



**V R SIDDHARTHA ENGINEERING COLLEGE**  
(Autonomous)  
**Department of Civil Engineering**



Dt: 25.08.2022

**Circular**

This is to inform all the students who are the members of Indian Concrete Institute (ICI) student Chapter of this college that the details of the student Executive Council formed after scrutiny are as under:

**Details of Student Executive Council, ICI-VRSEC-Student Chapter:**

S.No.	Name & Roll. No	Year of Study & Section	Position in Student Executive Council
1	Uppuluri Harshith Chowdary (198W1A01B0)	IV/IV Sec-B	President
2	Boilla Charan kumar Reddy (208W1A01B7)	III/IV Sec-C	Vice President
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4	Sure Lohith Sai (218W5A0131)	III/IV Sec-C	Secretary-2
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8	Akurathi Gayatri (208W1A01C6)	III/IV Sec-A	Treasurer-2
9	T. Siva Gopi Raju (198W1A01A6)	IV/IV Sec-B	Student-Coordinator
10	P. Jagadeesh (198W1A0199)	IV/IV Sec-B	Student-Coordinator
11	Mohammad Afreen (208W1A01E3)	III/IV Sec-C	Student-Coordinator
12	Shaik Mohammad Ashraf jaid (198W1A01A4)	IV/IV Sec-B	Student-Coordinator
13	Kasukurthi Mahesh Babu (208W1A01D4)	III/IV Sec-C	Student-Coordinator
14	Katta Chinmayi (218W1A0125)	II/IV Sec-A	Student-Coordinator
15	Movva Meghana Sai (218W1A0134)	II/IV Sec-A	Student-Coordinator
16	Dayyala Anvesh (218W1A0111)	II/IV Sec-A	Student-Coordinator

The above committee members are requested to meet the faculty coordinator (Dr. K.Hanuma) for further proceedings.

(Dr.Ch. Srinivas)  
Prof. & Head, CE Dept.

CC: To

1. N.B
2. To be read in all CE Classes
3. ICI File



**DEPARTMENT OF CIVIL ENGINEERING  
V R SIDDHARTHA ENGINEERING COLLEGE**



**Indian Concrete Institute (ICI)-Student Chapter-VRSEC -Activities AY 2022-2023**

S.No	Professional Chapter	Type of Event	Date	Event Name	Participants	International/ National/State	Outcome/Impact
1	ICI-VRSEC	Field visit	26 -07-2022	Field visit- Construction Techniques	50	State	Traditional buildings will require a lot of extra effort and money to make it sustainable to the effects of nature. Concrete can be affected over time by chemicals and water while it gets chilled in the winters. Traditional construction might be okay for some sectors that really need it, but its competence cannot be compared to the conventional building process when it comes to reliability against weather or ease of construction. The construction process of both traditional and prefab buildings starts in the same way with designing, site planning and foundation construction. After all the planning and site development

							has been done, modular buildings take a different turn from traditional structures. Students can see this turn as an efficient shortcut.
2	ICI-VRSEC	International Conference (Online)	14-10-2022 to 15-10-2022	International Conference (Online) on Innovative Technology for Smart Construction Materials and Sustainable Infrastructure (ITSCMSI 2022)	60	International	This conference have ignite and enlighten the thought provoking research ideas ,engrossing and given valuable experience by sharing ideas with others at this conference
3	ICI-VRSEC	Webinar	13-12-2022	"3D Printable Concrete (3DPC)"	10	State	Establishing a widely accepted mix design method for 3DPC is the end goal. it is essential to develop the mix design concepts based on compressive strength and durability for printable concrete, which pose a major challenge to the further advancement of 3DPC. 3DPC mixes used in recent years use high amounts of cementitious binder and low amounts of aggregates. This makes them vulnerable to shrinkage

							cracking and poor durability in the hardened 3DPC. This is not in harmony with the principle of sustainability either. Hence, investigating the use of 3DPC with coarse aggregate and low binder contents is critical in keeping with sustainable construction practices.
4	ICI-VRSEC	Guest Lecture	21-01-2023	"Best Practices in usage of Ready-Mix Concrete for Construction"	148	State	The ultimate goal of the program would be to prepare students for entry-level positions in the ready-mix concrete industry, and to provide them with the skills and knowledge needed to advance in their careers.
5	ICI-VRSEC	Expert Talk	07-03-2023	"Bamboo as a sustainable building construction material"	34	State	Understanding of sustainable materials: Learning about bamboo as a sustainable material for construction can help students understand the importance of using eco-friendly materials in building structures. This knowledge can translate into future careers in engineering or architecture, where sustainable design is becoming increasingly important.
6	ICI-VRSEC	Workshop	13-03-2023	"Virtual Reality for	97	State	A workshop on virtual reality (VR) for planning and design can have several outcomes for civil engineering students,

				Planning and Design "			<p>including: Increased understanding of VR technology: Students will learn about the capabilities and limitations of VR, as well as the different types of software and hardware available. They will also gain a better understanding of how VR can be used in the planning and design process. Improved design skills: By using VR to visualize and test design concepts, students will be able to better understand the spatial relationships of different design elements and make more informed design decisions. This can lead to more effective and efficient designs. Enhanced collaboration skills: VR can facilitate collaboration between different stakeholders in a project, including engineers, architects, and clients. By learning how to use VR to communicate design concepts and receive feedback, students will be better prepared to work in a team environment. Better job prospects: As VR technology becomes increasingly important in the civil</p>
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							engineering industry, students who have experience using VR in their coursework will be more competitive in the job market.
7	ICI-VRSEC		19-04-2023	Motivation Lecture on Ethics: "The journey in search of a satisfying life"	100	State	The outcome of the motivation lecture on ethics titled "The journey in search of a satisfying life" for students is likely to be a positive and impactful one. It will help students understand the importance of ethics, provide them with a framework for ethical decision-making, encourage personal reflection, inspire them to live a satisfying life, and have a positive impact on their personal and professional lives.



**DEPARTMENT OF CIVIL ENGINEERING  
V R SIDDHARTHA ENGINEERING COLLEGE**



## Field visit on Construction Techniques

<b>Event Type</b>	Field visit on Construction Techniques
<b>Date / Duration</b>	26-07-2022 – 2PM to 5PM
<b>Resource Team</b>	<b>Mr. A Dattatreya Kumar</b> , Assistant Professor, Civil Engineering Department, VRSEC
<b>Name of Coordinator</b>	<b>Dr.Hanuma Kasagani</b> , Assistant Professor, CED-VRSEC
<b>Target Audience</b>	B.Tech-students, Faculty members of Civil and Research scholars
<b>Total no of Participants</b>	50
<b>Objective of The-event</b>	<p>The main aim is to show the Prefab steel buildings have various advantages over the traditional building process. With high durability due to the use of structural steel and the flexibility of construction make it an excellent alternative to the conventional construction process.</p> <p>Traditional construction procedures have been here for a long time. The typical concrete reinforcement along steel beams and then waiting for the concrete to harden up has been taking up a lot of time from the construction managers and the customers together. Although traditional construction may never go obsolete as they are needed for the development of permanent complex buildings that require convoluted structures. But on a general thought, if you construct every building with the conventional concrete reinforced method, not all buildings that are built can be said to have the efficiency and cost conservation as prefab steel buildings. Over the years after the recession, the cost of traditional construction has increased by 60% because of the cost of its raw material and worker wages growing gradually.</p>
<b>Outcome of The-event</b>	<p>Traditional buildings will require a lot of extra effort and money to make it sustainable to the effects of nature. Concrete can be affected over time by chemicals and water while it gets chilled in the winters. Traditional construction might be okay for some sectors that really need it, but its competence cannot be compared to the conventional building process when it comes to reliability against weather or ease of construction.</p> <p>The construction process of both traditional and prefab buildings starts in the same way with designing, site planning and foundation construction. After all the planning and site development has been done, modular buildings take a different turn from traditional structures. Students can see this turn as an efficient shortcut.</p>
<b>Feedback / Suggestions</b>	B.Tech students and faculty gave positive feedback on the Field visit on Construction Techniques and requested more training programmes in this manner.

## Photos









**DEPARTMENT OF CIVIL ENGINEERING**  
**V R SIDDHARTHA ENGINEERING COLLEGE**  
(Autonomous) VIJAYAWADA  
In Association with Indian Concrete Institute, VRSEC Student Chapter



**International Conference (Online)**  
**on**

**Innovative Technology for Smart Construction Materials and Sustainable Infrastructure (ITSCMSI) 14<sup>th</sup> & 15<sup>th</sup> October, 2022**

**A Report on ITSCMSI-2022**

<b>Event Type</b>	Online International Conference
<b>Date/Duration</b>	14 <sup>th</sup> & 15 <sup>th</sup> October, 2022
<b>Resource Team</b>	Prof. C. B. KameswarRao, NIT Warangal, India. Ar. SarlyAdreSarkum, Architecture futurist, Malaysia. Dr. Krishna R. Reddy, Professor, University of Illinois, Chicago Dr. S. K. Shukla, Professor, Edith Cowan University, Australia
<b>Name of Coordinator</b>	Dr. HanumaKasagani, Assistant Professor, VRSEC Dr. Anuja Charpe., Assistant Professor, VRSEC
<b>Target Audience</b>	B.Tech.-students, M.Tech. students Faculty members and Research scholars
<b>Total no of Participants</b>	60
<b>Objective of The-event</b>	It aims at providing a premier platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Civil Engineering.
<b>Outcome of The-event</b>	This conference have ignite and enlighten the thought provoking research ideas, engrossing and given valuable experience by sharing ideas with others at this conference
<b>Feedback /Suggestions</b>	B.Tech-students, M.Tech.students Faculty members and Research scholars gave positive feedback on International Conference and requested more Conference in this manner.

**About the Conference:**

The International Conference on Innovative Technology for Smart Construction Materials and Sustainable Infrastructure (ITSCMSI-2022) was successfully held on October 14<sup>th</sup> and 15<sup>th</sup> 2022. The ITSCMSI-2022 was organized by Department of Civil Engineering, Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada, A.P, India. Innovative and sustainable development is one of the leading civilization ideas in the field of Civil Engineering that has gained importance among the researchers in the recent past. In keeping view that the primary objective of the

International Conference on Innovative Technology for Smart Construction Materials and Sustainable Infrastructure (ITSCMSI-2022) to provide a platform to the researchers and practitioners from both academia as well as industry to meet and share cutting-edge development in the Civil Engineering in line with the conference theme “Building the World with Innovative Structures towards a Sustainable Future”. The scope of the conference is to gather scientists, practitioners, members of technical committees and users of technical recommendations, to jointly at the same place discuss and envision the future sustainable development of materials, systems and structures in a holistic, global way. Thus, it aims at providing a premier platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Civil Engineering.

**Conference Theme:**

The conference focuses on latest research in different areas of civil engineering with special emphasis on sustainable construction practices. The main theme of the conference is “Building the World with Innovative Structures towards a Sustainable Future” and it is divided into seven sub-themes:

1. Smart materials and sustainable construction,
2. Sustainable infrastructure in Structural Engineering
3. Sustainable infrastructure in Geotechnical and Transportation Engineering
4. Sustainability in Environmental Engineering
5. Sustainability in Irrigation, Water Resources and Management
6. Sustainability in Construction Management, and
7. Remote Sensing and GIS Applications in Sustainability

**Conference Model:**

The ITSCMSI-2022 received about 120 abstracts from various fields of Civil Engineering and out of which 93 full-length papers were received. After detailed review by experts 51 scientific papers were selected for presentations in this conference. The research manuscripts deal with Innovative Technologies and Sustainable Materials in Civil Engineering. The inaugural session of the

conference was conducted in online mode through Google Meet. About 51 scientific papers were presented in the conference by the authors from various countries through online platform. Participants were given a total of 15 minutes per paper, which includes 10 minutes for presentation and 5 minutes for discussions and Q&A session. A total of 4 technical sessions organized from 10 AM to 5 PM IST on both the days and a maximum of 14 papers were presented by presenters in each session. Minor obstacles due to technical issues such as low internet connection from presenters, and failure on audio did appear. However, it was manageable and solved within a bit of time. Hence, the technical sessions of the ITSCMSI-2022 went well as planned. All the presented papers in the sessions of ITSCMSI 2022 will be published in IOP Conf. Series: Earth and Environmental Science.

### **Keynote sessions:**

A total of 4 keynote sessions were organized as a part of ITSCMSI-2022. Four eminent and well distinguished experts in the field of civil engineering were invited to deliver their keynote speeches and share their knowledge along with their rich experience in the applications of the advancements in sustainable materials and infrastructure in civil engineering to the participants.

Dr. C. B. KameswarRao, Professor, NIT Warangal, India, has delivered a keynote lecture on “Joints and connections in precast construction” on the Session-1 of first day of the conference, Ar. SarlyAdreSarkum, Architecture futurist, Malaysia has delivered a keynote lecture on “The importance of Carbon Measurement, the next step in Green Building Evolution” on the Session-2 of first day of the conference, Dr. Krishna R. Reddy, Professor, University of Illinois, Chicago has delivered a keynote lecture on “Soil and Groundwater Pollution: Problems and Solutions” on the Session-1 of second day of the conference and Dr. S. K. Shukla, Professor, Edith Cowan University, Australia has delivered a keynote lecture on “Fundamentals and Applications of Geosynthetic Engineering” on the Session-2 of second day of the conference. Keynote Speakers were given 40 minutes to present the talk and 20 minutes Q&A session guided by the assigned moderator.

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### Co-Conveners

**Dr. HanumaKasagani**, Assistant Professor, VRSEC

**Dr. Anuja Charpe**, Assistant Professor, VRSEC

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**Dr. C. B. Kameswar Rao**, Professor, NIT Warangal, India.

