

INFRASTRUCTURE PULSE – NEWSLETTER

M. S. PATEL DEPARTMENT OF CIVIL ENGINEERING, CSPIT, CHARUSAT

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July-December 2024

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Vision of the Department

“To be the center of excellence in education, consultancy & research having recognition at national and international level.”

Mission of the Department

“To impart the state-of-the-art education through innovative research and develop the graduates having abilities to handle integrated professional activities.”

From the Desk of HOD

At the outset, I would like to complement the editorial team for successfully bringing out the second issue of "INFRASTRUCTURE PULSE". The topics covered are relevant and give an account of the events and activities that have taken place within the Civil Engineering Department in the recent past.

Regular issues of the INFRASTRUCTURE PULSE will give an opportunity to stakeholders of the Civil Engineering Department to contribute to various aspects of Civil Engineering, besides helping to keep a record of departmental activities.

I would urge all staff members to actively contribute to making the INFRASTRUCTURE PULSE a success.

I once again congratulate all for the second issue of INFRASTRUCTURE PULSE.



Event Organized

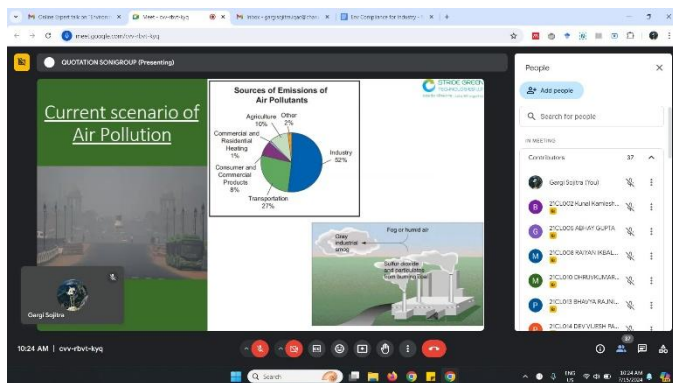
Department Activities

1. Expert talk on 'Environment Compliance for Industry'

July 15, 2024

Objective: To educate attendees about environmental laws and compliance processes.

Description: An online expert lecture was delivered by Mr. Luv Patadiya, Director & Founder, Stride Green Technologies LLP, Mehsana to spread knowledge about environmental law and learn about the environmental compliance process for various industries. The session covered key regulatory frameworks, pollution control measures, and sustainable industrial practices to minimize environmental impact. Real-life case studies and compliance challenges were discussed to help participants understand the significance of adhering to environmental norms.



2. 'Mock PG CET for Civil Engineering'

July 26, 2024

Objective: To allow students to assess their readiness for the PG CET entrance examination.

Description: An online mock Post Graduate Common Entrance Test (PG CET) examination was organized by Prof. Neha Chauhan from M. S. Patel Department of Civil Engineering to give students a platform to check their preparation for the PG CET entrance test required for M.Tech admissions. The test simulated real examination conditions, helping students to manage time effectively and analyze their performance. A detailed discussion session followed, offering insights into common mistakes and strategies for improvement in various subject areas.

3. Expert talk on 'Understanding the Essence of Project'

July 26, 2024

Objective: To educate students on project basics, functions, and stages.

Description: An online expert lecture was delivered by Mr. Samir Gupte, Technical Director, Geo Designs and Research Pvt. Ltd., Vadodara to provide knowledge on the basics of projects, functions of projects, and various stages of projects. The session emphasized project planning, execution, risk management, and monitoring processes, which are crucial for successful project completion. Students also learned about tools and techniques used in project management for efficient resource allocation.



4. One-day workshop on 'Revit Mastery Workshop: Hands-on session'

July 29, 2024

Objective: To provide hands-on experience in designing buildings and creating 3D models using Revit.

Description: An online workshop was conducted by Mr. Jugal Doshi from Systra, Ahmedabad. He is alumni of CHARUSAT. The aim of this workshop was to provide knowledge on designing buildings and creating 3D models of architectural designs. The session allowed students to explore the full potential of Revit software, including parametric modeling, Building Information Modeling (BIM) applications, and collaboration tools. Practical exercises were conducted to enhance understanding of creating detailed architectural layouts and structural elements.



