

# FRESHER'S HANDBOOK

CIVIL ENGINEERING DEPARTMENT

2022-23



# Disclaimer

Though the ISCP (Institute Student Companion Program) has taken care while compiling the handbook, neither the council nor the Institute can be held responsible for errors/inadequacies that may have inadvertently crept in. This handbook cannot be used as a basis for making a claim on facilities/concessions/interpretation of rules/statues or the like. If there is some critical information to which the reader of this handbook refers, it is with his or her own responsibility that it is put to use, with cross verification if need be.



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# About the Institute



Established in 1958, the second of its kind, IIT Bombay was the first to be set up with foreign assistance. The funds from UNESCO came as Roubles from the then Soviet Union. In 1961 Parliament decreed the IITs as 'Institutes of National Importance'. Since then, IITB has grown from strength to strength to emerge as one of the top technical universities in the world.



The institute is recognized worldwide as a leader in the field of engineering

education and research. Reputed for the outstanding caliber of students graduating from its undergraduate and postgraduate programs, the institute attracts the best students from the country for its bachelor's, masters and doctoral programs. Research and academic programs at IIT Bombay are driven by an outstanding faculty, many of whom are reputed for their research contributions internationally. IIT Bombay has secured the first position in India and 177th rank this year in the Quacquarelli Symonds (QS) World University Rankings (2022). IIT Bombay has secured the fourth position in 'Overall' category, the third position in 'Engineering' category and eleventh position in 'Management' category of the National Institutional Ranking Framework (NIRF) for 2020.

IIT Bombay also builds links with peer universities and institutes, both at the national and the international levels, to enhance research and enrich its educational programs. The alumni have distinguished themselves through their achievements in and contributions to the industry, academics, research, business, government and social domains. The institute continues to work closely with the alumni to enhance its activities through interactions in academic and research programs as well as to mobilize financial support.

Over the years, the institute has created a niche for its innovative short-term courses through continuing education and distance education programs. Members of the faculty of the institute have won many prestigious awards and recognitions, including the Shanti Swaroop Bhatnagar and Padma awards.

Located in Powai, one of the northern suburbs of Mumbai, the residents of the institute reap the advantage of being in the busy financial capital of India, while at the same time enjoying the serenity of a campus known for its natural beauty. A fully residential institute, all its students are accommodated in its 15 hostels with in-house dining; the campus also provides excellent amenities for sports and other recreational facilities.



# About the Department

**VISION:** To be the fountain-head of new ideas and innovations in Civil Engineering.

**MISSION:** To offer world-class undergraduate and postgraduate education, research guidance, professional consultancy, outreach and manpower training as well as leadership in Civil Engineering.

Civil Engineering Department is part of the Indian Institute of Technology, Bombay since its inception (1958). The Indian Institute of Technology Bombay (IITB) ranks in the top 100 in the world and first in India for its civil engineering course and overall 152nd rank according to QS World University Rankings 2020.

The department has developed strong links with civil infrastructure, academic and research agencies, both within and outside the country. Besides high-quality teaching and instruction, the Department is actively involved in basic and applied research and consultancy and provides high quality technical advisory support through various R&D projects and consultancy to various organizations. The Department of Civil Engineering, with its multifaceted faculty, continues to maintain and cultivate its strong links with the infrastructural industry and academic and research institutions both within and outside the country.



## Message from HOD



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Civil Engineering  
IIT Bombay  
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Dear New Students,

Welcome to IIT Bombay!! Heartiest Congratulations to you all for getting selected as Postgraduate (M.Tech. / Ph.D.) student of the Civil Engineering Department of IIT Bombay. You are one of the best students in the country who could either qualify one of the toughest examinations of the country i.e., Graduate Aptitude Test in Engineering (GATE), or qualified through rigorous interview and selection process of the department. Additionally, I as the former Organizing Chairperson of GATE-2021 and former zonal Chairperson of GATE-2020, want to commend all GATE qualified candidates who are joining in M.Tech. program, for winning the battle against all odds created by the Covid-19 pandemic situation.

This year our department had received a record number of applications (around 573) for admission in Ph.D. program. You are only a few lucky ones who got selected because we found you are the best with huge potential to become country's some of the top future academician / researcher / entrepreneur / industry expert / leader.

This year our department also have seen many folds increase in the number of applications from foreign candidates (about 100+), who had applied for M.Tech. and Ph.D. program from various other countries.

