

CIVIL ENGINEERING NEWSLETTER, 2021

In This Issue

WEBINARS!

by professors and
esteemed guests

pg. 7

Funding received for
Research Projects!

pg. 11

Class of 2021
make it to universities
around the world!

pg. 12





A Message *from the* HOD

I am happy to see that the second issue of the Newsletter is being brought out by the student editorial team. During the past few months, several exciting developments have taken place in the department. The Department has started successfully started a new M.Tech. program in Computer Aided Structural Engineering (CASE), to integrate the strengths of Computer Science into Structural Engineering for providing robust, accurate, fast, economical, and sustainable solutions for the current and future challenges. 15 students were admitted as part of the first batch and classes began in September 2021. The M.Tech. program gives an in-depth knowledge of mathematical modeling and computational methods in the areas of non-linear, static, and dynamic analysis of structures. The program integrates analytical and programming skills for solving complex design and analysis problems posed by various materials and structures.

The Ph.D. program in Civil Engineering has also been running successfully with the current strength being 13 students. Four students, namely Lakshmi Thotakura, Sairam Neridu, Rakesh Katam, and Sidhu Ramulu, have successfully cleared their comprehensive exams. I extend my heartiest congratulations to them on this achievement. I am glad to note that all other Ph.D. students who are in their first year and are doing course work, have also simultaneously started their research work with great zest and have also started publishing their research in reputed conferences and scholarly journals under the guidance of their research advisors.

I am also happy to note that during this period, the B.Tech students of Civil Engineering have participated in the events organized by the ASCE and IGS student chapters. In the limited time available on campus, they were able to organize many technical and social events. The Bridge-IT and MATLAB Hackathon events saw enthusiastic participation from a large number of students and three winners were announced for both events. I am also pleased to note that a large number of webinars by distinguished speakers were organized by both student chapters and these webinars saw good attendance by faculty and students. I was also delighted to note that our recent alumni have been keeping our flag flying high. In particular, would like to congratulate the B.Tech. students who secured placements in reputed companies and also those who have obtained admissions in premier high educational institutions across the world.

Lastly, I observed that the student editorial team has made a commendable effort to bring out this issue of the newsletter despite their preoccupation with the end-semester exams, and I would like to commend the students and their faculty advisor for the same. I look forward to future issues of the newsletter in the new year. All the best!

Prabhakar Singh

Dr. Prabhakar Singh
Head of Department, Civil Engineering.

STUDENT ACTIVITIES

ASCE STUDENT CHAPTER

Student activities at Mahindra university are organised by the American Society of Civil Engineering (ASCE) student chapter. The chapter is led by students from 3rd and 4th year who organise events and induct new members from the first and second year. These ASCE activities aid in the overall technical and professional development of the students.

MATLAB HACKATHON

Matlab hackathon is a coding competition in which students compete in teams of two to solve problems using Matlab. It is all matter of time! So, who does it swiftly stands to be winner.

Winners of this year are:

First Place

Abhishek and Semanth,

Second place

Pritika and Siddhart,

Third place

SreeVansh and Manvitha.

BRIDGE IT COMPETITION

Bridge it is an annual competition where bridges are made of popsicle sticks. Creativity and out of the box thinking is the key.

Winners of this year are:

First place

Team 8 - Sumedh, Semanth, Abhishek, Dheeraj.

Second place

Team 3 - Aradhya, Aayushi Singh, Ansh Chordiya, Venkat Dinesh.

Third place

Team 2 - Kaushik Talluri, Karthik Talluri, Govind Kandula;
Team 12 - Vishwaajith, Bhavani, Vinuthna, Venkat Rishi badiga.

Proudly Welcoming our newest edition to the Civil Engineering department , Dr. Sri Kalyana Rama J .



Dr. Sri Kalyana Rama J

Assistant Professor
Dept. Of Civil Engineering

Dr. Sri Kalyana Rama J has joined as an Assistant Professor in the Department of Civil Engineering.

