

## FACULTY GROUP



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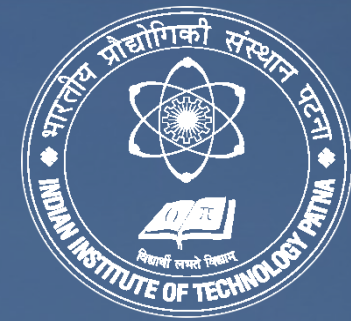
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Roy**



**Dr. Trishiki  
Raychoudhury**



**Dr. Ramkrishna  
Bag**



**INDIAN INSTITUTE  
OF TECHNOLOGY,  
PATNA**

**DEPT. OF CIVIL AND  
ENVIRONMENTAL  
ENGINEERING**

**M.TECH. BATCH:  
2016-2018**

**PLACEMENT  
BROCHURE**



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# ABOUT US

Keeping in mind the infrastructure requirements for improved quality of life in a growing society as well as for industry and economic development, the need of the hour is to focus on Civil and Infrastructure Engineering with interdisciplinary approach. In order to satisfy the current societal needs and growing industry demands, the M.Tech in Civil and Infrastructure Engineering program started in 2014 under the aegis of Department of Civil and Environmental Engineering at Indian Institute of Technology Patna intends to be the forefront of imparting engineering education by amalgamating traditional Civil Engineering with modern Infrastructure Engineering.

The program is designed to provide in-depth knowledge in the fundamentals, design, analysis and implementation of solutions for modern-days Civil Infrastructure problems. Moreover, the program intends to emphasize application-oriented and thesis/project-based learning.



## COURSES OFFERED

### Core Courses

1. Finite Element Methods
2. Advanced Engineering Mathematics
3. Civil Engineering Design I & II
4. Technical Communication
5. Civil Engineering Lab I&II

### Electives

1. Structural Dynamics
2. Soil Exploration
3. Ground Improvement Techniques
4. Air Pollution and Control
5. Railway Engineering
6. Site Remediation
7. Groundwater Hydrology



## PROJECT LIST

1. Recovery of precious metals from electronic waste.
2. Dynamic response of geocell foundation
3. Seismic response of fine saturated sand due to silt intrusion.
4. Fragility curve for various building in Patna region using non linear static method for vulnerability assessment.
5. Ground improvement using Bamboo reinforcement.
6. Structure health monitoring.
7. Simulation of rail ballast tri-axial testing under static and dynamic loading in ABAQUS.
8. Effect of ground motion duration on parameter such as IDR., reduction factor, ductility demand for SDOF and MDOF.



## SPONSERED PROJECTS

1. Occurrence, fate and Removal of Emerging Contaminants in Surface Water.
2. Development of Gravity-based Household Filter for Simultaneous Removal of Arsenic and Iron Contamination of Groundwater in Patna District, Bihar, India.
3. Seismic response, damage and vulnerability of structures in Patna for future earthquakes.
4. Arsenic immobilization by in-situ synthesis of iron-based adsorbent under reducing environment within porous media.
5. Evaluate the fate and transport and implication of engineered nanoparticle retention in porous media



## RESEARCH LABS

### Environmental Engineering Lab



### Soil Dynamics Lab



### CAD Lab



### Geotechnical Engineering Lab

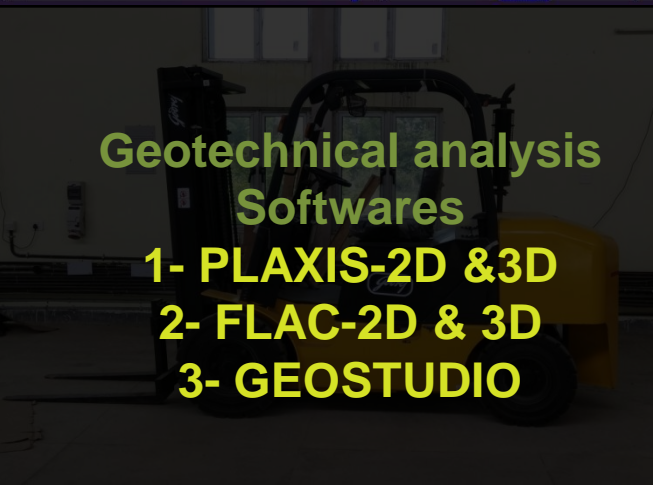


### Transportation Engineering Lab

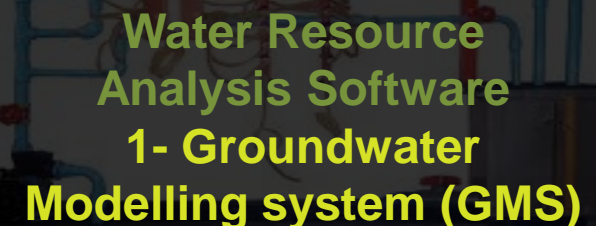
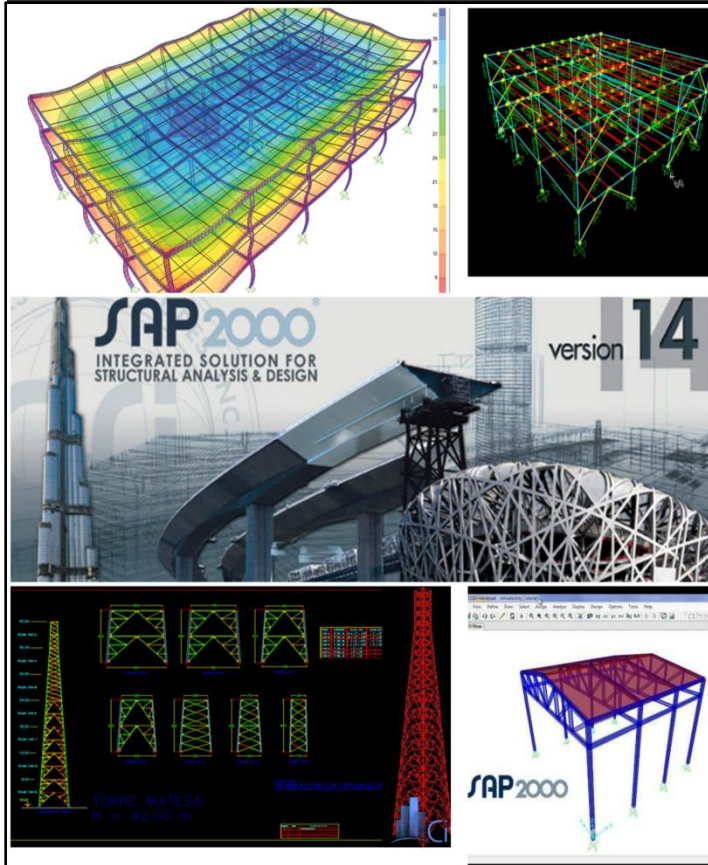


### Structural Engineering Lab





- 1- SAP 2000
- 2- OPENSYS
- 3- ABAQUS



# Water Resource Analysis Software

## 1- Groundwater Modelling system (GMS)