All these data clearly show the huge demand of the Postgraduate (M.Tech. and Ph.D.) program of our department. You may know that our department's recent QS world ranking is between 51-100, with all India rank number ONE (1st), in the domain of Civil Engineering. Our expert faculty members are involved in several basic and applied research works, many of which also get translated to solve various challenging issues of the country and society at large. Eight of our department faculty members are also listed in top 2% scientists/researchers of the world as per the recent Stanford University database. These are possible because of various contributions made by several of our former PG students of this department. You will find several finest and best teachers from the list of our department faculty members, some of whom you might be knowing already through NPTEL and other various online teaching platforms.

As a PG student, you will get many opportunities to learn several new things from this department of IIT Bombay which will shape your career. Freedom is one of the keywords which is best utilized for the better growth of a student in this campus, as it provides not only best education but also opportunities to get involved in multi-dimensional co-curricular activities.

We shall look forward for your significant research and other developmental contributions to keep the name and prestige of this department high, which will make the institute and country proud for you in near future. Hope to have you all soon in-person at this beautiful campus of IIT Bombay. Stay safe and blessed.



# Message from Faculty Advisors



Prof. Avijit Maji

Dear Students,  
Welcome onboard. You are now part of the Department of Civil Engineering, IIT Bombay. I am sure your experience at IIT Bombay is going to be rich and fruitful.



Prof. Prasenjit Basu

Dear Students,  
I Welcome you all to the Department of Civil Engineering, IIT Bombay. Enjoy the coming years of your life through learning. My very best wishes to you all as you embark on this exciting new phase in your life.



Prof. Bellie Sivakumar

Dear Students,  
Welcome to the Department of Civil Engineering. I would like to urge you to explore all the possibilities that the institute offers be it in any domain, research, academics, extra-curricular etc. I wish you all success & enriching journey of yours in the coming years.



Prof. Meera Raghunandan

Dear Students,  
Welcome to the Civil Engineering Department of IIT Bombay. As a post-graduate student in Civil Engineering Department, I hope you get to discover, learn, appreciate and apply different facets of your specialization. I wish you all the best for this new journey you are embarking upon.



## Message from Faculty Advisors



Prof. V.K. Srineash

Dear Students,

A hearty welcome to the Department of Civil Engineering, IIT Bombay! We are certain that you will find the next two years to be the most inspiring and a tremendous learning opportunity. I encourage you to go forth with a spirit of exploration and eagerness. Please reach out to us whenever you have any query, we are here to support your academic expedition. We look forward to the fresh ideas and energy you will bring to our campus. Wishing you all a very successful and academically fulfilling journey ahead.



Prof. Eswar Rajasekaran

Dear Students, welcome to the Department of Civil Engineering at IITB. I am glad seeing interest to specialize in some niche areas of Civil Engineering. Keep this zeal at the highest level throughout your stay at IITB and leave your mark in whatever you do. I wish you all success.



Prof. Muhammad Salman

The construction technology and management specialization of the civil engineering department is the youngest division in one of the oldest departments of IIT Bombay. The emphasis of the specialization is to understand the fundamental concepts of civil engineering materials as well as appreciate the principles of managing manpower, time and equipment on the construction sites with a focus on sustainability.





# Message from ISCP (OC & CM)



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**ANANDA CHARAN  
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Cabinet Member  
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Dear new entrants,

Heartfelt congratulations for embarking on one of life's most memorable journeys - the journey of learning at IIT. The prestigious institute of IIT Bombay welcomes you aboard.

We congratulate you on having achieved this feat. Your dedication, hard work and perseverance brought you here, and we are confident that your experience will lead you towards great opportunities. We can guarantee that your time here on campus will be exciting based on our experiences. Along with the degree, you will leave with beautiful memories of late-night conversations, delicious wing cultures, and crazy birthday parties. You will also integrate into a society where individuals strive to become experts in their fields and devote endless hours. As a result, there will be many chances to learn inside and outside the classroom. So, entering this new universe presents both exhilaration and potential difficulties. We at ISCP (Institute Student Companion Programme) strive to provide the tips you need to handle these difficulties and enjoy your time with the IIT Bombay community.

Institute Student Companion Programme (ISCP) is a student body with the primary objective to build a relationship of trust and comfort between the final year students and the incoming students of the PG programmes. Once this is established, life at campus becomes much easier than it would have been without it. The knowledge and the experience that the senior batch has gained with their stay at the campus makes the surroundings so much you that the transition becomes smooth. From the campus tour to classroom lectures, from the grading system to completing the syllabus, from the profile to placements, from Schezwan Frankie to curry-pakora curry rice, all become ingrained as if they were you always.

On campus, there is likely always something to do, and when there is something to do, time goes by quickly. Balancing academic work with extracurricular activities, social life, and other responsibilities might be challenging. Thus, the ISCP programme assigns you a Student Companion with whom you may discuss academic and extracurricular issues. You can rely on the team for any initial advice on anything you are venturing out into, whether it be academics or extracurriculars, any academic or nonacademic issues that you are facing, any support, or any requirements that you want to raise as a part of the student community, and last but undoubtedly not least just for regular interaction because that is all the programme holds at its core.