**Ar. SarlyAdreSarkum**, Architecture futurist, Malaysia.

**Dr. Krishna R. Reddy**, Professor, University of Illinois, Chicago

**Dr. S. K. Shukla**, Professor, Edith Cowan University, Australia

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**Prof. C. B. KameswarRao**, NIT Warangal

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# Conference Registration and Schedule:

 <b>DEPARTMENT OF CIVIL ENGINEERING</b> <b>VELAGAPUDI RAMAKRISHNA SIDDHARTHA ENGINEERING COLLEGE</b> <b>(Autonomous) VIJAYAWADA</b> <b>In Association with Indian Concrete Institute, VRSEC Student Chapter</b> 				
<b>International Conference (Online) on</b> <b>Innovative Technology for Smart Construction Materials and Sustainable Infrastructure 14<sup>th</sup> &amp; 15<sup>th</sup> October, 2022</b>				
<b>Day-1 (14/10/2022) -Session-1, Time : 9:00 am to 1:30 pm, Schedule Link: <a href="https://meet.google.com/zjc-jryr-ghe">https://meet.google.com/zjc-jryr-ghe</a></b>				
<b>Inauguration of international conference: 9:00 am to 10:00 am</b> <b>Cheif guest and kenote speaker : Dr. C. B. Kameshwar Rao, Professor, Department of Civil Engineering, National Institute of Technology, Warangal</b> <b>Topic: joints and connections in precast construction, Time : 10:00 am to 11:00 am</b>				
<b>Session Chair: Dr. G. Mallikarjuna Rao, Head and Associate Professor, Department Civil Engineering, Vardhaman College Of Engineering, Telangana</b> <b>Co-Chair: Dr. Lakshmi Kesav, Associate Professor, VR Siddhartha Engineering College, Vijayawada, A.P</b>				
S.No	Paper ID	Presenter Name	Title of the Topic	Time
1	12	Haritha M	Case study: ground improvement technique with geosynthetics as reinforcement on soft ground for buildings in coastal andhra pradesh	11:00 am to 11:10 am
2	14	PARTHIBAN D	A short review on Substantial role of Geopolymer in the sustainable construction industry	11:10 am to 11:20 am
3	26	Dr.Mangesh V Madurwar	A Review of Sustainable Housing Technologies: A Judicious Way Out to Aggravating Housing Demands	11:20 am to 11:30 am
4	27	K veerababu	Seismic analysis of Multi storey Building on Sloping Ground and Flat Ground by using ETAB	11:30 am to 11:40 am
5	28	Dr.S.Anitha Priyadarshani	Influence of loading type and rectangular opening on the behaviour of GFRP stiffened panels	11:40 am to 11:50 am
6	32	REWA BOCHARE	Experimental Investigation on Waste Paper-pulp Infused Cement Mortar	11:50 am to 12:00 pm
7	33	Sanjay Kumar R	Performance Assessment and Engineering behaviour of Cement Concrete with partially Replaced Foundry Sand as Fine Aggregate	12:00 pm to 12:10 pm
8	38	G Ravi , P.K. Prasanna	The Role of Granite Waste Powder on Mechanical and Durability performance of GGBS and Metakaoline based concrete	12:10 pm to 12:20 pm
9	44	KOLLURU VENKATA SAI	A Review on the Utilisation of Silica Fume and Metakaolin as Novel Grout Materials	12:20 pm to 12:30 pm
10	55	Durgadevi S	LIGHTWEIGHT HEAT RESISTANT CONCRETE PANELS USING RECYCLED MATERIALS	12:30 pm to 12:40 pm
11	57	U V NARAYANA RAO	Greener and sustainable Self Compacting Concrete : A review on performance at elevated temperatures.	12:40 pm to 12:50 pm
12	60	CH KARTHIK	An Experimental Study on Recycled Aggregate Concrete With Partial Replacement of Cement With Flyash and Alccofine	12:50 pm to 01:00 pm
13	64	Maryanne Blanche De Souza	Need for structural health assessment of RCC buildings	01:00 pm to 01:10 pm
14	31	Pavankumar Naik	Analysis of skew bridge slab under IRC vehicle loading	01:10 pm to 01:20 pm
<b>Day-1(14/10/2022) -Session-2, Time : 2:00 pm to 5:00 pm, Schedule Link: <a href="https://meet.google.com/zjc-jryr-ghe">https://meet.google.com/zjc-jryr-ghe</a></b>				
<b>kenote speaker : Ar. Sarly Adre Sarkum, Architecture futurist, Malaysia</b> <b>Topic: The importance of Carbon Measurement, the next step in Green Building Evolution, Time : 2:00 pm to 3:00 pm</b>				
<b>Session Chair: Dr. Praveen Oggu, Assistant Professor, Department Civil Engineering, Vardhaman College Of Engineering, Telangana</b> <b>Co-Chair: Dr. Sriram Pradeep, Assistant Professor, VR Siddhartha Engineering College, Vijayawada, A.P</b>				
S.No	Paper ID	Presenter Name	Title of the Topic	Time
1	65	Aditi A Mhamal,	Use of marble and granite dust waste as partial replacement of fine aggregates in concrete	03:00 pm to 03:10 pm
2	66	KakaraparthiPhani Kumar	A study on the water proofing behaviour of FLYASH M-sand and dust based concrete with varying Percentages of different Crystalline Admixtures	03:10 pm to 03:20 pm
3	75	MasabattulaNeeharika	Ultrahigh Performance of Concrete using Manufactured Sand	03:20 pm to 03:40 pm
4	82	PARTHASARATHY S	Envisaging Sustainable Building Materials for Earthen Construction Practices	03:40 pm to 03:50 pm
5	19	JUPAKA AKHILA	EXPERIMENTAL INVESTIGATION ON CONCRETE CARBONATION	03:50 pm to 04:00 pm
6	84	A Ahalya	Stabilization of black cotton soil with waste plastic and admixtures	04:00 pm to 04:10 pm
7	34	sureshkannan s	Seismic Analysis of Soft Storey Building in Earthquake Zones	04:10 pm to 04:20 pm
8	40	SAIMA AGA	Parametric study on response of multi-storied building equipped with viscous and visco-elastic dampers subjected to ground motions.	04:20 pm to 04:30 pm
9	42	Disha J & Dr. K Gourav	A Collateral study on Optimization of Pre-Engineered building with Tubular sectional connection	04:30 pm to 04:20 pm
10	54	B. Vamsi Krishna	Fragility Comparison for Soft Storey Infill Reduced Structures by Incremental Dynamic Analysis	04:40 pm to 04:50 pm
11	58	B. Vamsi Krishna	Comparative Analysis & Design of RCC & Steel Preheater Tower Structure by Using STAAD. Pro	04:50 pm to 05:00 pm
12	59	Vajrala kavya sameera	Mechanical and durability behaviour of GGBS, Msand based concrete with varying percentages of two crystalline admixtures - An experimental study	05:00 pm to 05:10 pm

**Day-1 (14/10/2022) -Session-1, Time (IST) : 9:00 am to 1:30 pm,**  
**Schedule Link: <https://meet.google.com/zjc-jryr-ghe>**

**Day-1(14/10/2022) -Session-2, Time (IST) : 2:00 pm to 5:00 pm,**  
**Schedule Link: <https://meet.google.com/zjc-jryr-ghe>**



International Conference (Online) on  
Innovative Technology for Smart Construction Materials and Sustainable Infrastructure 14<sup>th</sup> & 15<sup>th</sup> October, 2022

Day-2 (15/10/2022)-Session-1, Time : 10:00 am to 1:00 pm, Schedule Link: <https://meet.google.com/zjc-jryr-ghe>

kenote speaker : Dr. Krishna R. Reddy, Professor, University Scholar & Distinguished Researcher Director, Geotechnical & Geoenvironmental Engineering Laboratory & Sustainable Engineering Research Laboratory Civil, Materials, and Environmental Engineering

Topic: Soil and Groundwater Pollution: Problems and Solutions, Time : 10:00 am to 11:00 am

Session Chair: Dr. Ashwin Raut, Associate Professor, Department Civil Engineering, KL University, Guntur, A.P

Co-Chair: Dr. S.R.R. Teja Prathipati, Assistant Professor, VR Siddhartha Engineering College, Vijayawada, A.P

S.No	Paper ID	Presenter Name	Title of the Topic	Time
1	61	PLS Shalini kora	Study On Behaviour Of Aluminium Metal Matrix Composite Reinforced With Silicon Carbide And Titanium Diboride.	11:00 am to 11:10 am
2	68	B.Saketh Raj	Flexural Performance of Sustainable Fly Ash Based Concrete Beams	11:10 am to 11:20 am
3	79	Goushiya Sayed	Optimization of critical factors responsible for prestressed concrete bridge pier collapse	11:20 am to 11:30 am
4	86	Dr.G.Mallikarjuna Rao	Prediction of Compressive Strength of Recycled Aggregate Concrete Using Artificial Neural Networks	11:30 am to 11:40 am
5	91	Dr. Kunamineni Vijay	Evaluating the effect of steel fibres on the mechanical performance of high-volume fly-ash concrete	11:40 am to 11:50 am
6	92	N.Mahendra Reddy	A study on Real time strength assessment of concrete by maturity method	11:50 am to 12:00 am
7	20	VIJAYAN D.S	An investigational study on Pre and post stabilization behaviour of Lime stabilized Expansive soil admixed with palm kernel ash	12:00 pm to 12:10 pm
8	21	S Jeya Sudha	Assessing the application of lime and foundry sand in soil stabilization - a lab scale approach	12:10 pm to 12:20 pm
9	37	Raghendra Pratap Singh Rajput	A Study on the Effect of Aging on PMB40 And CRMB55 In Bituminous Concrete Layers	12:20 pm to 12:30 pm
10	51	JahnaviDonavalli	Probability Assessment of Soil Liquefaction Potential in Vijayawada Region(CRDA)	12:30 pm to 12:40 pm
11	52	CHUKKA SANDHYARANI	ANALYSIS OF LIQUEFACTION POTENTIAL OF SOILS IN GUNTUR REGION(CRDA)	12:40 pm to 12:50 pm
12	89	Venkatesh Noolu	A Study on Site Specific Ground Response Analysis in Bihar	12:50 pm to 01:00 pm

Day-2 (15/10/2022)-Session-2, Time : 2:00 pm to 5:00 pm, Schedule Link: <https://meet.google.com/zjc-jryr-ghe>

kenote speaker : Dr. S. K. Shukla, Professor, Edith Cowan University, Australia.

Topic: Fundamentals and Applications of Geosynthetic Engineering , Time : 2:00 pm to 3:00 pm

Session Chair: Dr. Sanjeet Kumar, Associate Professor, Department Civil Engineering,

Co-Chair: Mrs. B. Durga Priyanka, Assistant Professor, VR Siddhartha Engineering College, Vijayawada, A.P

S.No	Paper ID	Presenter Name	Title of the Topic	Time
1	10	P Padhma Priya, AngelinJenitDerina J Pearlina D and Naresh Kumar Sharma	Predictive Biodegradation of Multiple Toxic Pollutants in Bioreactors Treating Real Wastewater using ANN and GP	03:00 pm to 03:10 pm
2	13	DIGAMBAR BALASAHEB PATIL	Basics of computational fluid dynamics: an overview	03:10 pm to 03:20 pm
3	43	SmitaBadgajar	Economical and environmental friendly self compacting concrete	03:20 pm to 03:40 pm
4	53	Rajendra D. Patil	Proposing a Water Distribution Network Solution for an Arid Region Using the Criticality Tool	03:40 pm to 03:50 pm
5	67	Dr. S V S N D L PRASANNA	Prediction and Comparison of Rainfall-Runoff Using Mathematical Model	03:50 pm to 04:00 pm
6	88	Bhogayya Naidu Gudivada	Analysis of Water Quality Around the Patancheruvu, Sangareddy, Telangana, India	04:00 pm to 04:10 pm
7	7	Dr.S.Ajith	A Framework to Evaluate Safety Performance Using UACS Equation in Construction Sites	04:10 pm to 04:20 pm
8	17	Sai Nandan Mandadapu	A review of fresh and hardened properties of concrete reinforced with waste materials	04:20 pm to 04:30 pm
9	35	NAGA VENKATA VAMSI KRISHNA TADIBOINA	INVESTIGATION OF MECHANICAL PROPERTIES OF M-SAND CONCRETE WITH POLYPROPYLENE AND STEEL FIBERS	04:30 pm to 04:20 pm
10	36	Mokeshprabu E	Influence of various parameters on lifecycle cost of buildings with active energy efficiency measures	04:40 pm to 04:50 pm
11	70	Garnepudi Sheena Ecclesia	Artificial Intelligence in Civil Engineering: Boon or Vain	04:50 pm to 05:00 pm
12	63	Lizbeth Kariza Gomes	Detection of damage in offshore jacket structure using artificial neural network	05:00 pm to 05:10 pm

15/ 10/ 2022- Valedictory Ceremony: Time (IST) : 5:30 PM to 6:00 PM

Day-2 (15/10/2022)-Session-1, Time (IST) : 10:00 am to 1:00 pm,  
Schedule Link: <https://meet.google.com/zjc-jryr-ghe>

Day-2 (15/10/2022)-Session-2, Time (IST) : 2:00 pm to 6:00 pm,  
Schedule Link: <https://meet.google.com/zjc-jryr-ghe>

## **Inauguration:**

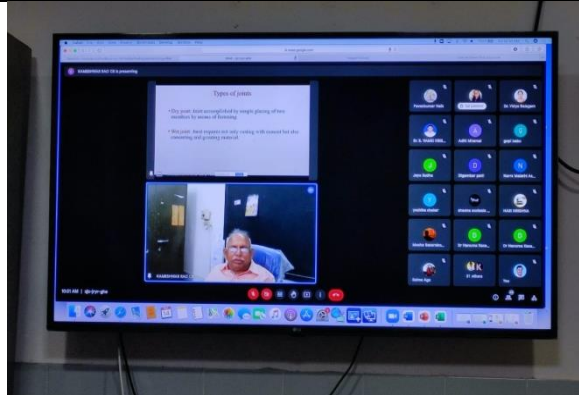
Dr.Lakshmi Keshav, Associate Professor, Civil Engineering Department, VRSEC welcomed the chief guest, keynote speakers and participants to the International Conference (Online) on “Innovative Technology for Smart Construction Materials and Sustainable Infrastructure”. She has given the brief introduction about the conference.

Dr. Anuja Charpe, Assistant Professor, VRSEC, Civil Engineering Department, VRSEC, has given objective and themes of International Conference (Online) on “Innovative Technology for Smart Construction Materials and Sustainable Infrastructure”.