Previously he worked for Vignana Bharathi Institute of Technology, Hyderabad, and BITS Pilani, Hyderabad. He obtained his Ph.D. from Birla Institute of Technology and Science, Pilani Hyderabad Campus, and has over 50 publications in peer reviewed journals and conferences.

Dr. Kalyana Rama's research interests include Performance evaluation of high-performance concrete for precast applications, compatibility of agro waste materials on rheological based 3D printed non structural concrete elements and also investigating low cost base isolation techniques for masonry structures.

Dr.Venkata Dilip Kumar Pasupuleti and Dr. Saladi Subbarao have been promoted as Associate professors.

Congratulations on your new position!



**Dr. Venkata Dilip
Kumar Pasupuleti**



**Dr. Saladi S.V.
Subbarao**

Non Destructive Testing Laboratory

The purpose of education is not achieved outrightly without labs and practical knowledge. It exposes students to deal with various real-life hiccups. It is important to update equipment in the laboratory with time to keep pace with the world that reforms every day. This semester the new NDT lab was established, with three advanced equipment:



Ultrasonic Pulse Velocity Tester (Pundit Lab +)



Profometer PM 600- Rebar



Locator Original Schmidt Rebound Hammer (Digital).

WEBINAR SERIES

A series of four webinars was organized in May 2021. The entire civil engineering student community of MU attended the talks. The speakers included:



Dr. Ravi Kishore

IIT Jodhpur

Topic: "Challenges and Opportunities in Structural Fire Engineering" - Thursday, 7th May, 2021

Dr. KVL Subramaniam

Dean (Planning & Construction), IIT Hyderabad

Topic: "Careers in Civil Engineering" - Thursday, 14th May, 2021



Dr. A. K. Jain

Retired Professor, IIT Roorkee

Topic: "Demystifying Structural Engineering" - Thursday, 21st May, 2021



Dr. B. K. Rastogi

NGRI and ex-DG, ISR Gandhinagar

Topic: "Geotechnical Investigations for Seismic Hazard Assessment" - Thursday, 28th May, 2021



Walkthrough to Excellence with Doyens of Structural Engineering



Dr. Prem Krishna

Former Professor, IIT Roorkee
Governing Council Member, IAStructE



Prof. Mahesh Tandon

Managing Director, Tandon Consultants Pvt Ltd
Guest Professor, IIT Gandhinagar

*“Walkthrough to Excellence with doyens of Structural Engineering”
was organised on 28th October 2021.*

Two doyens of Structural Engineering community Prof. Mahesh Tandon and Dr. Prem Krishna were invited to present their journey of excellence and inspire students to pursue a career in structural engineering. Following the webinar, students of the Master's Program in Computer Aided Structural Engineering had an in-depth discussion with both the doyens, gaining insights from their acumen in academia, construction industry, and structural consulting.

The "Young Geotechnical webinar" series was organized by the IGS student chapter of Mahindra University to hear from the fresh Doctorate minds on 11th Dec, 2021



Dr. Bhargav Kumar KP

Ph.D from IIT Hyderabad
Topic: Utilization of Industrial Waste Materials in Geotechnics

Dr. Sriram

Ph.D from IIT Madras
Topic: Importance of durability study for chemically stabilised expansive soils



A quick section highlighting the recent publications that MU professors & students have been involved as an author/editor in.