We welcome you to IIT Bombay— A journey where you Learn, Grow and Enjoy. Come and contribute to this vast store of knowledge and help it become more vibrant and colourful.

The campus of IIT Bombay awaits your presence; we will soon see you there.



# Message from PGAC



## **Mohit Meena**

Institute Masters Representative (2022-23)

Post Graduate Academic Council

IIT Bombay

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Email: [imr@iitb.ac.in](mailto:imr@iitb.ac.in)

Welcome Freshers!

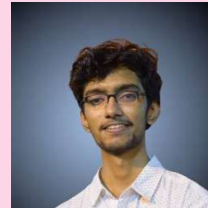
We all have gone through a lot in these past couple of years, so firstly congratulations to all of you for securing admission in one of the prestigious institutes in the country. IIT Bombay provides best exposure to its students in all the aspects, both academically as well as non-academically. The skills you develop here, the interactions you have with people here will stay with you throughout your life. The post-graduation demands something additional compared to the under graduation, more time, more effort, more determination and a ton of dedication. For meeting these primary requirements, often we find ourselves in a daunting situation. In order to make your stay at IIT Bombay convenient, the institute has established the PGAC (Post Graduate Academic Council). Any technical necessity, any placement related assistance, any research queries or any academic grievances, you can always reach out to us. Each department has their own AURAA (Academic Unit Representative of Academic Affairs), whom you can approach directly in case you find any difficulties. Wishing you all a really convenient and productive IIT journey!



# Message from ISCP (DC)



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Welcome juniors!

We congratulate you on having made it to one of the finest institutes in India. You are about to embark on a journey of knowledge and exploration. We know that it may not be easy for everyone to make this transition into the world of unknown. You do not have to worry as we are here with you, by your side, to make this task a much simpler and memorable one.

We also would like to invite you to the Department of Civil Engineering, one of the oldest and prominent departments of IIT Bombay. Our professors are well known in the field of academia for their research activities. The resources available and the lab facilities are the best in the country, and we urge you to make use of them as well as you can.

The institute is well known not only for its academic activities but also for its extracurricular activities. There are numerous events organized by the various clubs at IIT Bombay every week and being involved with ones that interest you is undoubtedly helpful in beating the academic stress you might feel. The atmosphere here ensures the all-round development of an individual and your stay at IIT Bombay will definitely transform you and make you a different and better version of yourself.

Set in the dream city of Mumbai, the lush green campus surrounding Powai lake is surely a sight to behold. We are eager to welcome you into your second home where you will surely make memories of a lifetime.

The department ISCP team is always with you at any point in time to address any and every issue you might face, however small or silly they might seem to you. So do not hesitate to come to us because we are here to serve your needs and make you as comfortable as we can. We have already traversed the path that you are about to embark upon, and we know where the potholes are. Aspiring to be good mentors to you all, we do not want you to make the mistakes we have made. So, this is us reaching out to you, hoping that you will reach out to us whenever needed.

Welcome to IIT Bombay!



## Department Coordinator



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## Student Companions



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# Academic Overview

The Department of Civil Engineering offers a broad-based undergraduate B.Tech. programme, dual-degree (B.Tech.-M.Tech.) programme. Postgraduate (M.Tech.) and PhD programmes in the following specializations:

- Transportation Systems Engineering
- Geotechnical Engineering
- Water Resources Engineering
- Structural Engineering
- Ocean Engineering
- Remote Sensing
- Construction Technology and Management

## CE1 - Transportation Systems Engineering

This specialization has contributed to many projects such as the Bandra-Worli sea link. Transportation systems Engineering specialization has excellent facilities for carrying out teaching, research and consultancy activities in various areas of transportation such as Highway Material Laboratory, Traffic Engineering Laboratory & Advanced Pavement Engineering Laboratory.

Faculty members and their research areas:



Prof. Avijit Maji

**Research Areas:** Machine intelligence and computer vision in alignment development; Optimization in transportation infrastructure development; Effects of highway infrastructure on driver behavior; Performance based highway infrastructure design; Innovative highway infrastructure design; High speed rail infrastructure planning; Transportation safety and security

**Contact:** avimaji@civil.iitb.ac.in  
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02225767338



Prof. Dharamveer Singh

**Research Areas:** Characterization Of Pavement Materials (Asphalt, Hot Mix Asphalt, Soil, And Aggregates), Recycled Asphalt Mixes, Warm Mix Asphalt, Locally Available Materials, Stabilization Of Soil And Aggregates, Intelligent Asphalt Compaction, Constitutive Modeling Of Pavement Materials, Simple Performance Tests (Rutting, Fatigue, Dynamic Modulus) On Asphalt Mixes, Pavements (Flexible And Rigid) Design And Evaluation, Forensic Investigation Of Pavements, Pavement Maintenance And Rehabilitation.

