



**SHRI G.S. INSTITUTE OF TECHNOLOGY AND SCIENCE, INDORE**  
**DEPT. OF CIVIL ENGINEERING AND APPLIED MECHANICS**  
**NEWSLETTER**

**JULY-DEC 2024**



**Vol. 05 - 2024**

Editorial Team: Dr. S. M. Narulkar (HOD), Prof. M. K. Laghate, Ms. Suninda Parmar, Ms. Nikita Verma, Dr. Arti Sahu.

**Vision of the Department**

A strong source in Civil Engineering field making significant contribution to human resource development considering dynamic needs of the society.

**Mission of the Department**

- M1: To generate experts in Civil Engineering field, useful for the nation and society.
- M2: To develop students for accelerated socioeconomic growth in professional and challenging environment of industries in modern world.
- M3: To motivate the students to apply the knowledge of civil engineering, preserving human values.

**Former IIRS-ISRO Director Prof. Murali Krishna Delivers Sarabhai Memorial Lecture on AI Applications**

CE-AMD hosted an ISRS-funded symposium titled "Remote Sensing/Geospatial Technology - In the AI Era, A State of Art Appraisal" at IRS-ISRO Center, commemorating Dr. Vikram Sarabhai's birth anniversary on 12 August 2024. **Prof. Murali Krishna Venkata Iyyenki**, former IIRS-ISRO Director, delivered the keynote address, emphasizing data's crucial role in AI-driven remote sensing applications.



*The Speaker, Prof. Murali Krishna Venkata Iyyenki, former IIRS-ISRO Director.*



*Attendees gathered at the G. J. Hall, SGSITS for the event.*

Under Institute Director Dr. Vijay Rode's guidance, the event explored the intersection of artificial intelligence with geospatial technologies and remote sensing. Organized with financial support from the Indian Space Research Organization (ISRO), the symposium featured a tribute to Dr. Sarabhai and successfully bridged academic expertise with technological innovation, advancing the future of space science education.

**Expert Talk: Addressing Water Scarcity**

The Civil Engineering Department hosted an informative lecture on water scarcity by **Mr. Devendra Sharma** on 12 September 2024. During the two-hour session, Mr. Sharma highlighted the growing concerns of water scarcity in urban regions and presented comprehensive data on declining groundwater levels. He emphasized innovative conservation techniques including rainwater harvesting systems and smart irrigation technologies that can be implemented at both institutional and community levels. He also discussed several case studies where effective water management strategies had successfully mitigated scarcity issues in drought-prone regions.



*Mr. Devendra Sharma, the speaker delivering lecture*

## Industrial Site Visit to Muradpura, Indore Division by B.Tech IV Year Students

B.Tech IV Year students visited Muradpura Indore Division on July 24, 2024, in collaboration with BIS. The visit provided first-hand exposure to steel fabrication processes, including connections, joints, and welding techniques under the guidance of Er. Vivek Tiwari. This practical experience enhanced students' understanding of industrial standards and construction practices.



*Faculties and B. Tech IV year Students at Muradpura, Indore Division for Exposure Visit.*

## Expert Lecture: Advanced Concrete Technology and Construction Chemicals by FOSROC

The Civil Engineering Department of SGSITS organized an enlightening expert lecture on August 9, 2024, delving into advanced concrete technology and construction chemicals. The session was led by FOSROC specialists Mr. Chetan Upadhyay and Mr. Vimal Parekh, along with their technical team.

The lecture, titled *"The Role of Admixtures in Advanced Concrete Technology and Innovations in Construction Chemicals,"* covered crucial developments in modern construction practices. Students gained comprehensive insights into how chemical admixtures are transforming concrete technology and improving construction quality.



*FOSROC Team (L-R): Mr. Chetan Upadhyay, Mr. Vimal Parekh and technical team & Students during the technical session.*

The FOSROC team shared practical applications and recent innovations in construction chemicals, emphasizing their impact on durability, workability,

and strength of concrete structures. The interactive session allowed students to understand industry perspectives on advanced construction materials and their real-world implementation.

This technical discussion reinforced the department's commitment to bridging academic theory with industry practices, keeping students abreast of the latest technological advancements in civil engineering.



*Interaction between faculty and students during the expert talk.*

## Congratulations to SGSITS Indore for earning NAAC 'A' Grade Accreditation in 2024!

Shri Govindram Seksaria Institute of Technology and Science (SGSITS), Indore, has earned an 'A' grade from the National Assessment and Accreditation Council (NAAC). The accreditation was announced on August 30, 2024, following NAAC's evaluation visit to the campus on August 22-23, 2024.



*SGSITS Indore*

## Welcoming the New Director, Dr. Neetesh Purohit: Steering SGSITS Towards Innovation and Growth



**Dr. Neetesh Purohit** has taken charge as the Director of Shri Govindram Seksaria Institute of Technology and Science (SGSITS), Indore, effective October 30, 2024.

In his vision for the institute, Dr. Purohit aims to equip students to become job creators rather than job seekers by fostering innovation and entrepreneurship. He is committed to implementing the **Multidisciplinary Education and Research University (MERU)** concept under the New

**Education Policy (NEP)** and ensuring that students are well-informed about emerging opportunities arising from government policy changes.