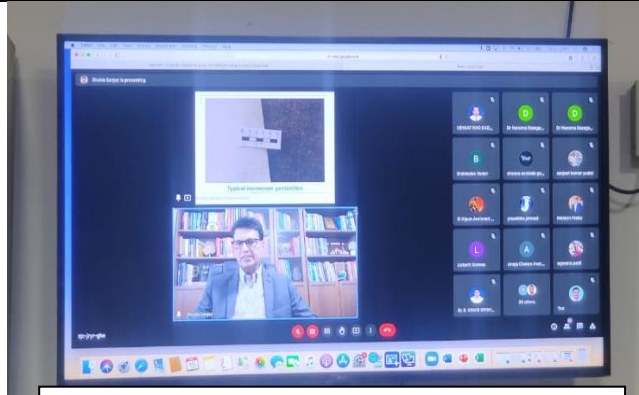
Dr. HanumaKasagani, assistant Professor, Civil Engineering Department, VRSEC, has presented the outline of the schedule for International Conference (Online) on “Innovative Technology for Smart Construction Materials and Sustainable Infrastructure”.

Dr. Ch. Srinivas, HoD-CE, VRSEC addressed the gathering and welcomed the guest speaker. Also, welcomed the students and faculty participants from different colleges and universities. He addressed about the importance of the International Conference (Online) on “Innovative Technology for Smart Construction Materials and Sustainable Infrastructure”. She has given the brief introduction about the conference. How best it is going to be useful to the participants. Also, appreciated the all faculty organizing committee and department faculty coordinators.

Dr. C. B. KameswarRao, Professor, NIT Warangal, India, addressed the gathering. He talked about present scenario of Civil Engineering. Also, talked about importance of Innovative Technology for Prefabricated Structures. Also, appreciated the all faculty organizing committee and department faculty coordinators.



**Dr. C. B. KameswarRao**, Professor, NIT Warangal, India.



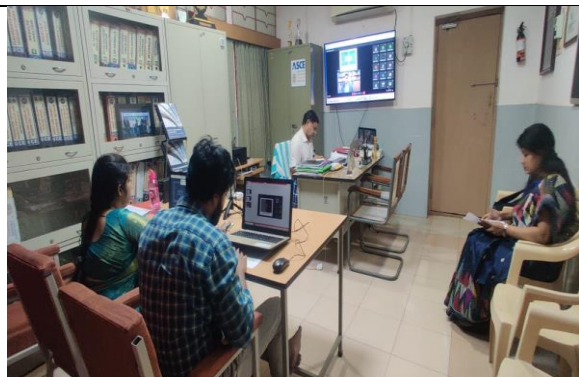
**Dr. S. K. Shukla**, Professor, Edith Cowan University.



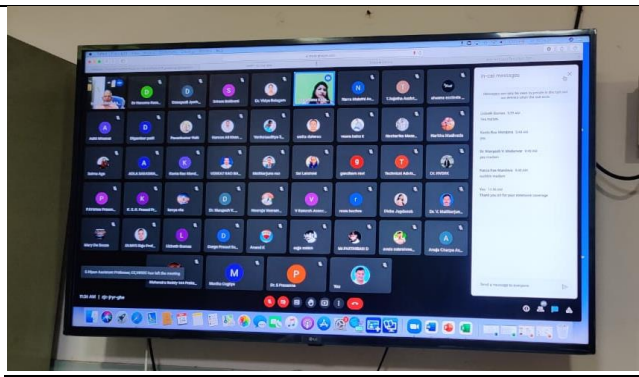
**Dr. Krishna R. Reddy**, Professor, University of



**Ar. SarlvAdreSarkum**, Architecture futurist, Malaysia.



**Dr. ChavaSrinivas**, Professor & HOD, CED-VRSEC, Dean, Industry Relation VRSEC ITSCMSI@22-Organizing Team



**Participants for ITSCMSI@22**

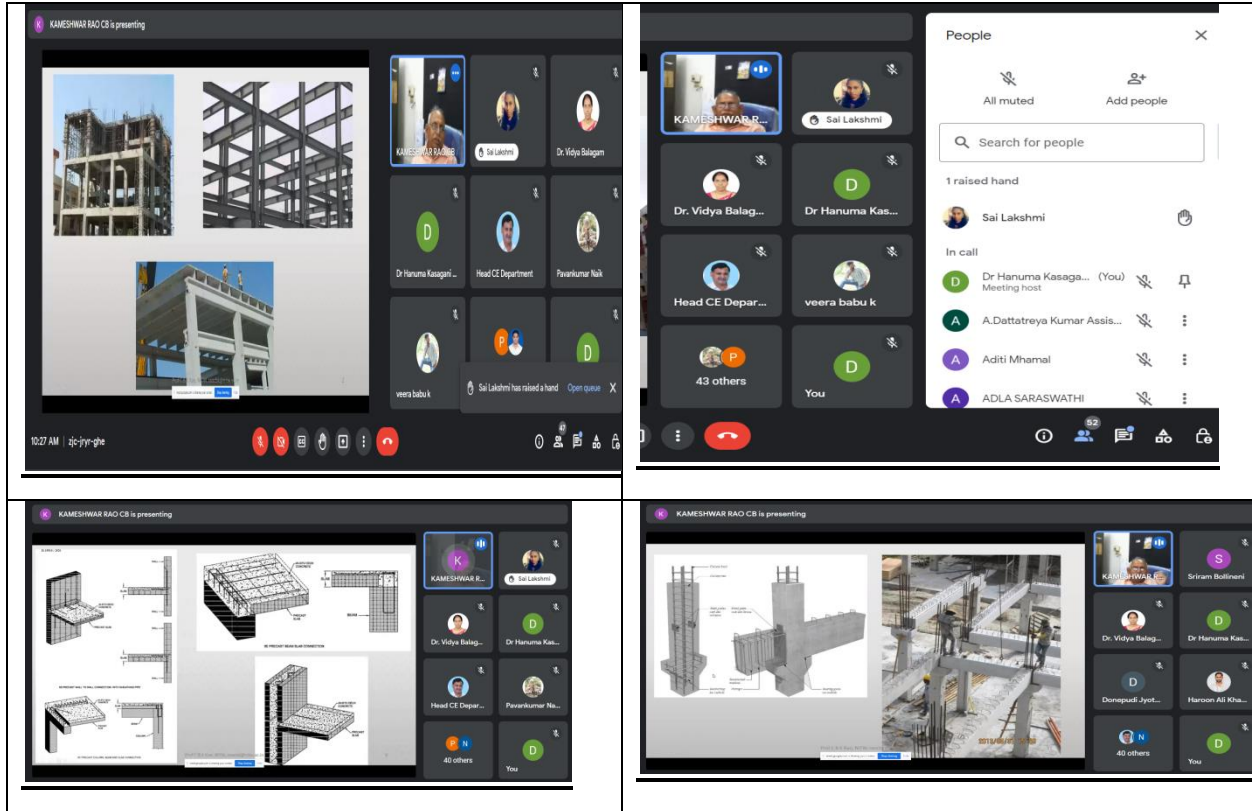
## Pictures:

### Day1-Session-1

### Keynote Lecture:

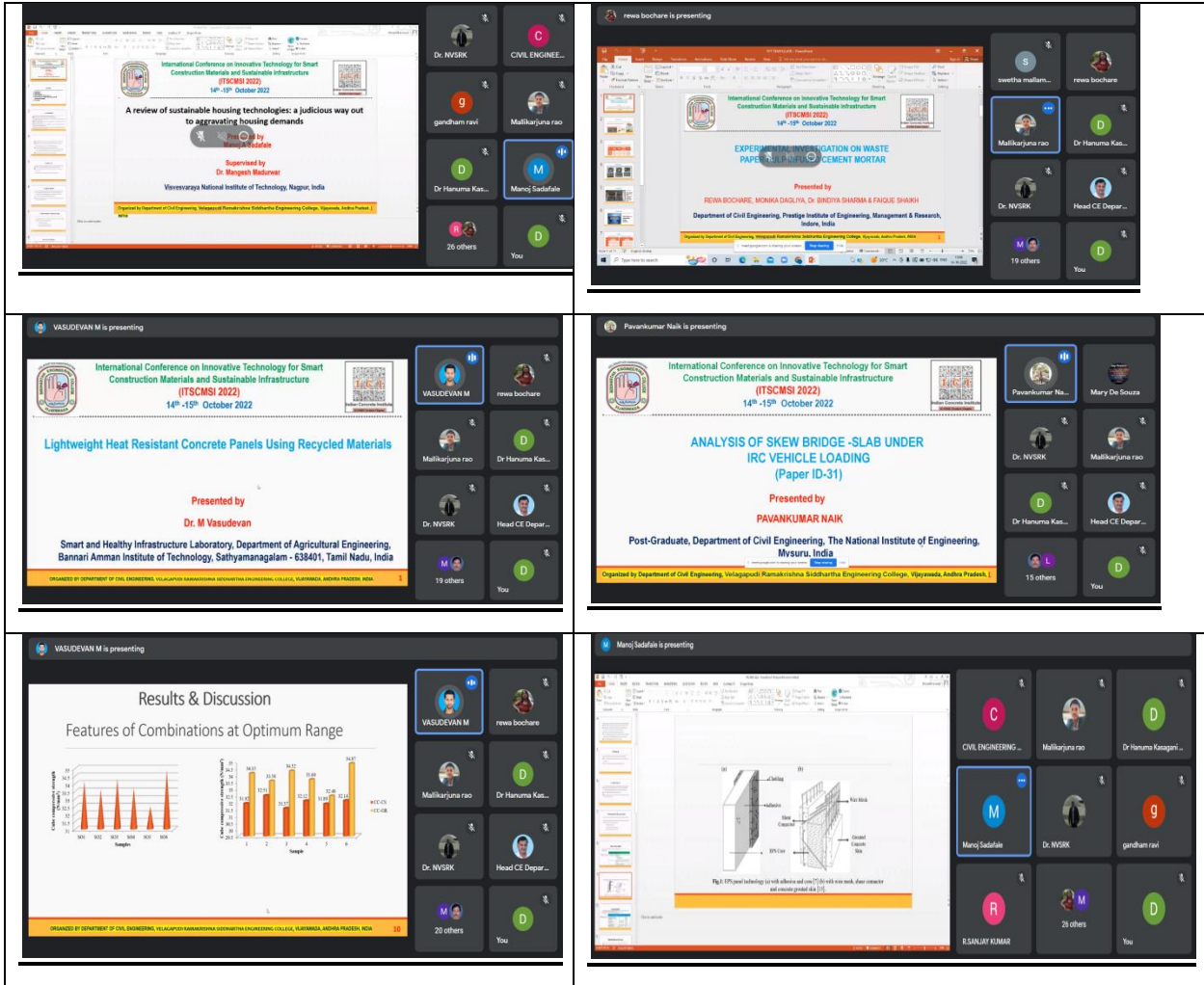
Speaker: **Dr. C. B. KameswarRao**, Professor, NIT Warangal, India.