**Contact:** dvsingh@iitb.ac.in  
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Prof. Gopal R. Patil

**Research Areas:** Transportation Systems Planning; Transportation Network Optimization; Traffic Operations; And Freight Transportation Modeling.

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Prof. K.V. Krishna Rao

**Research Areas:** Sustainable Urban Transportation Planning, Land Use Transport Modelling, Travel Survey Design And Analysis; Travel Behaviour And Choice Modelling, Air Travel Demand Modelling, Capacity And Level Of Service Of Traffic Facilities.

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Prof. Nagendra Rao  
Velaga

**Research Areas:** Traffic and Intelligent Transportation Systems. Transportation Accessibility and Mobility. GIS And GNSS Applications in Transport.

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Prof. Tom V. Mathew

**Research Areas:** Traffic Flow Modelling And Simulation; Transportation Network Optimization, Traffic Control And Management.

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Prof. Vedagiri Perumal

**Research Areas:** Traffic Safety, Modelling Pedestrian Behavior, Traffic Flow Modelling and Simulation, Traffic Management and Control, Public Transit System Design and Operation.

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## CE2 – Geotechnical Engineering

This group of researchers and academicians are involved in various research areas like geotechnical structural designs for different types of loads, soil investigations, laboratory experiments for soil testing, environmental geotechnics, numerical and centrifuge modelling, etc. Some of the most highly equipped laboratories are available to nurture and create possibilities for the students in making their contributions in the field. Interdisciplinary research and instrumentation, which



would be beneficial in understanding the parameters influencing the design of structures is the recent focus of the specialization.

Faculty members and their research areas:



Prof. Ashish Juneja

**Research Areas:** In-situ And Laboratory Engineering Properties Of Soil; Numerical And Physical Modelling In Geo-techniques; Earthwork; Ground Improvement

**Contact:** [ajuneja@iitb.ac.in](mailto:ajuneja@iitb.ac.in)  
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Prof. Viswanadham  
B.V.S

**Research Areas:** Centrifuge modelling; Environmental geotechnics; Soil reinforcements; Slope stabilization; Waste materials utilization

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Prof. Deepankar  
Choudhury

**Research Areas:** Geotechnical earthquake engineering; Soil dynamics; Foundation engineering; Computational geomechanics; Dynamic soil-structure interaction; Liquefaction

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Prof. D.N. Singh

**Research Areas:** Environmental Geotechnology; Valorization Of Industrial Waste(s); Gas Hydrates

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Prof. Pinom Ering

**Research Areas:**

Landslides, probabilistic methods, risk and reliability analysis, Mesh-free techniques (Material Point Method), large deformation problems.

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Prof. Dasaka Murthy

**Research Areas:** Studies on Earth Pressure Reduction Techniques, Field Behavior of Rock Socketed Piles, Stabilization of Problematic Soils, Mitigation of Railway-borne Vibrations, Deep Excavation Supporting Systems

**Contact:** dasaka@civil.iitb.ac.in  
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Prof. Prasenjit Basu

**Research Areas:** Energy geotechnics; Thermo-hydro-mechanical characterization of soil; Coupled(thermo-hydro) flow in the ground; Engineering of foundations; Computational geomechanics

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Prof. Santiram Chatterjee

**Research Areas:** Offshore geotechnical engineering; Pipeline geotechnics; Numerical modelling; Offshore soil characterization.

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## CE3 – Water Resources Engineering

This specialization deals with research in areas of rainfall-runoff modelling, groundwater flow modelling, climate change, extreme events, watershed management etc. There are three highly equipped laboratories: Fluid mechanics lab, advanced fluid mechanics lab, and advanced hydraulics lab. Advanced fluid mechanics lab houses facilities such as wind tunnel, facilities to measure drag and lift and various types of flumes, turbines and pump experiments. In advanced hydraulics lab, all research-based experiments in open channels, watershed, groundwater etc. can be carried out.

Faculty members and their research areas:



Prof. Bellie Sivakumar

**Research Areas:** Rainfall and Streamflow Modeling; Hydrologic Extremes; Sediment Transport in Rivers; Large-scale Water Projects; Transboundary Water Management; Groundwater Flow and Transport; Water quality in Rivers; Ecosystem Modeling; Human - Water Interactions; Hydrology Education; Complex Systems and Networks; Chaos Theory; Scaling and Fractals.