5. Poster making competition on ‘Stand United Stand Together to Make Our Campus Ragging-Free’

August 13, 2024

Objective: To raise awareness about the negative impacts of ragging.

Description: An online poster-making competition was organized by Prof. Megha Desai from M. S. Patel Department of Civil Engineering to spread awareness among students that ragging is a social evil and a crime. The competition encouraged students to creatively express their thoughts on anti-ragging policies, disciplinary actions, and creating a safe and inclusive campus environment. The best posters were displayed across the campus to reinforce the message.



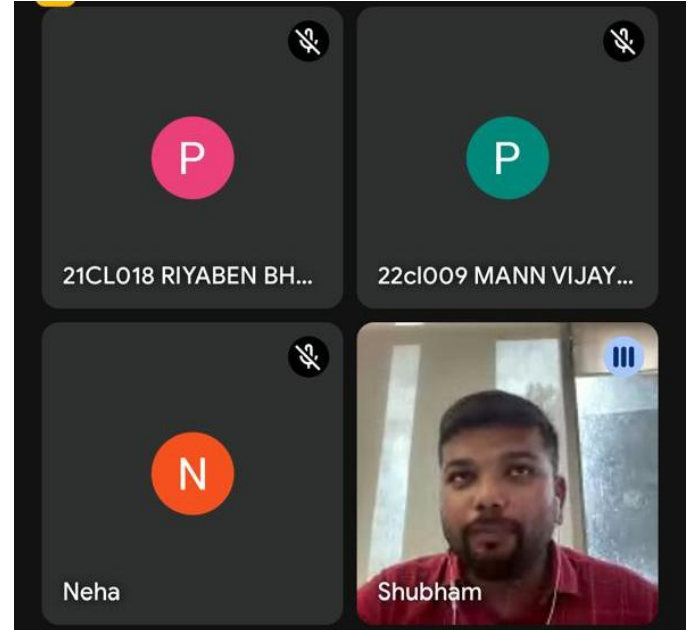
6. Expert Lecture on 'Charting your Careers in Disaster Risk Management'

August 29, 2024

Objective: To provide knowledge about different career paths in disaster risk management and to spread awareness about disaster risk management and climate change adaptation.

Description: An online expert lecture was delivered by Mr. Shubham Daberao, Research Associate cum Program Coordinator at Gujarat Institute of Disaster Management

(GIDM), Gandhinagar to provide knowledge about different career paths in disaster risk management and to spread awareness about disaster risk management and climate change adaptation. This program was done in collaboration with the GIDM. The lecture discussed emerging job roles, required skills, and the role of engineers in disaster mitigation and preparedness.

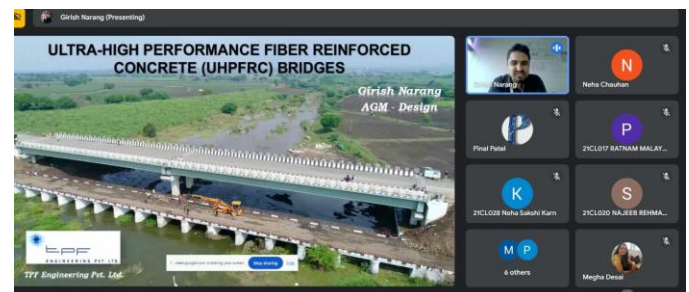


7. Expert lecture on ‘Bridge Construction using Ultra High Performance Fiber Reinforced Concrete’

August 30, 2024

Objective: To educate on the applications of UHPFRC in bridge construction.

Description: An online expert lecture was delivered by Mr. Girish Narang from TPF Engineering Pvt. Ltd., Pune to provide knowledge of various applications of Ultra-High Performance Fiber-Reinforced (UHPFRC) in bridge construction, including both new constructions and the rehabilitation of existing structures. The session covered innovative material properties, structural behavior, and case studies showcasing its successful implementation in real-world projects. Attendees learned about cost-benefit analyses and sustainability aspects of UHPFRC in infrastructure development.



8. Expert Lecture on 'Mastering Mega-Projects: A Techno-Economic Case Study on the Project Management of the Hoover Dam'

September 9, 2024

Objective: To expose students to project management techniques.