Topic: **Joints and connections in precast construction**



## Paper Presentations:



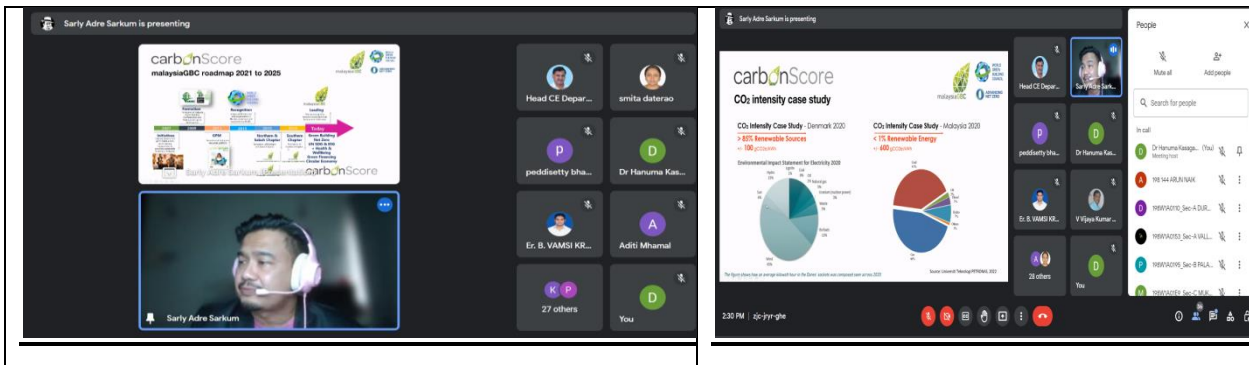


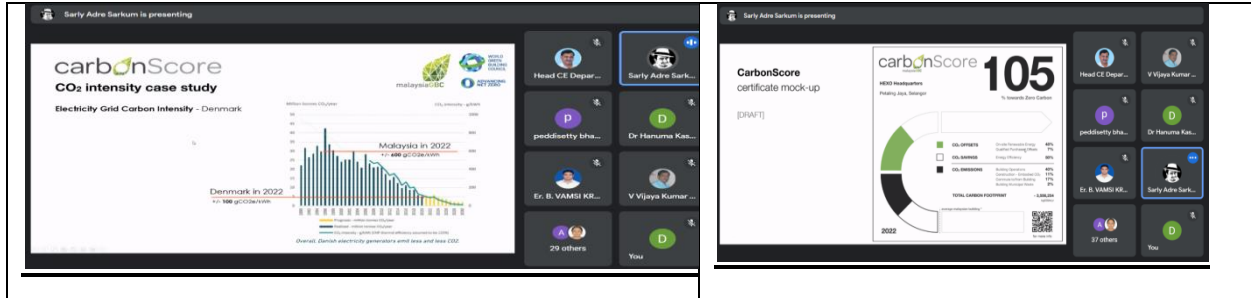
## Day1-Session-2

### Keynote Lecture:

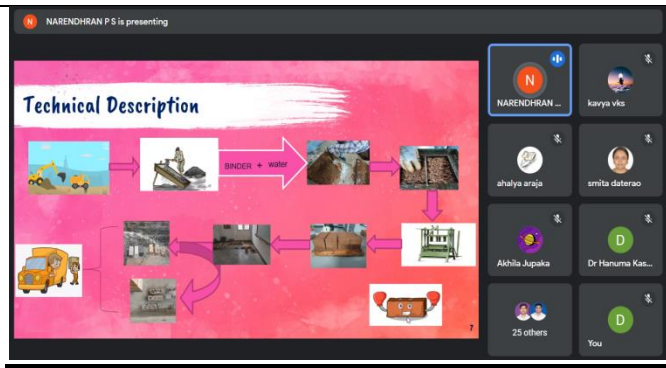
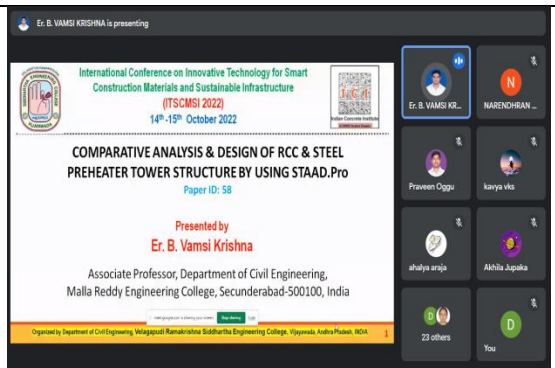
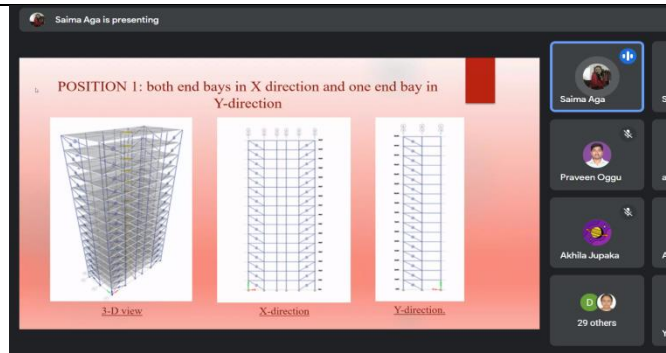
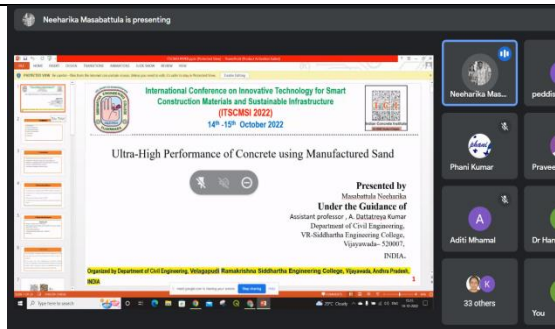
**Speaker:** Ar.SarlyAdreSarkum, Architecture futurist, Malaysia.

**Topic:** The importance of Carbon Measurement, the next step in Green Building Evolution





## Paper Presentations:



# Day2-Session-1

## Keynote Lecture:

Speaker: **Dr. Krishna R. Reddy**, Professor, University of Illinois, Chicago

Topic: **Soil and Groundwater Pollution: Problems and Solutions**

International Conference (Online) on Innovative Technology for Smart Construction Materials and Sustainable Infrastructure 14<sup>th</sup> & 15<sup>th</sup> October, 2022

### Soil and Groundwater Pollution: Problems and Solutions

**Krishna R. Reddy**, PhD, PE, ASCE, DOE, FAISE, ENV SP  
Professor of Civil & Environmental Engineering  
Director, Sustainable Engineering Research Lab  
Geotechnical & Geoenvironmental Engineering Lab  
University of Illinois, Chicago, USA

Keynote Presentation, Department of Civil Engineering, Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada, India  
October 15, 2022

UIC The University of Illinois at Chicago

### Soil and Groundwater Problems

UIC

Sharma, H.D., and Reddy, K.R., Geoenvironmental Engineering: Site Remediation, Waste Containment, and Emerging Waste Management Technologies, John Wiley & Sons, Inc., Hoboken, New Jersey, 2004, 992p. (ISBN: 0-471-21399-6)

### Remedial Alternatives

UIC

### Air Sparging

UIC

## Paper Presentations:

International Conference on Innovative Technology for Smart Construction Materials and Sustainable Infrastructure (ITSCMSI 2022)  
14<sup>th</sup> -15<sup>th</sup> October 2022

### Study On Behaviour Of Aluminium Metal Matrix Composite Reinforced With Silicon Carbide And Titanium Dioxide.

Presented by  
**Pis shalini kora**  
Department of Civil Engineering  
(Structural Engineering)  
Velagapudi Ramakrishna Siddhartha Engineering College  
Kamuru, Vijayawada,  
INDIA.

Organized by Department of Civil Engineering, Velagapudi Ramakrishna Siddhartha Engineering College, Kamuru, Vijayawada, Andhra Pradesh, INDIA

### Results and discussions

Reinforced concrete beam with dimensions of 100 mm in width by 200 mm in depth and 1.2 m. The diameter of the bar used as main reinforcement is 12 mm at the bottom and 8 mm at the top. 2 legged 8 mm dia bars are provided at a spacing of 90 c/c as the shear reinforcement. The clear cover provided for reinforcement is 20 mm.

100 mm  
200 mm



G A Sayyed is presenting

International Conference on Innovative Technology for Smart Construction Materials and Sustainable Infrastructure (ITSCMSI 2022)  
14<sup>th</sup>-15<sup>th</sup> October 2022

Optimization of critical factors responsible for prestressed concrete bridge pier collapse

Paper ID: 73

Presented by  
**Mrs. Goushiya Sayyed, Dr.P.M.Pawar**

Department of Civil Engineering, College of engineering, SVERI, Pandharpur, India

Organized by Department of Civil Engineering, VITAPURAM Ramakrishna Siddhartha Engineering College, Vijayawada, Andhra Pradesh

Participants: G A Sayyed, ashwin raut, Dr Hanuma Kas..., Dr Hanuma Kas..., smita daterao, Mubesh Prabu, 18 others, You

G A Sayyed is presenting

**Result and discussion**

Effect of bridge materials factors on response of bridge characteristics

**B. Pier collapse state (PC)**

Main effect plot for Pier collapse state (PC)

Contribution of bridge material parameters on PC

Participants: G A Sayyed, ashwin raut, Dr Hanuma Kas..., Dr Hanuma Kas..., smita daterao, Mubesh Prabu, 18 others, You

Jeya Sudha S is presenting

International Conference on Innovative Technology for Smart Construction Materials and Sustainable Infrastructure (ITSCMSI 2022)  
14<sup>th</sup>-15<sup>th</sup> October 2022

Assessing the Application of Lime and Foundry Sand in Soil Stabilization  
A Lab Scale Approach

Presented by  
**Ms. S. Jeya Sudha, M.Tech.,**  
Assistant Professor, Department of Civil Engineering,  
PSMA College of Engineering and Technology, Dindigul, India

Organized by Department of Civil Engineering, Velupillai Prabhakaran Siddhartha Engineering College, Vijayawada, Andhra Pradesh, INDIA

Participants: Jeya Sudha S, Mahendra Red..., Dr.D.S.Vijayan, ashwin raut, Mubesh Prabu, Dr Karthi Rao M..., 13 others, You

Raghendra Singh Rajput is presenting

International Conference on Innovative Technology for Smart Construction Materials and Sustainable Infrastructure (ITSCMSI 2022)  
14<sup>th</sup>-15<sup>th</sup> October 2022

A COMPARISON BETWEEN THE DIFFERENT GRADE OF BITUMEN

Participants: Mahendra Red..., Dr Hanuma Kas..., ashwin raut, chukka sandhy..., pravallika jadhav..., Head CE Deapar..., 14 others, You

## Day2-Session-2

### Keynote Lecture:

Speaker: **Dr. S. K. Shukla, Professor, Edith Cowan University, Australia**

Topic: **Fundamentals and Applications of Geosynthetic Engineering**

Shukla Sanjay is presenting

**Fundamentals of geosynthetics with sustainable applications**

Dr Sanjay Kumar Shukla  
Founding Editor-in-Chief, International Journal of Geosynthetics and Ground Engineering, Switzerland; Founding Research Group Leader (Geotechnical and Geoenvironmental Engineering), School of Engineering, Edith Cowan University, Perth, Australia; Adjunct Professor, Department of Civil Engineering, Indian Institute of Technology Madras, Chennai; Department of Civil Engineering, VR Siddhartha Engineering College, Vijayawada, India  
Email: s.shukla@ecu.edu.au, sanjayshukla1@gmail.com  
Mobile: +61 40453495

Participants: Shukla Sanjay, Dr Hanuma Kas..., sheena eccles..., Head CE Deapar..., sanjeet kumar..., Er. B. VAMSI KR..., 21 others, You

Shukla Sanjay is presenting

A typical geonet

Participants: Shukla Sanjay, Dr Hanuma Kas..., sheena eccles..., Head CE Deapar..., sanjeet kumar..., Er. B. VAMSI KR..., 27 others, You

Shukla Sanjay is presenting

Diaphragms

Base

A site assembled geocell

Participants: Shukla Sanjay, Dr Hanuma Kas..., sheena eccles..., Head CE Deapar..., sanjeet kumar..., Er. B. VAMSI KR..., 30 others, You

Shukla Sanjay is presenting

Participants: Shukla Sanjay, Dr Hanuma Kas..., sheena eccles..., Head CE Deapar..., P.Krishna Prasa..., 30 others, You

# Paper Presentations:

Padma Priya is presenting

**PREDICTIVE BIODEGRADATION OF MULTIPLE TOXIC POLLUTANTS IN BIOREACTORS TREATING REAL WASTEWATER USING ANN AND GP**

Presented by  
P. Padma Priya  
B.Tech, Department of Biotechnology, Kalasalingam Academy of Research and Education, Krishnankovil, Tamilnadu, India  
AUTHORS: P. Padma Priya, Anglin J, Devina P and Naresk K S

Organized by Department of Civil Engineering, Velloppattu Ramakrishna Siddhartha Engineering College, Vijayawada, Andhra Pradesh, INDIA

A. Dattatreya Kumar  
Assistant Professor, CE  
Department joined

smita daterao is presenting

### Life Cycle Assessment

- LCG of SCC
- Practical cost
- CO<sub>2</sub> emission of all trial sizes with their compressive strength

**Table 1 CO<sub>2</sub> emissions**

Sl. No.	Total CO <sub>2</sub> emission	Compressive strength
1	1791	27.88
2	1792	27.92
3	1793	27.96
4	1794	28.00
5	1795	28.04
6	1796	28.07

**Figure 1 The system boundary**

**Figure 2 CO<sub>2</sub> emissions**

**Figure 3 Compressive strength vs CO<sub>2</sub> emission**

smita daterao  
Digambar patil  
Prasanna S.V.S...  
sanjeev kumar...  
Nandu chowdary  
Mahendra Red...  
21 others  
You

Prasanna S.V.S.N.D.I is presenting

**PREDICTION AND COMPARISON OF RAINFALL - RUNOFF USING MATHEMATICAL MODEL**

Presented by  
Dr. (Ms.) S.V.S.N.D.I. PRASANNA  
Department of Civil Engineering, University College of Engineering (A)  
Osmania University, Hyderabad, Telangana State, India

Organized by Department of Civil Engineering, Velloppattu Ramakrishna Siddhartha Engineering College, Vijayawada, Andhra Pradesh, INDIA

Prasanna S.V.S...  
sanjeev kumar...  
smita daterao  
ashwin rauf  
Nandu chowdary  
Mahendra Red...  
21 others  
You

Mokesh Prabu is presenting

### LIFECYCLE COST ANALYSIS

Uniform Series Present Worth Method (UPW) or Uniform Present Value Method (UPV)

The UPW method is used to calculate present value of cash amount occur annually over a period of time.

**Equation for Lifecycle cost Calculation.**

The lifecycle cost analysis is conducted for all Design models are based on the annual electricity consumption results generated from eQUEST simulations and the initial cost of the design models evaluated from cost estimates.

$$LCC = IC + [EC \times ER(y)] \times UPV(y, r_d)$$

Where,

- LCC= Lifecycle Cost
- IC = Initial Cost
- EC= Electricity Cost
- y= lifecycle period (years)
- r<sub>d</sub> = Real Discount Rate
- ER = Electricity cost escalation rate
- UPV = Uniform present value factor
- $UPV(y, r_d) = \frac{1 - (1 + r_d)^{-y}}{r_d}$

Mokesh Prabu  
sanjeev kumar...  
Prasanna S.V.S...  
smita daterao  
ashwin rauf  
Mahendra Red...  
18 others  
You

sheena ecclesia garnepudi is presenting

**Artificial Intelligence In Civil Engineering: Boon or Vain**

Presented by  
Sheena Ecclesia Garnepudi  
Under the Guidance of  
Mrs. P. Krishna Prasanna  
Department of Civil Engineering, VR-Siddhartha Engineering College, Vijayawada - 520007, INDIA.

Organized by Department of Civil Engineering, Velloppattu Ramakrishna Siddhartha Engineering College, Vijayawada, Andhra Pradesh, INDIA

sheena eccles...  
sanjeev kumar...  
Mokesh Prabu  
Prasanna S.V.S...  
smita daterao  
ashwin rauf  
16 others  
You

sheena ecclesia garnepudi is presenting

### Conclusion

- In a nutshell, Artificial Intelligence is the collaboration of human intelligence with a computer algorithm that reflexively has no waffle response which is crucial in civil engineering.
- Future applications of artificial intelligence will surely make life easier for people and might even motivate them to develop new skills.
- The development, upkeep, and administration of various civil infrastructure components benefit from the use of artificial intelligence in civil engineering.
- What's even great is that we're always upgrading the technology to raise the caliber of performance.
- AI technology itself, and if we could actually incorporate ethical instinct into AI, we can make an effective civil engineering areas.

sheena eccles...  
sanjeev kumar...  
Mokesh Prabu  
Prasanna S.V.S...  
smita daterao  
ashwin rauf  
17 others  
You

# Attendance:

The screenshot displays a Zoom meeting interface with a list of participants. The interface is organized into a grid of four columns and two rows of participant lists. Each participant entry includes a profile picture, a name, and a status (e.g., 'All muted', 'In call', 'Meeting host'). There are also icons for muting and adding people.