**Contact:** b.sivakumar@civil.iitb.ac.in  
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Prof. Kapil Gupta

**Research Areas:** Urban Drainage/storm Water Management; Sedimentation In Channels And Rivers; Urban Water Infrastructure Management; Hydrologic Disaster Management; Water Quality Modelling In Rivers, Ponds, Lakes And Estuaries.

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02225767324







Prof. T I Eldho

**Research Areas:** Groundwater Flow And Pollution Investigation; Computational Fluid Dynamics; Coastal Hydrodynamics; Watershed Management; Application Of Numerical Methods In Water And Environment.

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Prof. V Jothiprakash

**Research Areas:** Water Resources Systems Analysis, Stochastic Hydrological Modeling, Reservoir Sedimentation, Airport And Road Side Storm Water Drainage System, Water Supply And Sewerage Systems, Genetic Algorithms And Genetic Programming, Artificial Neural Networks, Non-linear Dynamic Analysis Using Chaos Theory, Singular Spectrum Analysis, Single Variate And Multi-Variate Time Series Analysis.

**Contact:** [vprakash@iitb.ac.in](mailto:vprakash@iitb.ac.in)  
<https://www.civil.iitb.ac.in/~vprakash>  
02225767315



Prof. Janga Reddy  
Manne

**Research Areas:** Evolutionary Algorithms For WRS Optimization; Reservoir Operation, Water Supply Systems; Surface Water Hydrology And Watershed Management; Statistical Modeling And Forecasting, Risk Analysis Of Floods And Droughts; Copulas For Uncertainty Modeling; Applications Of Soft computing Techniques In WRM; Impacts Of Climate Change On Water Resources And Agriculture.

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02225767320



Prof. Subimal Ghosh

**Research Areas:** Hydro-climatology: Regional Modeling And Understanding Of Indian Monsoon; Statistical Downscaling; Atmosphere- Land Surface Interactions; Climate Change Projections And Impacts Assessment; Seasonal And Sub-seasonal Prediction Of Monsoon; Hydro-climatic Extremes; Hydrology: Meso-scale Hydrologic Modeling; Uncertainty Modeling; Eco-hydrology.

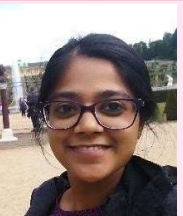
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02225767319



Prof. Arpita Mondal

**Research Areas:** Detection, Attribution And Impact Of Climate Change, Spatio-Temporal Modeling Of Hydroclimatic Extremes, Regionalization And Frequency Analysis Of Floods And Droughts, Risk Assessment Under Non-stationarity, Urban Flooding, Hydrologic Statistics And Machine Learning, Uncertainty Modeling.

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Prof. Riddhi Singh

**Research Areas:** Rainfall-Runoff Modelling, Model Diagnostics, Hydrologic Predictions In Data Scarce Regions, Catchment Classification And Hydrologic Similarity, Multi-stakeholder Analysis Of Resource-Constrained Systems, Decision Making Under Uncertainty.

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02225769307





Prof. Basudev Biswal

**Research Areas:** Conceptualization Of Hydrological And Ecological Processes. Prediction In Ungauged Basins. Global Hydrological Modelling. Recession Flow Hydrology. Large Scale Flood-inundation Modelling. Landscape Evolution Modelling.

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## CE4 – Structural Engineering

Various researches are being conducted through this specialization. Some of the researches are on high-speed railway bridges, seismic vulnerability assessment and seismic isolation of buildings and bridges, health monitoring and retrofitting of buildings, analysis and performance-based design of tall buildings, computational mechanics etc. There are highly equipped laboratories such as heavy structures and experimental mechanics laboratories which include shake table, sophisticated UTMs and loading frames capable of testing various types of materials including seismic isolators, elastomeric bearings, column-beam connections etc.

Faculty members and their research areas:



Prof. Yogesh Desai

**Research Areas:** FEM and control of vibrations; Structural dynamics; Composite mechanics; Rehabilitation of deteriorated structures; Computational mechanics

**Contact:** desai@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~desai/>  
02225767333



Prof. Alok Goyal

**Research Areas:** Structural dynamics and earthquake engineering; Vibration control; Seismic hazard assessment; Service life assessment, repair, rehabilitation and retrofitting of RC buildings.

**Contact:** agoyal@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~agoyal/>  
02225767342



Prof. Ravi Sinha

**Research Areas:** Dynamic behaviour of structures; Energy absorbing and base isolating devices; Earthquake resistant design and vulnerability evaluation of structure.