Under his leadership, SGSITS is poised to embrace transformative educational advancements, paving the way for a future-ready institution.

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## FACULTY UPDATES

**Dr. Vijay R. Rode** appointed as Director of SGSITS, Indore on 06-08-2024.

**Dr. Sandeep Narulkar** appointed as Acting Director of SGSITS, Indore on 1-10-2024.

## AWARDS AND ACHIEVEMENTS



**Assoc. Prof. Devendra Dohare** have received a patent on “Artificial Intelligence Based Digital Spirit Level for Construction” on 28 November 2024.

**Congratulations** to our faculty members on completing their doctoral studies:



**Mr. Rakesh Purviya** earned Elite certification with Top 5% distinction in "Availability and Management of Groundwater Resources" course by IIT Kharagpur. He achieved 91% score in this 12-week NPTEL program during July-October 2024, ranking among top performers from 518 candidates.



**Mr. Shivam Singh Chouhan** earned his Ph.D. in Civil Engineering from IIT Jammu on October 12, 2024.



**Ms. Arti Sahu** received her Ph.D. in Civil Engineering from Anna University Chennai on October 27, 2024.

## RETIREMENTS

**Dr. Vijay R. Rode** retired on 30 Sept 2024, – A Pillar of Excellence in Structural Engineering.



*Farewell to Dr. Vijay R. Rode & Mr. Narayan Tingre by CEAMD.*

**Dr. Vijay Rode**, a distinguished faculty member of SGSITS Indore, has been an integral part of the institution, having completed both his graduation and post-graduation from the same institute. He further earned his Ph.D. in Structural Engineering from IIT Mumbai, establishing himself as an expert in the field.

With an illustrious career spanning over 40 years at SGSITS, including more than 30 years of dedicated service, Dr. Rode has contributed immensely to academics, research, and institutional development. He mentored numerous Ph.D. and M.Tech. scholars, guiding them towards excellence in structural engineering. Retiring as the Director of SGSITS, his unwavering commitment to teaching, leadership, and mentorship has left an indelible mark on students, colleagues, and the institution. His legacy will continue to inspire generations to come.

**Mr. Narayan Tingre** retired on 30 Sept 2024

Mr. Narayan Tingre- member of SGSITS Indore, got retired after years of dedicated service, Your presence has always brought warmth and positivity to workplace, and your contributions have not gone unnoticed. you strive to be helpful, patient, and supportive, always ready to assist.

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## RESEARCH PAPER PUBLICATION

- **Bagora, P., Narulkar, S.** Enhancing Monsoon Predictions for the Upper Chambal Catchment Through Temporal and Spatial Downscaling of Predicted Future Precipitation. J. Inst. Eng. India Ser. A 105, 703–717 (2024). <https://doi.org/10.1007/s40030-024-00824-2>.
- **Dr. S.K. Ahirwar** and **Mustafa Shaheen** (2024); “3D Numerical Modelling of Shallow Footing Resting on Tire-Derived Aggregate Backfill”, Transportation Infrastructure Geotechnology. (ISSN: 2196-7202, Impact Factor: 2.6/2023, Scopus), Springer, Volume 12, article number 44, (2025) <https://10.1007/s40515-024-00501-8>
- Dr Anjan Kumar Dutta, Dr. Rajesh M. Bhagat, Yugasini S, Archana Tanawade, **Mr. Devendra Dohare**, Dr M Palanisamy. “Bio concrete for sustainable construction industry in India. Educational Administration Theory and Practice (May 2024). <https://kuey.net/index.php/kuey/article/view/3477>.
- **Mr. Devendra Dohare** “Mapping of Greenhouse Gases Emission from Agricultural Residue Burning in Madhya Pradesh”. International Journal of Research and Analytical Reviews. (December 2024) Volume No. 11 Issue No. 4.



- **Mr. Devendra Dohare** “Comparative Analysis of Various Microbial Community for Removal of Simulated Selected Dye Samples”. International Journal of Research and Analytical Reviews. (December 2024) Volume No. 11 Issue No. 4. **Jaiswal, A., Kumar, R., Venkatesh, K.** et al. “Influence of Dual Layer Confinement of Stone Column Material on the Shear Modulus of the Soil-Column Combined System”. Acad. Sci. Lett.(2024). <https://doi.org/10.1007/s40009-024-01569-z> . (SCIE)
- **Shukla, A., Kumar, R. & Jaiswal, A.** “Influence of Incorporating Waste Rubber Crumbs on Shear Parameters of Recycled and Natural Materials”. Acad. Sci. Lett.(2024). <https://doi.org/10.1007/s40009-024-01508-y> . (SCIE)