Participant Name	Status	Participant Name	Status	Participant Name	Status	Participant Name	Status
Sai Lakshmi	All muted	avula subrahmanyam	All muted	Dr. NVSHK	All muted	Dr. V. Mallikarjuna Associa...	All muted
In call		B.Durga Priyanka Asst. Pr...	All muted	Dr. Vidya Balagam	All muted	Durga Prasad Sonthi	All muted
Dr Hanuma Kasaga... (You)	Meeting host	Digambar patil	All muted	Dr. Vidya Balagam	All muted	Er. B. VAMSI KRISHNA	All muted
A.Dattatreya Kumar Assis...	All muted	Disha Jagdeesh	All muted	Durga Prasad Sonthi	All muted	Felix Ling Ngee Leh	All muted
Aditi Mhamal	All muted	Donepudi Jyothsnasree	All muted	Er. B. VAMSI KRISHNA	All muted	G Nipun Assistant Profes...	All muted
ADLA SARASWATHI	All muted	Dr Hanuma Kasagani Asst...	Meeting host	Felix Ling Ngee Leh	All muted	Head CE Department	All muted
Anuja Charpe Asst. Profe...	All muted	Dr. Bindiya Sharma	All muted	G Nipun Assistant Profes...	All muted		
avula subrahmanyam	All muted	Dr. Mangesh V. Madurwar	All muted	Head CE Department	All muted		

Participant Name	Status	Participant Name	Status	Participant Name	Status	Participant Name	Status
KAMESHWAR RAO CB	Meeting host	Moshe Basaraboyina	All muted	Kushideep reddy Nallaballe	All muted	sheena ecclesia garnepudi	All muted
KAMESHWAR RAO CB	Presentation	Mr.PARTHIBAN D	All muted	S.R.R. Teja Prathipati Assis...	All muted	smita daterao	All muted
Kanta Rao Mandava	All muted	Narra Malathi Asst.Profes...	All muted	Sai Lakshmi	All muted	V Ramesh Associate Prof...	All muted
kotha krishna prasad	All muted	Neeharika Masabattula	All muted	sai vara prasad	All muted	VASU DEVA KRANTHI KIR...	All muted
Lizbeth Gomes	All muted	Neeraja Veeramachineni	All muted	Saima Aga	All muted	veera babu k	All muted
Mahendra Reddy 144 Pra...	All muted	Nihar Dev	All muted	sheena ecclesia garnepudi	All muted	venkateswara rao Raman...	All muted
Mary De Souza	All muted	P.Krishna Prasanna Assist...	All muted	smita daterao	All muted	yoshika shekar	All muted
				V Ramesh Associate Prof...	All muted		

## Feedback:



**Concluding Remarks:**In summary, the success of the conference is a team effort. This conference could not be organized without the dedicated efforts from all our committee members and hence I am grateful to all the committee members who worked very hard to make this event a successful one. We would also like to thank all the authors who have submitted their papers to the conference and like to thank the editors and reviewers who have contributed to the thorough review process thereby ensuring quality publication of the conference proceedings. We hope that you will find this conference thought provoking and engrossing, and you had a valuable experience by sharing ideas with others at this conference.

**Dr. Anuja Charpe**  
Assistant Professor,  
CED-VRSEC

**Dr. Hanuma Kasagani**  
Assistant Professor,  
CED-VRSEC

**Dr. Ch. Srinivas**  
Dean, Industry Relation,  
Professor & HoD  
CE-VRSEC



**DEPARTMENT OF CIVIL ENGINEERING  
V R SIDDHARTHA ENGINEERING COLLEGE**



## Webinar on “3D Printable Concrete (3DPC)”

<b>Event Type</b>	Webinar
<b>Date / Duration</b>	13-12-2022 – 3PM to 4PM
<b>Resource Team</b>	<b>Mr. Boddepalli Uday</b> , Research Scholar (PMRF Fellow), Infra Structure Management Division, Civil Engineering Department, IIT Guwahati, Assam
<b>Name of Coordinator</b>	<b>Dr. Sriram Pradeep</b> , Assistant Professor, CED, VRSEC, <b>Dr. Hanuma Kasagani</b> , Assistant Professor, ICI-VRSEC Student Chapter ( <b>Coordinator</b> ) CED-VRSEC
<b>Target Audience</b>	B.Tech-students, Faculty members of Civil and Research scholars
<b>Total no of Participants</b>	56
<b>Objective of The-event</b>	<b>Mix design concepts for 3D printable concrete</b> The aim of this Webinar is to present the mix design concepts of 3D printable concrete. In this context, at the outset, the material requirements for 3DPC are discussed. These fresh-state and hardened-state requirements are design targets that should be achieved for designing an optimal mix for 3DPC. Thereafter, the compositions of 3DPC and the parameters of mix design, as well as their impact on the said design targets, are reviewed to give readers a fundamental understanding of the processes behind designing a mix for 3DPC. Finally, both empirical and theoretical mix design methods are comprehensively reviewed, which is also highlighted in the paper. It offers some scientific insights and suggestions regarding mix design concepts to researchers and engineers for the purposeful further development of 3D concrete printing technology in general and 3DPC compositions in particular.
<b>Outcome of The-event</b>	Establishing a widely accepted mix design method for 3DPC is the end goal. It is essential to develop the mix design concepts based on compressive strength and durability for printable concrete, which pose a major challenge to the further advancement of 3DPC. 3DPC mixes used in recent years use high amounts of cementitious binder and low amounts of aggregates. This makes them vulnerable to shrinkage cracking and poor durability in the hardened 3DPC. This is not in harmony with the principle of sustainability either. Hence, investigating the use of 3DPC with coarse aggregate and low binder contents is critical in keeping with sustainable construction practices.
<b>Feedback / Suggestions</b>	B.Tech students and faculty gave positive feedback on the Webinar on 3DPC and requested more programmes in this manner.

# Photos

**Webinar on "3D Printable Concrete (3DPC)"**

Mr. Boddepalli Uday, Research Scholar (PMRF Fellow), Infra-Structure Management Division, Civil Engineering Department, IIT Guwahati, Assam.

Time: 3-4 PM, 13<sup>th</sup> Dec 2022

Google Meet Link: <https://meet.google.com/zjc-jrvr-ghe>

Organized by ICI VRSEC Student Chapter

Dr. Srinivas Pradeep, Assistant Professor, CEO, VRSEC. Dr. Hanuma Kavagani, Assistant Professor, CEO, VRSEC, Coordinator, ICI VRSEC, Student Chapter. Dr. Ch. Srinivas, Dean, Infra-Structure, Professor & HOD, CEO, VRSEC.

**Introduction**

India's First 3D Concrete Printed Structures

**Basic Terminology**

- ✓ Pumpability
- ✓ Extrudability
- ✓ Open Time
- ✓ Buildability
- ✓ Structural Build-up

**Input Parameters**

Creation of a digital drawing file (CAD model) of the structure. Later sliced in Simplify 3D software, which defines the size of each layer and give specific information about the sequence of tool path in the form of G-Codes. The controller stores the information and send command to the printer for depositing the material in the pre-defined path.

**Rheology**

Rheology is the study of deformation and flow, commonly applied to materials (can be solids or liquids) to record the time dependent response to stress. (Sinha, L., et al. 1998) (Morgan, T. G. 2014)

Printable cementitious materials behave as Visco-Plastic Bingham Fluids. (Rousset, N. 2018, Rousset, N. et al. 2012)

Rheology of printable cementitious materials can be analyzed in two parameters. One is the printability (both pumpability and extrudability) and other is buildability (structuration). (Mohan M. K. et al. 2021)

**Introduction**

Requirements of a modern construction: Additive construction, 3D Concrete Printing, Extrusion of slice-plastic, Blended material layer by layer to form a desired structure.

Need for 3D printing of concrete (Shah et al. 2020): Reduction in labor and material cost, Reduction in planning and design cost.

**Basic Terminology**

- ✓ Pumpability
- ✓ Extrudability
- ✓ Open Time
- ✓ Buildability
- ✓ Structural Build-up

**3D Concrete Printing Process**

Stage 1: A large-scale conveying pump pumping fresh material to an extruder through a long hose. Stage 2: The material is extruded by a screw extruder in Stage 2, which is subsequently built in layers.

**Process Parameters**

Extrusion rate of 25.12 ml/s, 37.68 ml/s, 50.24 ml/s

Process Parameters: Nozzle Standoff Distance, Pumping rate, Pipeline radius, Extrusion rate, Speed factor, Nozzle diameter, Filament height, Nozzle Geometry, Extruder length.

**Relation between rheology and printability**

To initiate the flow, the material must initially overcome the static yield stress. During the flow, dynamic yield stress should be maintained as low as possible to prevent flow disruptions. Filament should smoothly extrude without breaking at any point of time during the process, while maintaining its shape (due to thixotropy). The material should be able to support its own weight and the weight of succeeding layers owing to chemical hydration and the growth of static yield stress.

Presenter: Uday Boddepalli

### Relation between rheology and printability

Evolution of yield stress with time (Roussel et al. 2015)

Evolution of yield stress with time (Krugger et al. 2019)

Equation:  $\sigma_y(t) = \tau_{01} + A\sigma_y t^n$

Equation:  $\sigma_y(t) = \tau_{02} + B\sigma_y t^{-n}$

Low dynamic yield stress to increase flow

High static yield stress to resist flow

3:32 PM | zfc-3jy-ghe

Presenter: Uday Boddepalli

### Tests conducted

**Pumpability**

- During the pumping, material is sheared more at outer edges and low at the center. The bulk material travels towards center due shear stress gradient difference.
- Tests on lubrication layer using tribometer. (Mohan et al. 2022)
- Direct pumping tests (Mohan et al. 2021)
- Flow table test (Tay et al. 2019)
- Dynamic yield stress using rheometer
- Sliding pipe rheometer (Matschke et al. 2014)
- Tests using viscometers and etc.

3:40 PM | zfc-3jy-ghe

Presenter: Uday Boddepalli

### Tests conducted

**Buildability**

- After the deposition of the material layer by layer on the print bed, the material should retain its shape either due to the physical changes (due to thixotropic recovery) or chemical changes (due to hydration)
- Calorimetry tests (Rabin et al. 2021)
- Green strength test (Chen et al. 2021)
- Flow table and penetration tests (Tay et al. 2019)
- Yield stress growth over time
- Viscosity recovery test (Panda et al. 2019)
- Plate stacking test (Perrut et al. 2016)
- Visual observation tests (Kazemian et al. 2017)

3:49 PM | zfc-3jy-ghe

Presenter: Uday Boddepalli

### Influence of mix parameters and other SCMs

Parameter	SY	DY	V	T	Remarks
S/B	↑	↑	↓	↓	Fineness of the sand is also a crucial parameter in yield stress growth.
W/B	↓	↓	↓	↓	Higher water content leads to the phase separation and bleeding.
Fillers (as a sand replacement finer than sand)	↑	↑	↑	↑	However, these properties show an inverted "V" trend, indicating the need for optimization.
FA	↓	↓	↑	↑	Dynamic yield stress values after reaching certain dosage tend to increase
SF	↑	↑	↑	↑	However, there are also contrasting results reported in Zhang et al. 2009
Calcined clay	↑	↑	↑	↑	Use of high-grade calcined clay shows greater improvement when compared with lower grade.
Nano-silica, Nano-clay, Silicic carbide	↑	↑	↑	↑	Depending on specific surface area, the improvement in thixotropy and yield stress values vary significantly.

S/B - Sand to Binder Ratio, W/B - Water to Binder Ratio, SY - Static Yield Stress, DY - Dynamic Yield Stress, V - Viscosity, T - Thixotropy

3:54 PM | zfc-3jy-ghe

Presenter: Uday Boddepalli

### Failure behaviour

Failure of wall by elastic buckling (left)

plastic collapse (right)

(Stuker et al. 2020)

3:40 PM | zfc-3jy-ghe

Presenter: Uday Boddepalli

### Tests conducted

**Extrudability**

- Extruding is the action of extrusion of fresh materials from the print head.
- Extrusion of soft solids like cement based materials is either done by ram extruder or screw type extruder (auger extruder).
- Ram Extruder, (Chen et al. 2022)
- Direct extrusion tests (Rahul et al. 2019)
- Penetration resistance test (Pati et al. 2021)
- Static yield stress of concrete using rheometer
- Desorptivity test (Rahul et al. 2020)
- Slag test (Ducoumbier et al. 2021)

3:48 PM | zfc-3jy-ghe

Presenter: Uday Boddepalli

### Mix Design

Various steps involved in material mix design for successful mortar printing (Boddepalli et al. 2022)

- There are two asymptotic regimes of material deposition by extrusion. One is infinite brick regime (i.e. extrusion of stiff materials) and other is extrusion of flowable material with or without the addition of admixtures.
- The realistic behaviour of the printable material lies between these regimes.

3:52 PM | zfc-3jy-ghe

Presenter: Uday Boddepalli

### Influence of fiber reinforcement

- Fiber reinforcement is often used to increase the ductility of 3DCP.
- Incorporation of fibres also aids in the shape stability of printable mixtures.
- Significant increase in the viscosity and dynamic yield stress was reported.
- The main limitation is fiber orientation which is responsible for the anisotropic behaviour.

Shape stability of mixture (a) without steel fibers, (b) with steel fibers

Anandhayan et al. 2022

Schematic and SEM images of fiber orientation (Zhang et al. 2021)

4:00 PM | zfc-3jy-ghe



Presenter: Uday Boddepalli

### Influence of chemical admixtures

Admixture	SY	DY	V	T	Remarks
SP	↓	↓	↓	↓	Retards at higher dosages. The change in V is not significant.
VMA	↑	↑	↑	↑	Retards at higher dosages. The rate of increase in V is higher than SY and DY.
ACC	↑	↑			Extrusion pressure is increased at higher dosages.
RET	↓	↓			Structuration rate is affected at higher dosages.
AEA	↓	↓	↑	↑	Instability is caused at higher dosages.

Compatibility issues with other chemical admixtures

SY - Static yield stress, DY - Dynamic yield stress, V - Viscosity, T - Thixotropy, SP - Superplasticizer, VMA - Viscosity Modifying Agent, ACC - Accelerator, RET - Retarder, AEA - Air Entraining Admixture.