- 1 Bansal, T., Talakokula, V., & Mathiyazhagan, K. (2022). *"Equivalent structural parameters based non-destructive prediction of sustainable concrete strength using machine learning models via piezo sensor."* Measurement, 187, 110202.
- 2 Bansal, T., Talakokula, V., & Sathujoda, P. (2021). *"A machine learning approach for predicting the electro-mechanical impedance data of blended RC structures subjected to chloride laden environment."* Smart Materials and Structures, 31, 010536
- 3 Singaram, Kailash Kumar, Mohd Ataullah Khan, and V. Talakokula. *"Statistical analysis of fly ash and slag blended geopolymer concrete."* Materials Today: Proceedings (2021).
- 4 Subbarao, SSV., Raghuram Kadali (2021). *"Impact of COVID-19 pandemic lockdown on public transportation system and strategic plans to improve PT ridership: A review"*. Innovative Infrastructure Solutions, Springer
- 5 B Raghuram Kadali, Shantanu Ingole, Kannan K. R Iyer, Saladi S.V. Subbarao (2021): *"User Perception towards Ride hail Service: A case of Nagpur city, India"*, European Transport, Issue No. 84, December 2021 (in press)
- 6 "Chennarapu, Hariprasad, et al. *"The analysis and design of MSE wall by considering variation of friction angle of backfill material along the depth."* Innovative Infrastructure Solutions 7.1 (2022): 1-7.
- 7 Sidhu Ramulu and Hariprasad Chennarapu (2021) *"Quality control of Compaction with Lightweight Deflectometer (LWD) Device: A State-of-Art"*. International Journal of Geo-Engineering. Springer.

8 Venugopal, Mandala, Mohd Ataullah Khan, and Jayaprakash Vemuri. *"Statistical analyses of hooked-end steel fibers in concrete."* Materials Today: Proceedings (2021).

9 Mandala Venugopal, Mohd Ataullah Khan, and Jayaprakash Vemuri. *"Statistical analyses of hooked-end steel fibers in concrete."* (2022).

10 Naraharisetty, V., Talari, V. S., Neridu, S., Kalapatapu, P., & Pasupuleti, V. D. K. (2021, August). *"Cloud Architecture For IOT Based Bridge Monitoring Applications. In 2021 International Conference on Emerging Techniques in Computational Intelligence (ICETCI)"* (pp. 39-42). IEEE.

11 Govardhan, Polepally, Prafulla Kalapatapu, and Venkata Dilip Kumar Pasupuleti. *"Identification of Multiple Cracks on Beam using Fuzzy Logic."* 2021 International Conference on Emerging Techniques in Computational Intelligence (ICETCI). IEEE, 2021.

12 "Singaram, Kailash Kumar, Mohd Ataullah Khan, and V. Talakokula. *"A Predictive Model for Fly Ash and Slag Blended Geopolymer Concrete"*, F-EIR Conference 2021 on Environment Concerns and its Remediation: Materials Science.

13 Vishwaajith Pemmasani, Kanuka Mareddy, Jayaprakash Vemuri, and KVL Subramaniam. *"Time-Frequency Analysis of Ground Motions from the 1999 Chamoli Earthquake"* published at DRSD 2021 of Asian Institute of Technology.

14 Vinuthna Ambatipudi, Kanuka Mareddy, Jayaprakash Vemuri, and K.V.L Subramaniam *"Time-Frequency Analysis of Strong Ground Motions from the 1991 Uttarkashi Earthquake"* published at DRSD 2021 of Asian Institute of Technology.

FUNDING & APPRECIATION

Mahindra university's student chapter has been appreciated by the committee of the Indian Geotechnical Society of the Hyderabad chapter in recognition of the services, programs, and activities conducted to motivate and inspire the students to work in the area of geotechnical engineering and allied fields for the academic year 2019-2020.



PROJECT FUNDING

Two research projects were recently awarded to the faculty of the civil department.

1 - Project Title: "Development of Economical and Sustainable Precast Building Products for Non-Structural Applications"

PI: Dr. Sri Kalyana Rama J, Mahindra University

Co-PI: Dr. Visalakshi Talakokula, Mahindra University

Agency: Smart Built Prefab Pvt Ltd, Hyderabad to work on for a duration of 3 years.

Congrats to Dr.Kalyanarama and Prof. Visalakshi!