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## CONFERENCES

- **Dr. S. M. Narulkar**, presented his paper on “Road Transport Connectivity in Mixed Land-use Area of Indore City: Special Reference to Peri-urban Development” at 15th International Conference on Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC), organized by the Transportation Systems Engineering group of the Department of Civil Engineering, IIT Bombay during 18-20 December 2024.
- **Dr. S.K. Ahirwar & Akhil Sharma** presented his paper on “FEM analysis of Foundation of Hyperboloid Cooling Tower Foundation Soil System” at Deep Foundation Technology for Infrastructure Development in India organized by Deep Foundation Institute of India in collaboration with Indian Geotechnical Society, Goa Chapter. 19-21 September 2024 Panaji Goa.
- **Dr. S.K. Ahirwar & Anant Maurya** presented his paper on “Numerical Model Analysis of Combined Pile-Raft Foundation CPRF by using Midas GPS NX” at Deep Foundation Technology for Infrastructure Development in India organized by Deep Foundation Institute of India in collaboration with Indian Geotechnical Society, Goa Chapter. 19-21 September 2024 Panaji Goa.
- **Asst. Prof. Tarun K. Narnaure and Sourabh Sharma**, presented his research titled "Behaviour of Asphalt using Lignin Modified Binder – A review" at the 10<sup>th</sup> International Conference on Transportation System Engineering and Management (CTSEM 2024) organized by the Department of Civil Engineering, Visvesvaraya National Institute of Technology Nagpur during July 19-20, 2024.
- **Shambhavi Shrivastava** presented her research on "Comparative Study of Bracing System for Optimum Location in RCC frames"

at the International Conference on Sustainable Practices and Advances in Civil Engineering (SPACE) 2024, organized by GLA University, Mathura from November 14-16, 2024.

- **Rahul Gupta** presented his research poster titled "Monolithic Design of Walls with Boundary Elements for Axial Force and Bending" at the National Conference on Futuristic Structural Engineering (StructE NatCon 2024) organized by the Indian Association of Structural Engineers in New Delhi from November 8-10, 2024.

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## FDP's & WORKSHOPS

- **Assoc. Prof. Devendra Dohare** completed a Two week Short Term Training Program (STTP) on “Research Writing, Funding Proposal Development and Patent Drafting” - Jointly organized by Vidya Vihar Institute of Technology, Purnea, Bihar, India & RSP Science Hub, Coimbatore, Tamil Nadu, India during July 8 – 20 2024.
- **Asst. Prof. Suninda Parmar, Asst. Prof. Soumya Sakhlecha, Asst. Prof. Iqra Mansoori, Asst. Prof. Namarata Khede, Dr. Akash Jaiswal and Asst. Prof. Sarika Khedekar** completed an AICTE-ATAL Faculty Development Program on "Risk to Resilience – Innovative Resilient Strategies for Mitigating Climate Change" held at IPS Academy, Institute of Engineering & Science, Indore from December 16-21, 2024.
- **Dr. Arti Sahu**, completed an AICTE-ATAL Faculty Development Program on "Emerging Trends in Civil Engineering for Disaster Management" held at JNTUA College of Engineering from Dec 23 – 28, 2024.

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## CONSULTANCY WORK

### Mortakka Bridge Safety Assessment

NHAI and SGSITS engineering experts conducted a crucial safety assessment of the 70-year-old Mortakka Bridge near Omkareshwar on 19 July 2024. The inspection team examined pillar integrity and span conditions through load testing while maintaining single-lane traffic flow. Initial findings indicate the bridge is suitable for B-class traffic under controlled speeds. To enhance safety, authorities plan to implement an integrated traffic monitoring system with CCTV surveillance. A comprehensive safety report with vehicle weight recommendations is forthcoming.



*Engineering team evaluating structural components beneath the Mortakka Bridge using crane assistance.*



*Prof. M. K. Laghate & Er. Vivek Tiwari at Mortakka Bridge for inspection.*

- Akhil Sharma (2024): FEM Analysis on Foundation of Hyperboloid Cooling Tower Using Midas GTX NX 2023.
- Prashod Mishra (2024): Experimental Study on Natural Geocomposite Reinforced Unpaved Road.
- Pranjal Chanderiya (2024): Study of Heterogeneous Traffic Congestion for Arterial road- A case Study of Indore City.

#### **Asst. Prof. Mahesh Chandra**

- Rahul Gupta (2024): Modification proposed in expressions for moment of resistance in RC walls designed as per IS: 13920-2016.

### **Construction Assessment at IIM Indore**

**Dr. H. K. Mahiyar** and **Dr. S. B. Ajmera** conducted a technical inspection of construction practices at IIM Indore, evaluating ongoing projects and building methodologies.

### **Mandi Board Infrastructure Review**

A separate inspection was carried out at the Madhya Pradesh State Agricultural Marketing Board by **Dr. H. K. Mahiyar**, **Dr. R. K. Khare**, and **Prof. M. K. Laghate**, focusing on structural assessment and infrastructure facilities.

## **STUDENT SECTION**

### **PG Thesis Completion**

#### **Dr. R. K. Khare**

- Shambhavi Shrivastava (2024): Seismic Analysis of Multi-storey RCC Frames with different locations of steel bracings for enhanced performance.
- Anuj Pal (2024): Structural Conservation and Restoration of Heritage Buildings.

#### **Dr. S. K. Ahirwar**

- Manohar Kushwah (2024): Experimental Study on Lightweight Concrete Using Industrial Waste.