Presenter: Uday Boddepalli

### Summary and future outlook

- 3DCP is building a desired structure layer by layer until its completion.
- 3DCP poses conflicting challenges like pumpability and buildability for a same mixture at various time intervals.
- There are no standard guidelines for mix designing 3DCP. Currently researchers are working on trial and error basis method. The researchers should work on standardizing the process to make it available for common people.
- Further, standard testing protocols are also not available to assess the 3DCP. Moreover, rheometry is an expensive method to evaluate and is not reliable for many reasons.
- Fiber dosage should be limited as per the requirements of extrudability and pumpability. However, transverse reinforcement is still need to be explored in 3DCP.
- Optimized usage of chemical admixtures can result in better printing parameters like buildability and open time for printable mixtures.

## Attendance:

People

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- 198W1A01B8\_Sec-C BAN...
- 198W1A01C0\_Sec-C BIKK...
- 198W1A01C1\_Sec-C CHA...
- 198W1A01C6\_Sec-C DAS...
- 198W1A01D1\_Sec-C ILLU...
- 198W1A01D4\_Sec-C JAN...
- 198W1A01D8\_Sec-C KATT...
- 198W1A01E2\_Sec-C KOS...
- 198W1A01E8\_Sec-C MOH...
- 198W1A01F3\_Sec-C PARA...

People

All muted Add people

- 198W1A01E8\_Sec-C MOH...
- 198W1A01F3\_Sec-C PARA...
- 198W1A01F4\_Sec-C PEN...
- 198W1A01F6\_Sec-C PRAT...
- 208 113 Purna
- 208 116 Pranitha Kommoju
- 208 117 GANESH
- 208 121 KALYANI
- 208 122 Sridevi
- 208W5A0112\_Sec-B KOL...
- 218w1a0183 MALLA VENK...

People

All muted Add people

- Sandeep Ijs
- Shaik Hussain
- Sriram Pradeep
- SYED RIZWAN
- T.Sujatha Assistant Profes...
- Uday Bhaskar
- Uday Boddepalli Meeting host
- Uday Boddepalli Presentation
- Vamsi Ram
- Vijay Krishna
- Y. Suma Assistant Profes...

People

All muted Add people

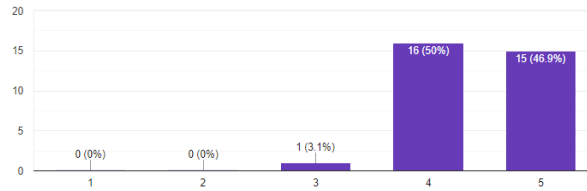
- 218w1a0183 MALLA VENK...
- 218w1a0189 PEDADA SWA...
- Aditya Tvs
- Akash M
- Anil Kumar Mangalampalli
- Dr Hanuma Kasagani Asst... Meeting host
- Dr. Suraj Prakash Sahoo
- Hari Priya Goberu
- Ravi Kiran Dokala
- S.R.R. Teja Prathipati Assis...
- Sandeep Ijs
- Shaik Hussain

## Feedback:

How would you rate the usefulness of the content

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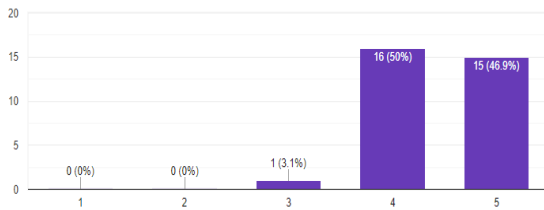
32 responses



How would you rate the presenter's knowledge in the subject

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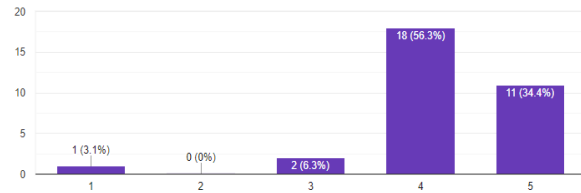
32 responses



How would you rate the presenter's style of teaching

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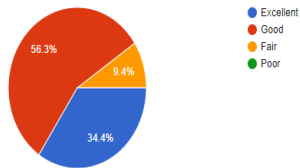
32 responses



How would you rate the presenter

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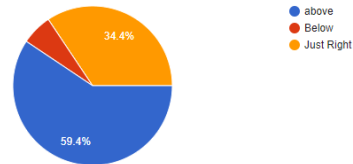
32 responses



Was the Webinar on 3DPC above or below your current skill level?

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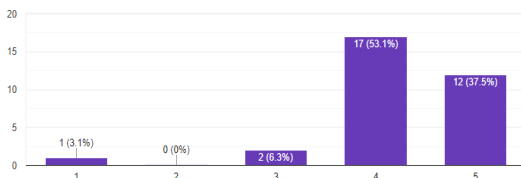
32 responses



Overall, how would you rate the Webinar on 3DPC

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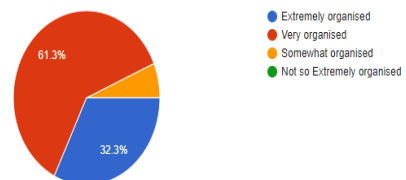
32 responses



How organised was the Webinar on 3DPC

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31 responses



**Dr. Sriram Pradeep**  
Assistant Professor,  
CED-VRSEC

**Dr. Hanuma Kasagani**  
Assistant Professor,  
CED-VRSEC, Coordinator  
ICI-VRSEC-Student-Chapter

**Dr. Ch. Srinivas**  
Dean, Industry Relation,  
Professor & HoD  
CED-VRSEC



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## Guest Lecture on "Best Practices in usage of Ready Mix Concrete for Construction"

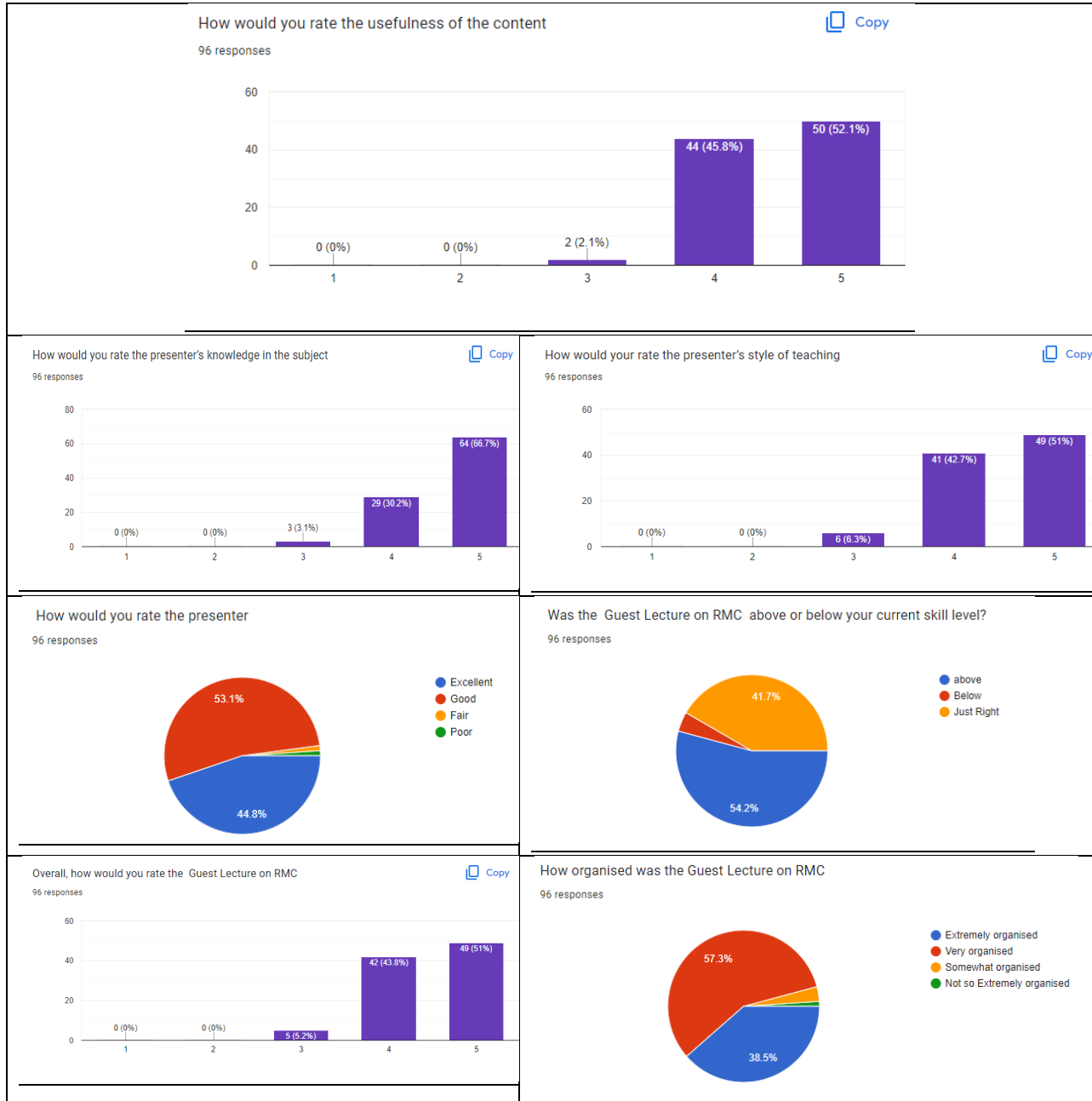
<b>Event Type</b>	Guest Lecture
<b>Date / Duration</b>	21-01-2023 – 10 AM to 11:30 AM
<b>Resource Person</b>	<b>Prof N V Ramana Rao, Director, NIT Warangal, Telangana, India</b>
<b>Name of Coordinator</b>	<b>Dr.Hanuma Kasagani, Assistant Professor, CED-VRSEC</b>
<b>Target Audience</b>	B.Tech-students, Faculty members of Civil and Research scholars
<b>Total no of Participants</b>	148
<b>Objective of The-event</b>	The objective of a ready mix concrete for construction program for students would be to provide students with a comprehensive understanding of the principles and techniques used in the production and application of ready-mixed concrete. This could include learning about the various types of concrete and their properties, as well as the equipment and methods used in the mixing, transport, and placement of the concrete. The program may also cover topics such as quality control, safety, and sustainability in the ready-mix concrete industry.
<b>Outcome of The-event</b>	The ultimate goal of the program would be to prepare students for entry-level positions in the ready-mix concrete industry, and to provide them with the skills and knowledge needed to advance in their careers.
<b>Feedback / Suggestions</b>	B.Tech students and faculty gave positive feedback on the Guest Lecture on RMC and requested more programmes in this manner.

# Photos





**Feedback:**



**Dr. Hanuma Kasagani**  
**Assistant Professor,**  
**CED-VRSEC, Coordinator**  
**ICI-VRSEC-Student-Chapter**

**Dr. Ch. Srinivas**  
**Dean, Industry Relation,**  
**Professor & HoD**  
**CED-VRSEC**



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## Expert Talk on “Bamboo as a sustainable building construction material”

<b>Event Type</b>	Expert Talk
<b>Date / Duration</b>	07-03-2023 – 5 PM to 6 PM
<b>Resource Person</b>	<b>Dr. Nischal Prasad N.P., PhD., HKUST, Hong Kong , Structural Engineer, Kathmandu, Nepal</b>
<b>Name of Coordinator</b>	<b>Dr.Hanuma Kasagani</b> , Assistant Professor, CED-VRSEC
<b>Target Audience</b>	B.Tech - Students, Faculty members of Civil and Research scholars
<b>Total no of Participants</b>	34
<b>Objective of The-event</b>	The objective of using multi-column bamboo axial members is to provide an eco-friendly, sustainable, and cost-effective solution for building structures that can withstand axial loads. These members are made from bamboo, which is a fast-growing, renewable, and strong natural material. Multi-column bamboo axial members are typically used in low-rise and medium-rise buildings, such as residential homes, commercial buildings, and community centers. They offer several advantages over traditional materials such as steel and concrete, including lighter weight, lower cost, and a smaller environmental footprint. Overall, the objective of using multi-column bamboo axial members is to promote sustainable and environmentally responsible building practices, while also providing strong and reliable structural support.
<b>Outcome of The-event</b>	Understanding of sustainable materials: Learning about bamboo as a sustainable material for construction can help students understand the importance of using eco-friendly materials in building structures. This knowledge can translate into future careers in engineering or architecture, where sustainable design is becoming increasingly important.
<b>Feedback / Suggestions</b>	B.Tech students and faculty gave positive feedback on the Expert Talk on MCABM and requested more programmes in this manner.

Photos

The poster features a background of green bamboo stalks at the top and a wooden plank texture at the bottom. A circular portrait of Dr. Nischal Prasad N.P. is centered. Logos for VRSEC, the Department of Civil Engineering, and the Indian Concrete Institute (ICI) are at the top. Text boxes provide details on the talk's topic, organizers, time, date, and Google Meet link. Faculty members' names and titles are listed at the bottom.