2 - Project Title: "Thermo-Structural Studies on RCC structures for impact analysis"

PI: Dr. Janardhan (CBIT)

Co-PI: Prof. Jagannatha Rao, Prof. Murali Krishna (CBIT), Dr. Sri Kalyana Rama J (Mahindra University)

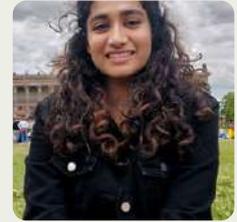
Agency: Advanced Systems Laboratory-Defense Research Development Organization (ASL-DRDO)

Congrats to Dr. Kalyanarama!

celebrating the 2021 batch



KANUKA REDDY
Columbia University, USA
MS in Construction Management



SRILA REDDY NUKKALA
North Carolina State University, USA
MS in engineering management



HASWANT
Northeastern University, USA
MS in engineering management



SREE KEERTHE BEERAM
Northeastern University, USA



RAVI
University of Texas Arlington, USA
MS in Data Science



SAHARSH NANDARAM
University of Washington, Seattle, USA
MS in Construction Management

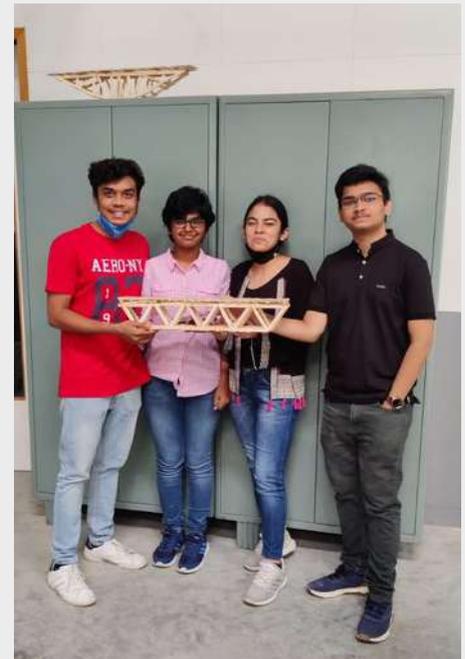


SREE SATYA VENKAT
University Of Texas at Arlington
Course: Masters in Data Science



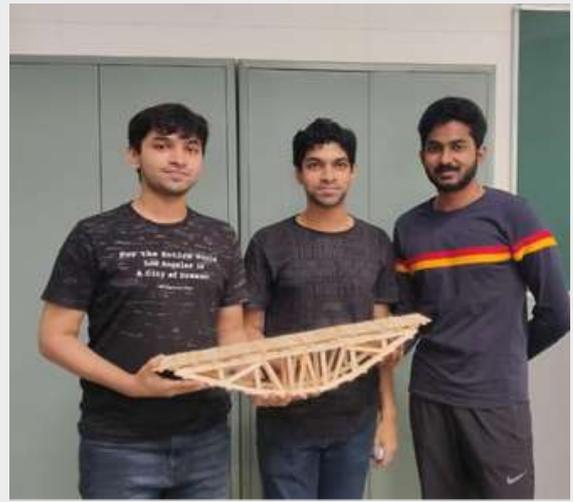
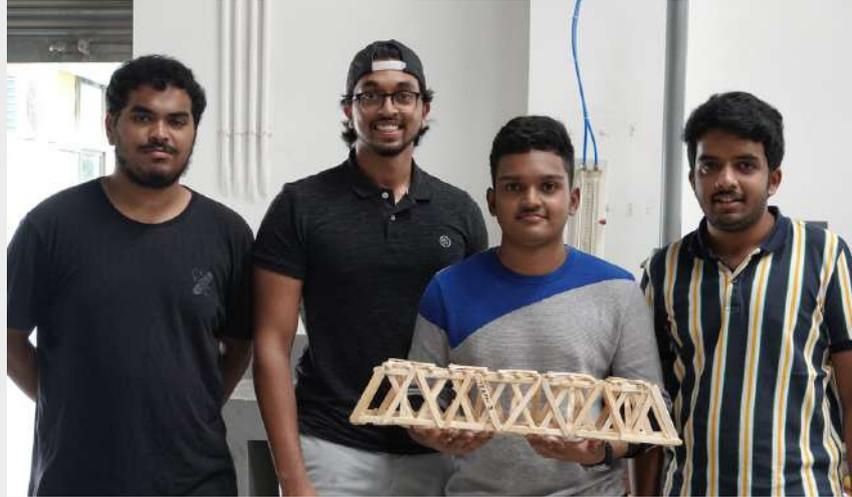
POOJA
Brunel University, London