Description: An online expert lecture was delivered by Dr. Sarvesh Swarup, Former Deputy Director General, Ministry of Commerce and Industry, Govt. of India to expose students to the project management techniques utilized in the construction of Hoover Dam. The session covered key challenges, planning strategies, engineering innovations, and economic implications involved in constructing one of the most significant civil engineering projects in history. Practical insights on risk management and large-scale coordination were also discussed.



9. One Day Workshop on 'Structural Optimization Techniques for Civil Engineering: Hands-On Session'

September 21, 2024

Objective: To introduce the principles of structural optimization and demonstrate key optimization algorithms.

Description: An offline workshop was conducted by Dr. Rupesh Kumar, Assistant Professor from K. R. Mangalam University, Gurugram, Haryana to introduce participants to the core principles of structural optimization and its importance in designing efficient, sustainable, and cost-effective structures. The session included software demonstrations, optimization algorithms, and case studies of real-world applications. Attendees engaged in problem-solving exercises to enhance their practical knowledge.

10. Short-Term Training Programme on 'Seismic Analysis of Structures'

September 23-27, 2024

Objective: To provide a solid foundation in seismic principles and structural dynamics.

Description: An offline short-term training program was conducted by Prof. T. K. Datta, Adjunct faculty at the National Centre for Disaster Mitigation & Management (NCDMM), Malaviya National Institute of Technology (MNIT), Jaipur to provide participants with a solid foundation in seismic principles. The program covered earthquake-resistant design methodologies, structural dynamics, and seismic retrofitting techniques. Hands-on sessions included software simulations and case studies of seismic failures and successes.



11. Expert Session on 'City Development & Challenges'

September 30, 2024

Objective: To understand the dynamics of urban development and evaluate case studies.

Description: An offline expert session was conducted by Shri Keshav Varma, Retd. IAS to understand the dynamics of urban development and evaluate case studies on city development. The discussion covered aspects of sustainable city planning, infrastructure challenges, and

policy frameworks shaping urban growth. The session featured insights from experienced urban planners and policymakers.

examination patterns, and preparation strategies for competitive examinations. Experts shared success stories and guidance on career prospects in the public sector.



12. Expert talk on ‘Emerging Areas in Transportation Engineering’ October 7, 2024

Objective: To make everyone aware of road safety and to understand the traffic measures to enhance road safety.

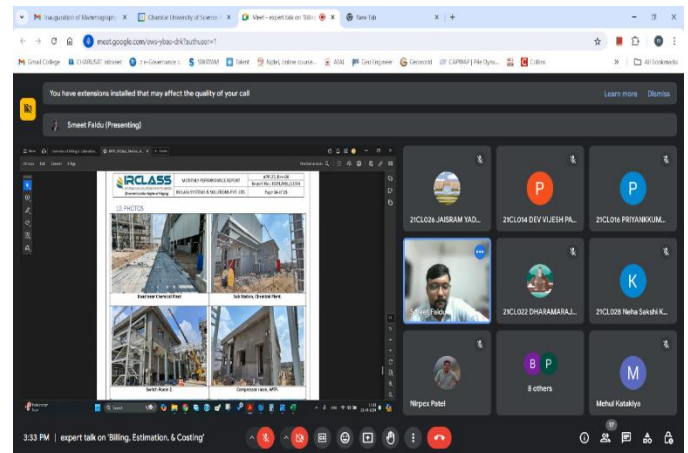
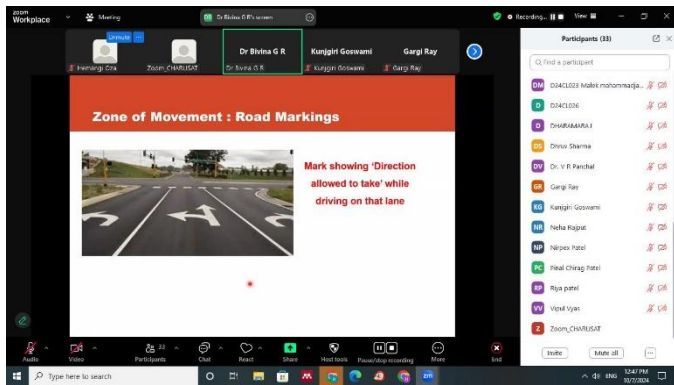
Description: An online expert lecture was delivered by Dr. Bivina G. R., Assistant Professor at Maulana Azad National Institute of Technology (MANIT), Bhopal, Madhya Pradesh to make everyone aware of road safety and to understand the traffic measures to enhance road safety. The session addressed evolving challenges in urban mobility, intelligent transportation systems, and innovative solutions for traffic congestion. Experts shared global best practices and future trends shaping transportation infrastructure.