**VRSEC**  
VELAGAPUDI RAMAKRISHNA  
SIDDHARTHA ENGINEERING COLLEGE  
ESTD. 2011

**DEPARTMENT OF  
CIVIL ENGINEERING**

**ICI**  
Indian Concrete Institute

**Expert Talk**  
**on**  
**“Bamboo as a sustainable building  
construction material”**

**Organised by**  
**ICI VRSEC Student Chapter**

**Time: 5-6 PM,**  
**5<sup>th</sup> March 2023**

**Google Meet Link:**  
**<https://meet.google.com/zjc-jryr-ghe>**

**Dr. Nischal Prasad N.P.,**  
**PhD., HKUST, Hong Kong**  
**Structural Engineer,**  
**Kathmandu, Nepal**

**Dr. K.Hanuma**  
**Assistant Professor,**  
**CED, VRSEC, Coordinator,**  
**ICI-VRSEC-Student-Chapter**

**Dr. Ch. Srinivas**  
**Dean, Industry Relation,**  
**Professor & HoD**  
**CED-VRSEC**



Nischal Pradhan is presenting

### cyclic response

**damage modes**

splitting, row-shearing, mortar push-out, bolt-fracture, embedment damage, splitting

Pradhan et al. *Journal of Building Engineering* (2020) 21

Nischal Pradhan is presenting

### effects of loading history

**embedment and pinching**

force, KN, displacement, mm, initial culm-wall boundary, cavity boundary

Pradhan et al. *Journal of Building Engineering* (2020) 21

Nischal Pradhan is presenting

### yield loads from analytical method

**European Yield Model**

ratio of analytical to experimental yield capacities

average error between analytical and experimental yield load

- around 10% for monotonic specimens,
- around 15% for cyclic specimens (tension envelopes)

this is promising for **rational design**

Paraskeva et al. (2019), Pradhan et al. (2020) 24

Nischal Pradhan is presenting

### pilot study on capacity-based design

**design premise**

Kao Jue bamboo culms, dowel connections, gusset plate

a rational design approach that

- manages the natural variability of bamboo culms
- ensures high-ductility and predictability

an original combination of:

- grading**
  - unviable and defective culms removed
- multiple bamboo culms**
  - eg 4 bamboo culms combined into a single member
- capacity design principles**
  - establish a desired hierarchy of capacities

Pradhan & Dimitrakopoulos, *Journal of Structural Engineering* (2021) 26

Nischal Pradhan is presenting

### design premise

**copling with variability**

bamboo culms, dowel connections, gusset plate

**multiple culms - premise:**

- highly unlikely for multiple culms to possess unfavourable values of (geometric/material) properties simultaneously
- the stronger culms compensate for the weaker, the performance averages out:

$$\bar{X} = \sum_{i=1}^N (X_i/N)$$

when the number of bamboo culms  $N$  increases

- variance reduces

$$\sigma_{\bar{X}}^2 = \sum_{i=1}^N \sigma_{X_i}^2 / N = \sigma_X^2 / N$$

Dr Hanuma Kassagani Asst Professor, CE, VRSEC has left the meeting

Engineering (2021) 27

Nischal Pradhan is presenting

### design premise

**copling with variability**

probability density, tensile strength, MPa

**example:**  
**tensile strength of bamboo (Kao Jue) culms**

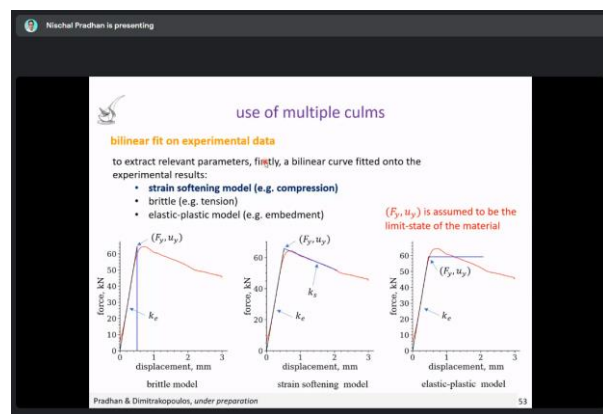
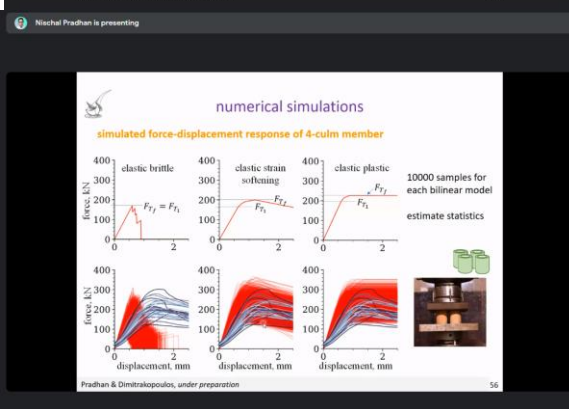
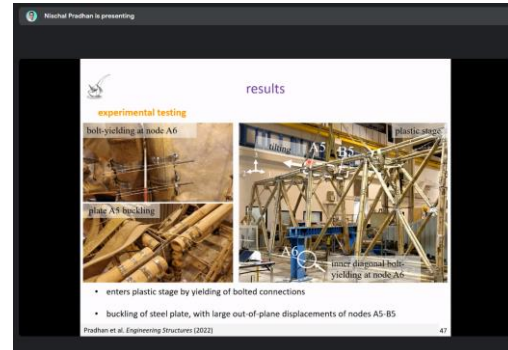
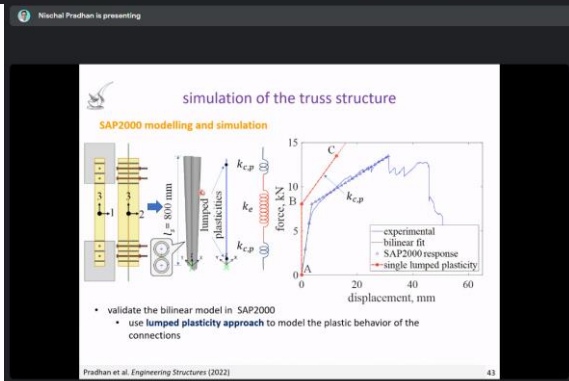
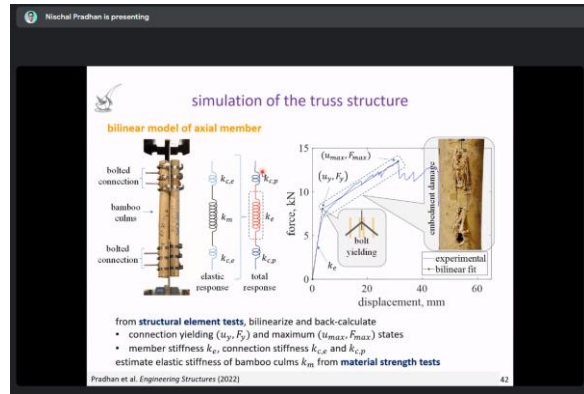
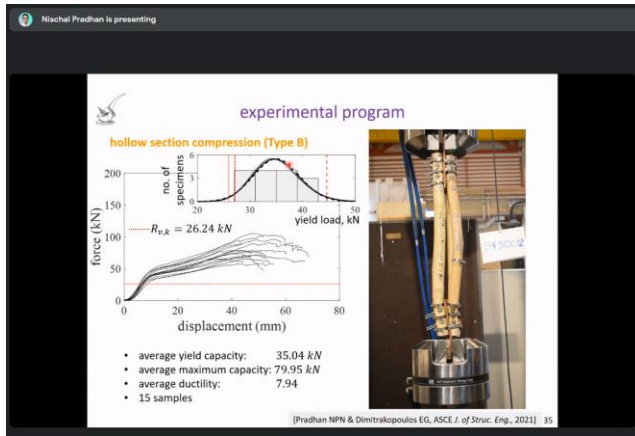
- expected value and variance of a **single bamboo culm:**

$$\mu_X = 127.33 \text{ MPa} \quad \sigma_X^2 = 521.3$$
- expected value and variance of average tensile strength in
  - 2-culm axial member**

$$\mu_{\bar{X}} = 127.33 \text{ MPa} \quad \sigma_{\bar{X}}^2 / 2 = 260.6$$
  - 4-culm axial member**

$$\mu_{\bar{X}} = 127.33 \text{ MPa} \quad \sigma_{\bar{X}}^2 / 4 = 130.3$$

Pradhan & Dimitrakopoulos, *Journal of Structural Engineering* (2021) 28



## Attendance:

In call		
	Dr Hanuma Kasaga... (You)	Meeting host
	198 119 Manasa	
	198W1A0180_Sec-B KAM...	
	198W1A01A2_Sec-B SAB...	
	198W1A01B2_Sec-B VENT...	
	1C3 Jithendra	
	218w1a0111 DAYALA ANV...	
	218W5A0128_Sec-C V DI...	
	228w5a0104 KAGITHA VI...	
	228w5a0109 MEKALA SU...	
	B.Durga Priyanka Asst. Pr...	
	Dr Hanuma Kasagani Asst...	Meeting host
	Dr. V. Mallikarjuna Associa...	
	Dr.Lakshmi Keshav Associ...	
	Harshasree vollure	
	Let's Be Unique	
	Narra Malathi Asst.Profes...	
	Nischal Pradhan	Meeting host
	Nischal Pradhan	Presentation
	P.Krishna Prasanna Assist...	
	S.R.R. Teja Prathipati Assis...	
	T.Sujatha Assistant Profes...	
	V Ramesh Associate Prof...	
	VENKAT RAO BADUGU	
	Dr.Lakshmi Keshav Associ...	
	Harshasree vollure	
	Let's Be Unique	
	Narra Malathi Asst.Profes...	
	Nischal Pradhan	Meeting host
	Nischal Pradhan	Presentation
	P.Krishna Prasanna Assist...	
	S.R.R. Teja Prathipati Assis...	
	T.Sujatha Assistant Profes...	
	V Ramesh Associate Prof...	
	VENKAT RAO BADUGU	

**Feedback:**



**Dr. Hanuma Kasagani**  
Assistant Professor,  
CED-VRSEC, Coordinator  
ICI-VRSEC-Student-Chapter

**Dr. Ch. Srinivas**  
Dean, Industry Relation,  
Professor & HoD  
CED-VRSEC



DEPARTMENT OF CIVIL ENGINEERING  
V R SIDDHARTHA ENGINEERING COLLEGE



## Workshop on "Virtual Reality for Planning and Design "

<b>Event Type</b>	Workshop
<b>Date / Duration</b>	13-03-2023 – 2 PM to 5 AM
<b>Resource Person</b>	<b>Ms.P. M Lakshmi, TMTCS, Krishna district</b>
<b>Name of Coordinator</b>	<b>Dr.Hanuma Kasagani, Assistant Professor, CED-VRSEC</b>
<b>Target Audience</b>	B.Tech-students, Faculty members of Civil and Research scholars
<b>Total no of Participants</b>	97
<b>Objective of The-event</b>	The objective of the workshop is to provide participants with the knowledge and skills necessary to effectively use VR technology in their planning and design work, ultimately leading to better designed and more successful projects.
<b>Outcome of The-event</b>	<p>A workshop on virtual reality (VR) for planning and design can have several outcomes for civil engineering students, including:</p> <p>Increased understanding of VR technology: Students will learn about the capabilities and limitations of VR, as well as the different types of software and hardware available. They will also gain a better understanding of how VR can be used in the planning and design process.</p> <p>Improved design skills: By using VR to visualize and test design concepts, students will be able to better understand the spatial relationships of different design elements and make more informed design decisions. This can lead to more effective and efficient designs.</p> <p>Enhanced collaboration skills: VR can facilitate collaboration between different stakeholders in a project, including engineers, architects, and clients. By learning how to use VR to communicate design concepts and receive feedback, students will be better prepared to work in a team environment.</p> <p>Better job prospects: As VR technology becomes increasingly important in the civil engineering industry, students who have experience using VR in their coursework will be more competitive in the job market.</p>
<b>Feedback / Suggestions</b>	B. Tech students and faculty gave positive feedback on the Guest Lecture on VRPD and requested more programmes in this manner.

Photos

**VRSEC**  
VELAGAPUDI RAMAKRISHNA  
SIDDHARTHA ENGINEERING COLLEGE  
ESTD. 2011

**DEPARTMENT OF  
CIVIL ENGINEERING**

**ICI**  
Indian Concrete Institute

**Workshop on  
Virtual Reality For Planning and Design**

**Organised by  
ICI VRSEC Student Chapter  
In Association with Ultratech Cement**

**Time: 2-5 PM,  
13<sup>th</sup> March 2023**

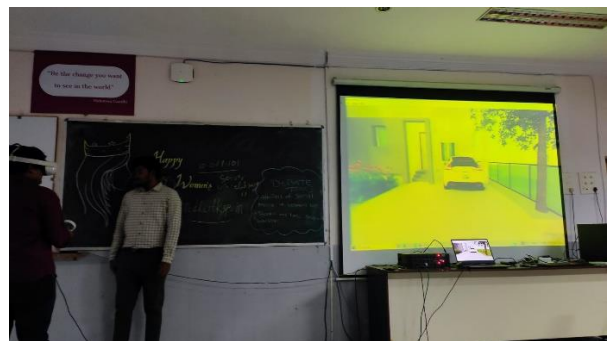
**Venue: CE Seminar Hall**

**Ms.P. M Lakshmi**  
TMTCS  
Krishna district

**K. Venkataraman**  
Regional Head-  
TCS  
Andhra Pradesh

**Dr. K.Hanuma**  
Assistant Professor,  
CED, VRSEC, Coordinator,  
ICI-VRSEC-Student-Chapter

**Dr. Ch. Srinivas**  
Dean, Industry Relation  
Professor & HoD  
CED-VRSEC



# Attendance:

DEPARTMENT OF CIVIL ENGINEERING V. R. SIDDHARTHA ENGINEERING COLLEGE (AUTONOMOUS) VIJAYAWADA - 520 027				
S.No	Roll No	Name	Year & Section	Signature
01	190101001	B. Suman	3rd Year A Section	[Signature]
02	190101002	P. Praveen Kumar	3rd Year A Section	[Signature]
03	190101003	C. Suman	3rd Year A Section	[Signature]
04	190101004	P. Gopi Chand	3rd Year A Section	[Signature]
05	190101005	P. Suman	3rd Year A Section	[Signature]
06	190101006	S. Suman	3rd Year A Section	[Signature]
07	190101007	S. Suman	3rd Year A Section	[Signature]
08	190101008	P. Suman	3rd Year A Section	[Signature]
09	190101009	P. Suman	3rd Year A Section	[Signature]
10	190101010	P. Suman	3rd Year A Section	[Signature]
11	190101011	P. Suman	3rd Year A Section	[Signature]
12	190101012	P. Suman	3rd Year A Section	[Signature]
13	190101013	P. Suman	3rd Year A Section	[Signature]
14	190101014	P. Suman	3rd Year A Section	[Signature]
15	190101015	P. Suman	3rd Year A Section	[Signature]
16	190101016	P. Suman	3rd Year A Section	[Signature]
17	190101017	P. Suman	3rd Year A Section	[Signature]
18	190101018	P. Suman	3rd Year A Section	[Signature]
19	190101019	P. Suman	3rd Year A Section	[Signature]
20	190101020	P. Suman	3rd Year A Section	[Signature]
21	190101021	P. Suman	3rd Year A Section	[Signature]
22	190101022	P. Suman	3rd Year A Section	[Signature]
23	190101023	P. Suman	3rd Year A Section	[Signature]
24	190101024	P. Suman	3rd Year A Section	[Signature]
25	190101025	P. Suman	3rd Year A Section	[Signature]