**Contact:** rsinha@civil.iitb.ac.in  
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02225767336



Prof. Naresh K.  
Chandiramani

**Research Areas:** Nonlinear Dynamics; Stability And Control; Computational Mechanics; Solid Mechanics.

**Contact:** naresh@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~naresh/>  
02225767311





Prof. Pradipta Banerji

**Research Areas:** Earthquake vibration control; Damage detection in structures; Guided wave propagation and scattering; Condition monitoring of bridge structures.

**Contact:** pbanerji@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~pbanerji/>  
02225767334



Prof. R. S. Jangid

**Research Areas:** Base isolation for earthquake-resistant design; Vibration control using tuned mass dampers; Non-linear dynamic analysis; Non-classically damped systems; Stochastic earthquake analysis

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02225767346



Prof. Sauvik Banerjee

**Research Areas:** Structural health monitoring using vibration and wave based approaches; Condition assessment of structures using NDT; Ultrasonic NDE and Imaging of materials; Passive Acoustic Emission (AE) Monitoring of structures; Guided wave propagation; Modelling of laminated composite and sandwich structures; FRP retrofitting of structures; Impact response of structures

**Contact:** sauvik@civil.iitb.ac.in  
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Prof. Siddhartha Ghosh

**Research Areas:** Earthquake engineering; Reliability of structures; Structural dynamics; Vulnerability/fragility assessment; Risk analysis; Uncertainty quantification; Structural steel; Cold-formed steel; Inelastic analysis and design; Stone block masonry.

**Contact:** sghosh@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~sghosh/>  
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Prof. Najeeb Shariff Mohammad

**Research Areas:** Behavior of structural concrete, Nonlinear analysis of structures; Time-dependent behavior of structures; Structural evolution of 3D printed concrete members.

**Contact:** shariff@iitb.ac.in  
<https://www.civil.iitb.ac.in/faculty/details/prof-najeeb-shariff-mohammad>  
02225765324



Prof. Amit Das

**Research Areas:** Design and analysis of steel and concrete structures; Formwork analysis and design computational mechanics; Finite element analysis; Field dislocation mechanics; Analysis of PDEs.

**Contact:** amitdas@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~amitdas>  
02225767301





Prof. Mandar Inamdar

**Research Areas:** Application of structural; solid, fluid, and statistical mechanics to biological systems; Mechanics of biopolymer networks; Cellular adhesion and motility, DNA mechanics; Mechanics of biofilms

**Contact:** minamdar@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~minamdar/>  
02225767314



Prof. Arghadeep  
Laskar

**Research Areas:** Experimental Study of Reinforced and Pre-Stressed Concrete; Finite Element Analysis of Concrete Structures; Seismic Simulation

**Contact:** laskar@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~laskar/>  
02225765326



Prof. Jayadipta Ghosh

**Research Areas:** Structural reliability and risk assessment; Earthquake engineering; Ageing and corrosion deterioration problems; Seismic fragility analysis; Bridge engineering; Machine learning

**Contact:** jghosh@iitb.ac.in  
<https://www.civil.iitb.ac.in/~jghosh/>  
02225767337



Prof. Swagata Basu

**Research Areas:** Earthquake Risk and Reliability Analysis of Bridges, Disaster Resilience of Bridges and Highway Systems, Multihazard analysis

**Contact:** swagata@civil.iitb.ac.in  
<http://swagatabasu.wixsite.com/swagata>  
02225767317



Prof. Meera  
Rangunandhan

**Research Areas:** Earthquake engineering; Probabilistic seismic risk analysis of structures; Performance prediction of structures under dynamic loads; Building code Evaluation

**Contact:** meerar@civil.iitb.ac.in  
<https://sites.google.com/site/meeraraghunandan/>  
02225767322



Prof. Manish Kumar

**Research Areas:** Earthquake Engineering, Seismic Isolation, Blast and Impact Resistant Structures

**Contact:** mkumar@civil.iitb.ac.in  
<http://www.manishkumar.org/>  
02225767329

## CE5 – Ocean Engineering

It is a relatively new course in Civil Department which includes coastal, port and harbour engineering, wave hydrodynamics, coastal, marine and offshore structures, wave-structure interaction, coastal erosion and mitigation measures, physical and numerical modelling of coastal/ocean dynamics, design of port/harbour and offshore structures, design of coastal protection and waterfront



structures. Tidal, estuarine and bay hydrodynamics, sediment transport, harbour agitation/layout/planning, application of neural networks and soft computing for offshore engineering related problems are also studied under this specialization.

Wave Simulator, a physical wave flume testing facility with computer-controlled wavemaker is established in the ocean engineering laboratory. The wavemaker is capable of generating regular, random and non-linear waves of different heights and periods. A range of instruments such as wave gauges and underwater dynamic pressure sensors, Qualisys motion capture system is recently acquired.

