustainable Concrete Infrastructure		
Session 6		
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<b>Session Coordinator/Chairperson:</b> Navdeep Singh/Shailja Bawa- NIT Jalandhar, India		
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09.45	<i>Current status and future research prospects in 3D concrete printing for sustainable construction</i>	607
10.00	Shashank Yadav, Shivansh Yadav, Tushar Singh, Shivam Yadav, Suryansh Rajput, Bishnu Kant Shukla - India	
10.00	<i>Integrating BIM with carbon footprint assessment of buildings: A review</i>	610
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10.15	<i>A sustainable study on effect of mesh sizes in parameters and performance of thin shells based on biomimics</i>	611
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10.30	<i>Use of Alccofine 1203 as sustainable supplementary cementitious material for printable concrete</i>	612
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