Alumni Activity

1. Expert talk on 'Billing, Estimation & Costing' August 21, 2024

Objective: To equip participants with skills in project cost estimation, billing, and budget management.

Description: An online expert lecture was conducted by Mr. Smit Faldu, Owner of Diamond Tools Pvt. Ltd., Morbi to provide participants with a comprehensive understanding of the principles and practices of billing, estimation, and costing in construction projects. The session highlighted cost estimation techniques, contract management, and budgeting strategies. Participants were introduced to practical case studies showcasing real-world applications.



13. Expert talk on ‘Scope for Civil Engineers in Gujarat Government Services’ October 16, 2024

Objective: To guide students on preparing for government positions.

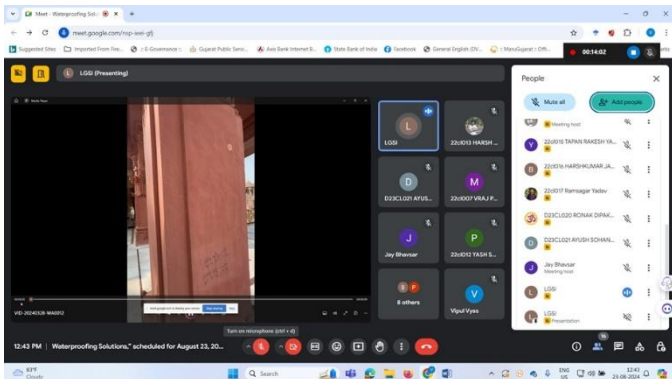
Description: An offline expert lecture was delivered by Mr. Akshay Patel, Founder and Leader Holistic Academy, Gandhinagar on how to prepare for government positions in Gujarat, exclusively offered to Civil Engineers. The session included details on eligibility criteria,

2. Expert talk on 'Water Proofing Solutions'

August 23, 2024

Objective: To raise awareness about advancements in waterproofing technologies.

Description: An online expert lecture was delivered by Mr. Hirak Shah, Founder of LGSI & Co-founder of Hydro Check, Vadodara to raise awareness about advancements in waterproofing technologies in construction industries. The session covered different types of waterproofing techniques, including membrane, integral, and coating-based solutions. Industry experts provided insights into selecting the right waterproofing materials for different structures to enhance durability.



3. A seminar on 'Future Trends in Urban Transport and Road Safety'

October 22, 2024

Objective: To provide career guidance and networking opportunities.

Description: An offline seminar was conducted by Mr. Parth Karia S., Founder and Director at KATCH Mobility, Ahmedabad focused on career guidance, development, networking, alumni-student relations, enhanced alumni engagement, and showcasing success stories. He is alumni of CHARUSAT University. The discussion highlighted innovations in smart mobility, pedestrian-friendly infrastructure, and policy-level interventions for safer and more sustainable urban transport.



Industrial Visits

1. Industrial Visit to 'GIFT City, Gandhinagar'

July 20, 2024

Objective: To provide students with exposure to advanced construction techniques and infrastructural knowledge.

Description: An industrial visit to GIFT City, Gandhinagar, was organized by M. S. Patel Department of Civil Engineering for students to make them aware of advanced construction techniques, utility facilities, infrastructural knowledge, and automatic solid waste management systems. The visit provided a real-time understanding of smart city planning, green building practices, and high-tech urban infrastructure. Students gained exposure to sustainable construction methodologies and digital governance systems implemented in GIFT City.



2. Academic Tour to 'Smritivan Earthquake Memorial Museum, Kutch, Bhuj'

September 30 - October 2, 2024

Objective: To enhance understanding of earthquake-resistant structures and to create awareness of the historical and cultural significance of the Bhuj Earthquake.

Description: An academic tour was organized by M. S. Patel Department of Civil Engineering to enhance understanding of earthquake-resistant structures and disaster management. The visit allowed students to explore interactive exhibits, historical records of the Bhuj earthquake, and advanced seismic engineering

applications. Discussions with experts at the site provided insights into post-disaster recovery and resilient construction methodologies.