Faculty members and their research areas:

	<p><b>Research Areas:</b> Ocean engineering (wave hydrodynamics, Ocean structures, statistical and stochastic analysis); Hydrology</p> <p><b>Contact:</b> mcdeo@civil.iitb.ac.in  <a href="https://www.civil.iitb.ac.in/~mcdeo/">https://www.civil.iitb.ac.in/~mcdeo/</a>            02225767330</p>
	<p><b>Research Areas:</b> Coastal engineering; Wave structure interaction; Tidal hydrodynamics; coastal processes</p> <p><b>Contact:</b> rbalaji@iitb.ac.in  <a href="https://www.civil.iitb.ac.in/~rbalaji/">https://www.civil.iitb.ac.in/~rbalaji/</a>            02225767321</p>
	<p><b>Research Areas:</b> Ocean and Coastal Engineering; Computational Ocean and Coastal Hydrodynamics; Modelling of Tide, Storm and Tsunami; Impact of Changing Climate; Wave and Tidal Energy; Wave Current Interaction; Multi-phase Flow</p> <p><b>Contact:</b> manasa.rb@iitb.ac.in  <a href="https://www.civil.iitb.ac.in/~manasarb/">https://www.civil.iitb.ac.in/~manasarb/</a>            02225767313</p>
	<p><b>Research Areas:</b> Coastal Engineering, Hydrodynamics, Wave-structure interaction, Coastal resilience, Climate change adaptation studies.</p> <p><b>Contact:</b> srineash@iitb.ac.in  <a href="https://srineash.wixsite.com/iitb">https://srineash.wixsite.com/iitb</a>            02225767328</p>

## CE6 – Remote Sensing

This specialization deals with research in areas of Surveying and Remote Sensing. UAV(s)/ Drones (both fixed-wing and rotary-wing) have recently been included in instruments owned by the department. It can be used for large scale mapping and real-time assessment and monitoring activities of various applications ranging from precision agriculture to structural engineering. It can also be used in the generation of DEM, Ortho maps and 3D models etc. The specialization has also access to instruments like TLS, GPS, Total Station, Ground-penetrating Radar (GPR) and corresponding processing software.

Faculty members and their research areas:

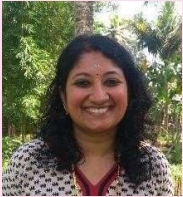




Prof. RAAJ  
Ramsankaran

**Research Areas:** Remote Sensing And GIS Applications In Surface Hydrology And Water Resources Management, Hydro-Data Assimilation, Cryosphere Remote Sensing; Precision Agriculture; High-Definition Surveying; Remote Sensing Of Ocean And Coastal Areas.

**Contact:** ramsankaran@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~ramsankaran>  
02225767348



Prof. Indu J

**Research Areas:** Microwave Remote Sensing; Uncertainty In Radar Based Rainfall; Nowcasting Of Precipitation; Applications in Hydrology And Water Resources; Image Processing Using Synthetic Aperture Radar (SAR); Fuzzy Logic

**Contact:** indusj@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~indusj>  
02225769304



Prof. Eswar  
Rajasekaran

**Research Areas:** Thermal Remote Sensing, Modelling Evapotranspiration From RS, RS Applications In Hydrology, Drought Monitoring.

**Contact:** eswar.r@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~eswar.r>  
02225767325

## CE7 – Construction Technology and Management

This specialization was instituted in 2016. The vision of the programme is to create a sustainable construction infrastructure system for the society through high-quality teaching, research, outreach, manpower training and academic leadership in the area of Construction Materials and Management. The division has developed strong links with the academic institutions, research organizations and construction industry both within and outside the country.

The specialization includes construction technology that mainly focuses on Construction Materials, Concrete Technology, mineral and chemical admixtures, rheology and particle packing of cement-based materials, Alkali activation, geopolymerization, Mineral carbonation, Industrial residue valorization, sustainable construction materials. Construction management that consists of infrastructure contracts, Building Information Modelling, Machine learning-enabled construction safety management.

Faculty members and their research areas:



Prof. Prakash  
Nanthagopalan

**Research Areas:** Rheology Of Cement Based Materials; Design And Development Of Ultra High-Performance Concrete; Cement And Lime Based Plasters/renders; Product Development Using Industrial And Agro Based By-products.

**Contact:** prakashn@iitb.ac.in  
<https://www.civil.iitb.ac.in/faculty/details/prof-prakash-nanthagopalan>  
02225767323





Prof. Venkata Santosh  
Kumar Delhi

**Research Areas:** Infrastructure project governance, Construction project management, Organization in construction projects and infrastructure sustainability, Structural Engineering.