DEPARTMENT OF CIVIL ENGINEERING V. R. SIDDHARTHA ENGINEERING COLLEGE (AUTONOMOUS) VIJAYAWADA - 520 027				
S.No	Roll No	Name	Year & Section	Signature
1	190101001	C. Suman	CE-3, 3rd Year	[Signature]
2	190101002	P. Suman	CE-3, 3rd Year	[Signature]
3	190101003	P. Suman	CE-3, 3rd Year	[Signature]
4	190101004	P. Suman	CE-3, 3rd Year	[Signature]
5	190101005	P. Suman	CE-3, 3rd Year	[Signature]
6	190101006	P. Suman	CE-3, 3rd Year	[Signature]
7	190101007	P. Suman	CE-3, 3rd Year	[Signature]
8	190101008	P. Suman	CE-3, 3rd Year	[Signature]
9	190101009	P. Suman	CE-3, 3rd Year	[Signature]
10	190101010	P. Suman	CE-3, 3rd Year	[Signature]
11	190101011	P. Suman	CE-3, 3rd Year	[Signature]
12	190101012	P. Suman	CE-3, 3rd Year	[Signature]
13	190101013	P. Suman	CE-3, 3rd Year	[Signature]
14	190101014	P. Suman	CE-3, 3rd Year	[Signature]
15	190101015	P. Suman	CE-3, 3rd Year	[Signature]
16	190101016	P. Suman	CE-3, 3rd Year	[Signature]
17	190101017	P. Suman	CE-3, 3rd Year	[Signature]
18	190101018	P. Suman	CE-3, 3rd Year	[Signature]
19	190101019	P. Suman	CE-3, 3rd Year	[Signature]
20	190101020	P. Suman	CE-3, 3rd Year	[Signature]
21	190101021	P. Suman	CE-3, 3rd Year	[Signature]
22	190101022	P. Suman	CE-3, 3rd Year	[Signature]
23	190101023	P. Suman	CE-3, 3rd Year	[Signature]
24	190101024	P. Suman	CE-3, 3rd Year	[Signature]
25	190101025	P. Suman	CE-3, 3rd Year	[Signature]

# Certificate:

## CERTIFICATE OF PARTICIPATION

THIS CERTIFICATE IS PRESENTED TO:

### J Samvidha

This Certificate is awarded to J Samvidha as a participant in the Workshop on "Virtual Reality for Planning and Design" Organised by ICI VRSEC Student Chapter In Association with Ultratech Cement @ V. R. Siddhartha Engineering College on 13 March 2023.

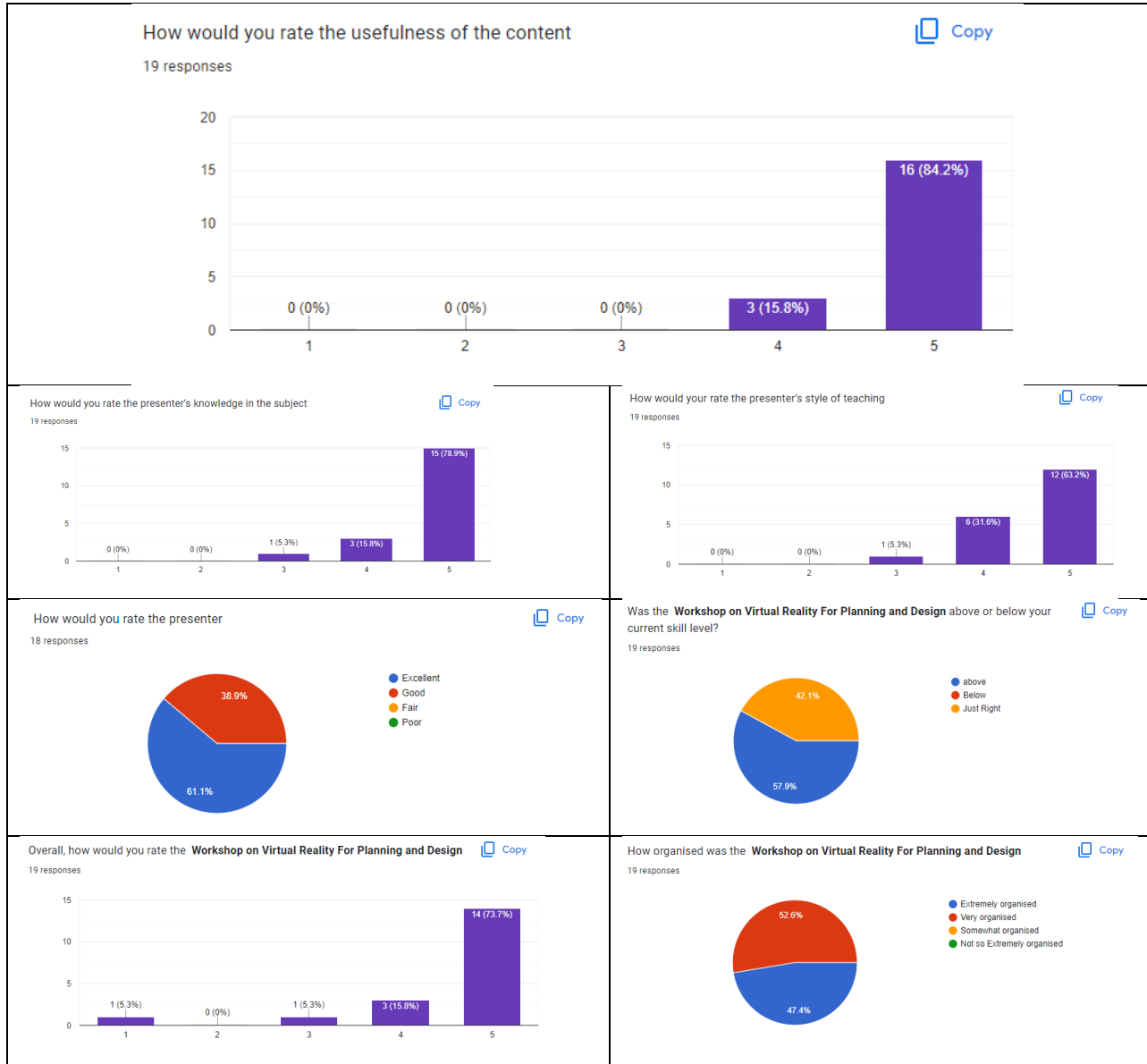
*K. Hanuma*

Dr. Hanuma Kasagani  
Assistant Professor,  
CED-VRSEC, Coordinator  
ICI-VRSEC-Student-Chapter

*Ch. Crinivas*

Dr. Ch. Crinivas  
Dean, Industry Relation,  
Professor & HoD  
CID-VRSEC

**Feedback:**



**Dr. Hanuma Kasagani**  
**Assistant Professor,**  
**CED-VRSEC, Coordinator**  
**ICI-VRSEC-Student-Chapter**

**Dr. Ch. Srinivas**  
**Dean, Industry Relation,**  
**Professor & HoD**  
**CED-VRSEC**





DEPARTMENT OF CIVIL ENGINEERING  
V R SIDDHARTHA ENGINEERING COLLEGE



## Expert Talk on “Eco-friendly Ultra-High-Performance Concrete”

<b>Event Type</b>	Expert Talk
<b>Date / Duration</b>	05-06-2023 – 2 PM to 5 AM
<b>Resource Person</b>	<b>Dr. J.Sri Maruthi PhD., P.E, M.ASCE , Research &amp; Development Engineer Tindall Corporation, USA</b>
<b>Name of Coordinator</b>	<b>Dr.Hanuma Kasagani</b> ,and Mrs. Y.Suma, Assistant Professor, CED-VRSEC
<b>Target Audience</b>	B.Tech & M.Tech-students, Faculty members of Civil and Research scholars
<b>Total no of Participants</b>	50
<b>Objective of The-event</b>	The objective of the expert talk on eco-friendly ultra-high-performance concrete for students is to educate, inspire, and motivate students to become advocates for sustainable construction practices and encourage them to explore the potential of eco-friendly materials like UHPC in their future careers.
<b>Outcome of The-event</b>	<p>The outcomes of an expert talk on eco-friendly ultra-high-performance concrete (UHPC) for students can include:</p> <p>Increased knowledge and understanding: The students will gain a comprehensive understanding of UHPC, its composition, manufacturing process, and properties. They will learn about the environmental benefits of UHPC and its potential to reduce carbon emissions, conserve natural resources, and promote sustainable construction practices.</p> <p>Awareness and consciousness: The event will raise awareness among students about the importance of adopting eco-friendly materials in construction. They will become more conscious of the environmental impact of conventional concrete and the need for sustainable alternatives like UHPC. This awareness can shape their attitudes and decision-making processes in their future careers.</p> <p>Inspiration and motivation: The expert talk can inspire and motivate students to pursue careers in sustainable construction or related fields. By showcasing the advancements and potential of eco-friendly UHPC, students may be inspired to become advocates for sustainable practices and contribute to the development and adoption of greener construction materials.</p> <p>Practical application and innovation: Students will gain insights into the practical applications of UHPC in various construction projects. They may be inspired to explore innovative uses of UHPC, such as in high-rise buildings, bridges, or infrastructure projects. This can stimulate their creativity and encourage them to think critically about sustainable design and construction solutions.</p> <p>Networking and collaboration: The event can provide students with the opportunity to network and connect with industry experts, researchers, or professionals working</p>

	<p>in the field of sustainable construction. This networking can lead to potential collaborations, mentorship opportunities, or internships, enabling students to gain practical experience and build valuable relationships in the industry.</p> <p>Future research and academic pursuits: The talk may spark an interest in students to further explore the field of eco-friendly UHPC through research or academic pursuits. They may be motivated to conduct studies, experiments, or projects related to UHPC, contributing to the body of knowledge in sustainable construction and enhancing their academic and professional profiles.</p>
<b>Feedback / Suggestions</b>	<p>B. Tech &amp; M.Tech students and faculty gave positive feedback on the Guest Lecture on EUHPC and requested more programmes in this manner.</p>

**Photos**

**VRSEC**  
VELUPUDI RAJAKKUNTA  
REGIONAL ENGINEERING COLLEGE

**DEPARTMENT OF CIVIL ENGINEERING**

**Expert Talk on**  
**Eco-friendly Ultra-High Performance Concrete**

**Organised by**  
**IGBC & ICI**  
**VRSEC Student Chapters**

**Date: 05-06-2023**

**Indian Green Building Council**

**Indian Concrete Institute**

**Outside Grey** **Time : 2:00 PM**

**On the eve of Worlds Environmental Day**

**Inside Green** **Venue: CE Seminar Hall**

**Dr. J.Sri Maruthi**  
**PhD., P.E, M.ASCE**  
**Research & Development**  
**Engineer**  
**Tindall Corporation, USA**



**Feedback:**



**Mrs.Y.Suma,**  
**Assistant Professor,**  
**CED-VRSEC, Coordinator**  
**IGBC-VRSEC-Student-Chapter**

**Dr. Hanuma Kasagani,**  
**Assistant Professor,**  
**CED-VRSEC, Coordinator**  
**ICI-VRSEC-Student-Chapter**

**Dr. Ch. Srinivas,**  
**Dean, Industry Relation,**  
**Professor & HoD**  
**CED-VRSEC**



**DEPARTMENT OF CIVIL ENGINEERING  
V R SIDDHARTHA ENGINEERING COLLEGE**



**Motivation Lecture on Ethics:  
“The journey in search of a satisfying life”**

<b>Event Type</b>	Motivation Lecture
<b>Date / Duration</b>	19-04-2023 – 10 AM to 12 PM
<b>Resource Person</b>	<b>Mr. Vithal Kode, Alumni of vrsec, civil engineering also treasurer of srimath ubhaya vedantha acharya peetham trust</b> <b>Mrs.Kaakarlapudi Venkatravamma</b> <b>M. com &amp; M.A. Retired Lecturer in Commers Dept. Satavahana Mahila College Vijayawada</b>
<b>Name of Coordinator</b>	<b>Dr.Hanuma Kasagani, Assistant Professor, CED-VRSEC</b>
<b>Target Audience</b>	B.Tech-students and Faculty members of Civil
<b>Total no of Participants</b>	100
<b>Objective of The-event</b>	The objective of the motivation lecture on ethics should be to inspire students to live a fulfilling life that is guided by ethical principles and values. By providing practical tips and guidance on ethical decision-making, the lecture can equip students with the tools they need to navigate ethical challenges and achieve personal and professional success.
<b>Outcome of The-event</b>	The outcome of the motivation lecture on ethics titled “The journey in search of a satisfying life” for students is likely to be a positive and impactful one. It will help students understand the importance of ethics, provide them with a framework for ethical decision-making, encourage personal reflection, inspire them to live a satisfying life, and have a positive impact on their personal and professional lives.
<b>Feedback / Suggestions</b>	B. Tech students and faculty gave positive feedback on the Motivation Lecture on the journey in search of a satisfying life and requested more programmes in this manner.

## Photos

**VRSEC**  
VELAGAPUDI RAMAKRISHNA  
SIDHANTA ENGINEERING COLLEGE  
Est. 2011

**DEPARTMENT OF  
CIVIL ENGINEERING**

**ICI**  
Indian Concrete Institute

**Motivation Lecture on Ethics:  
"The journey in search of a satisfying life"**

**Organised by  
ICI VRSEC Student Chapter**

**Mr. Vithal Kode, Alumni of vrsec, civil  
engineering also treasurer of srimath  
ubhaya vedantha acharya peetham trus**

**Mrs. Kaakarlapudi Venkatravamma  
M. com & M.A. Retired Lecturer in  
Commers Dept. Satavahana Mahila  
College Vijayawada**

**Time: 10:15-11:15 AM  
19<sup>th</sup> April 2023  
Venue: CE Seminar Hall**

**Dr. K. Hanuma  
Assistant Professor,  
CED, VRSEC, Coordinator,  
ICI-VRSEC-Student-Chapter**

**Dr. Ch. Srinivas  
Dean, Industry Relation  
Professor & HoD  
CED-VRSEC**

**Dr. B. Panduranga Rao  
Dean, Student Affairs,  
Professor, CED-VRSEC**