A glimpse of fall semester 2021



*Learning, achieving and
making memories!*





ASCE Student Committee 2021



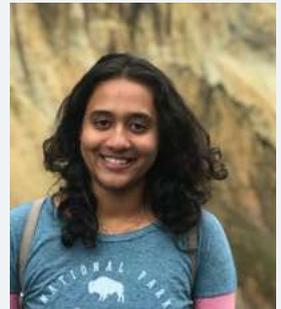
Dr. Saladi S.V. Subbarao
Faculty Advisor



Ruthvik Reddy Kurra
PRESIDENT



Ruthviz Kodali
VICE PRESIDENT



Sahiti Koduru
CORRESPONDING SECRETARY



Sriram Boinpally
TREASURER



Chaitanya Vadla
RECORDING SECRETARY



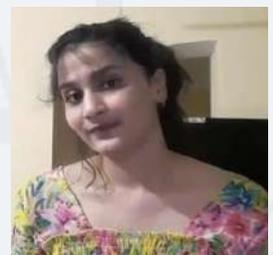
Semanth
CHAIRPERSON: ACTIVITIES



Sloka Gampa
CHAIRPERSON: MEETINGS



Viswajith
CHAIRPERSON: MEMBERSHIP



Vinuthna
CHAIRPERSON: PUBLICITY



Faculty Advisor

Dr. Jayaprakash Vemuri



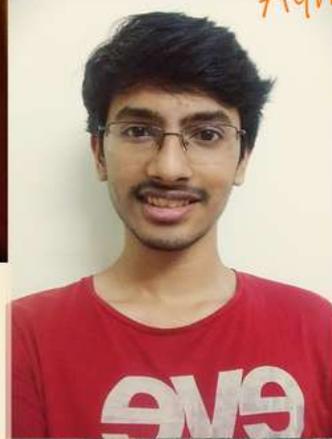
Carol
Rachel

A hand-drawn orange arrow pointing from the text 'Carol Rachel' towards the Faculty Advisor's portrait.

Synthia
Maiyukhi



Ayman
Saquib



**Our
Team.**



Ruthviz
Kodali

A hand-drawn orange arrow pointing from the text 'Ruthviz Kodali' towards his portrait.

Siri Reddy

A hand-drawn orange arrow pointing from the text 'Siri Reddy' towards her portrait.

Sreeja Reddy

A hand-drawn orange arrow pointing from the text 'Sreeja Reddy' towards her portrait.

A Riddle for You!

When Bill, Ed, Jim and Tom started an eighteen-hole golf match the other day they discovered that no one had brought a pencil, so they had to carry their scores in their heads. As a result they got things a bit mixed up. In fact only two of the four statements made by each player as they tried to determine the winner were correct.

Bill: I beat Jim and Tom.

Ed shot 111.

Jim took 6 on the last hole.

None of us broke 100.

Ed: Bill wasn't last.

I was the winner.

Jim finally broke 100.

I shot 98.

Jim: I beat Bill and Ed.

The last hole wasn't my best.

we didn't all break 100.

Tom wasn't the winner.

Tom: Ed beat Bill.