3. Industrial Visit to 'Canal Syphon - Karai, Gandhinagar'

October 11, 2024

Objective: To provide a practical insight into the structure and functioning of the canal syphon.

Description: An industrial visit was organized by M. S. Patel Department of Civil Engineering to provide a practical insight into the structure and functioning of the canal syphon, which is an essential component of water resources and hydraulic structures engineering. Students observed hydraulic control mechanisms, flow regulation systems, and maintenance aspects crucial for efficient water distribution networks.



4. Industrial Visit to 'Amul Chocolate Plant, Mogar'

December 27, 2024

Objective: To learn about the dairy industry process and effluent treatment.

Description: An industrial visit was organized by M. S. Patel Department of Civil Engineering to learn about the production process of the dairy industry and gain knowledge about the Effluent Treatment Plant (ETP). The visit included guided tours of manufacturing units, insights into quality control measures, and discussions on waste management practices in food processing industries.



Training and Placement

Ms. Neha Sakshi Karn, Mr. Niraj Saru, Mr. Anand Raj and Mr. Dharamaraj Sahani from B. Tech. (Civil Engineering) have been selected by Hi-Tech Engineers Pvt. Ltd., Ahmedabad with the package of Rs. 3.61 LPA, showcasing their potential in the professional domain of civil engineering. The company is known for its excellence in engineering solutions and infrastructure development and offers dynamic opportunities for young engineers in the civil and structural fields. The organization provides quality services in the field of engineering and infrastructure.

Mr. Jayeshram Yadav, B. Tech. (Civil Engineering) has received an internship offer from Soilmate Laboratories & Consultancy LLP, Ahmedabad with a monthly stipend of Rs. 12,000. The firm specializes in geotechnical investigations and soil testing, contributing significantly to civil engineering consultancy services.

Research & Development Activities

(A) List of Research Papers Published in Journals

Name of Authors	Title of Paper	Journal Title	Publication Month
Rupesh Kumar Tipu, Vijay R. Panchal, Vandana Batra, Suman and Kartik Pandya	Predicting compressive strength of concrete with iron waste: a BPNN approach	Asian Journal of Civil Engineering	July 2024

(B) List of Research Papers Published in Conferences

Vipul Harshadbhai Vyas and Vijaykumar Ramanlal Panchal	Seismic Isolation of Liquefied Natural Gas Storage Tanks Using Quintuple Friction Pendulum System (QTFP)	Third International Conference on Advances in Concrete and Construction Engineering for Sustainability (ICACC 2024), November 6-8, 2024, Rajagiri School of Engineering & Technology (RSET)-Autonomous, Kakkanad, Kochi
Patel Milan Bipinbhai, Vipul Harshadbhai Vyas, and Vijaykumar Ramanlal Panchal	Seismic Response of a Ground-Supported Water Tank Isolated by a Variable Frequency Ball Isolator (VFBI) Under Variable Friction Coefficient	14th International Conference on Science and Innovative Engineering-2024, April 27-28, 2024, Prince Dr. K. Vasudevan College of Engineering and Technology
Hemangi Gaurangbhai Oza and Tarjan Pathak	A Review on Micro and Nano Plastics Removal from Aqueous Environment through Bionanomaterials	Recent Advancements in Materials science and Nanotechnology (RAMAN) - 2024, March 28-30, 2024, Institute of Technology, Nirma University, Ahmedabad, Gujarat (India)
Hemangi Gaurangbhai Oza, G. Jayanthi, K. Karthikeyan, Mrugesh Desai, Shyama Langnecha, Falguni Maheshwari, Manisha Desai, and Shivam Kapoor	Vermicomposting for Zero Waste: Upcycling Spent Mushroom Substrate and Paper Waste	14th International Conference on Sustainable Waste Management-Circular Economy and IPLA Global Forum 2024, November 28 - December 01, 2024, GITAM (Deemed to be) University Visakhapatnam, Andhra Pradesh



THE ACADEMIC INSIGHTS

Proudly Presented To

M. S. Patel Department
of Civil Engineering, CSPIT, CHARUSAT

for being featured in



*in recognition of the commendable contributions the
Civil Engineering Department has made towards the
society and the educational fellowship*

RS Prasad
Editor-in-Chief

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