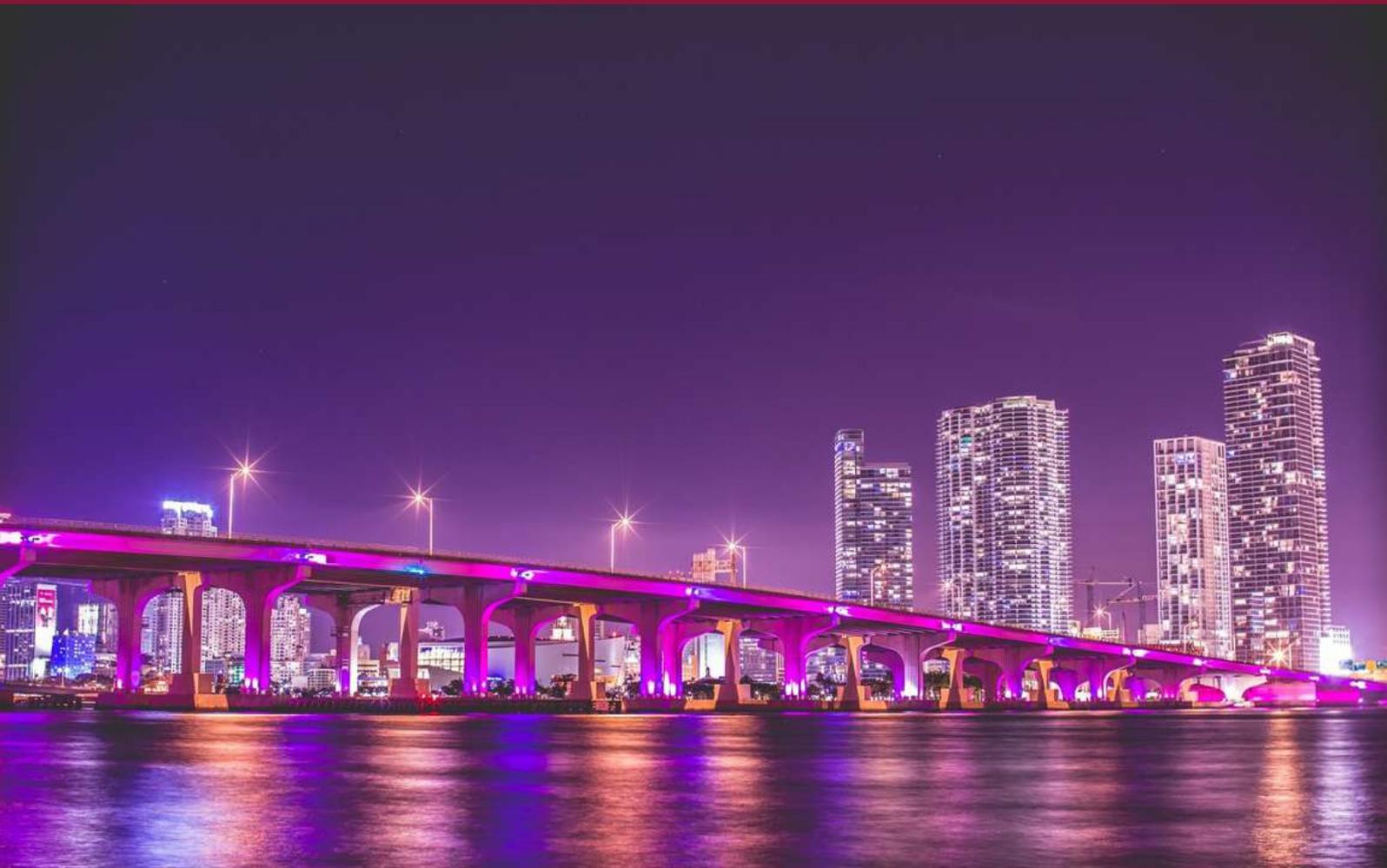
I was the winner.

Bill placed between ED and Jim.

The last hole was Jim's best,

Knowing this, and the fact that all the scores were different,

Can you tell from the statements they made at the "nineteenth hole" who was first, second, third and last?



**We shape our buildings,
thereafter they shape us.**

– Winston Churchill