**Contact:** venkatad@civil.iitb.ac.in  
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02225765325



Prof. Muhammad  
Salman

**Research Areas:** Construction Materials, Concrete Technology, Alkali activation, Geo Polymerization, Mineral carbonation, Slags.

**Contact:** msalman@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/~msalman>  
02225769306



Prof. Albert Thomas

**Research Areas:** Sustainable Construction Management Practices, Building Energy Simulation, Lean Construction, Life Cycle Energy Analysis, Project Scheduling and Earned Value Analysis, Construction Project Lifecycle Management.

**Contact:** albert@iitb.ac.in  
<https://www.civil.iitb.ac.in/~albert>  
02225767347



Prof. Swathi Manohar

**Research areas:** Domain of Construction Technology and Management with emphasis on "Material Characterization, Durability of Construction Materials and Heritage Conservation".

**Contact:** swathym@civil.iitb.ac.in  
<https://www.civil.iitb.ac.in/faculty/details/prof-swathy-manohar>



# Department Facilities

The department has excellent infrastructure facilities for carrying out teaching, research, and consultancy activities in various disciplines of Civil Engineering. The laboratory facilities in the department are as follow:

## Transportation Engineering

- Highway Material Testing Laboratory
- Traffic Engineering Laboratory
- Transportation Planning Laboratory
- Advanced pavement Laboratory

## Geotechnical Engineering

- Geotechnical Engineering Laboratory
- Environmental Geotechnology Laboratory
- Geo-textiles and Geosynthetics Laboratory
- National Geotechnical Centrifuge Facility
- Advance & Dynamic Soil Testing Laboratory
- Advanced Geotechnical Engineering Laboratory
- Geotechnical Earthquake Engineering Laboratory

## Water Resources Engineering

- Hydraulics Engineering Laboratory
- Fluid Mechanics Laboratory

## Structural Engineering

- Heavy Structures Laboratory
- Experimental Mechanics Laboratory
- Structural Safety, Risk and Reliability Laboratory
- Structural Health Monitoring & Retrofitting Laboratory
- Structural Nano & Bio Mechanics Laboratory
- Disaster Risk Mitigation Laboratory

## Ocean Engineering

- Ocean Engineering Laboratory

## Remote Sensing

- Surveying Engineering Laboratory
- Photogrammetry Laboratory
- Advanced Engineering Surveying Laboratory

## Construction Technology and Management

- Structural Evaluation and Materials Technologies Laboratory
- Material Characterization Laboratory
- Construction Management Laboratory

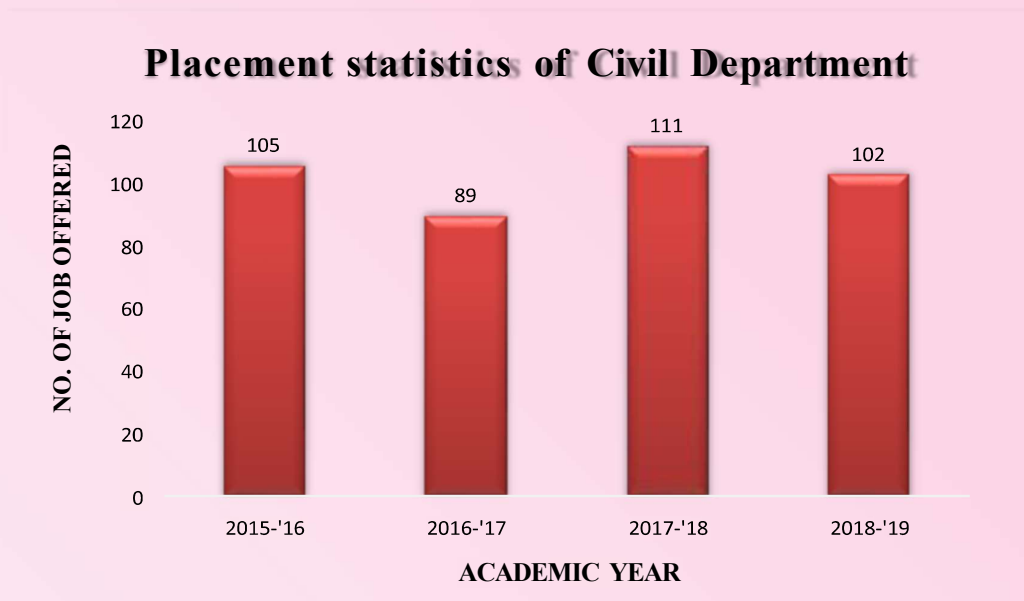
## Computational Laboratory





# Department Placement Information

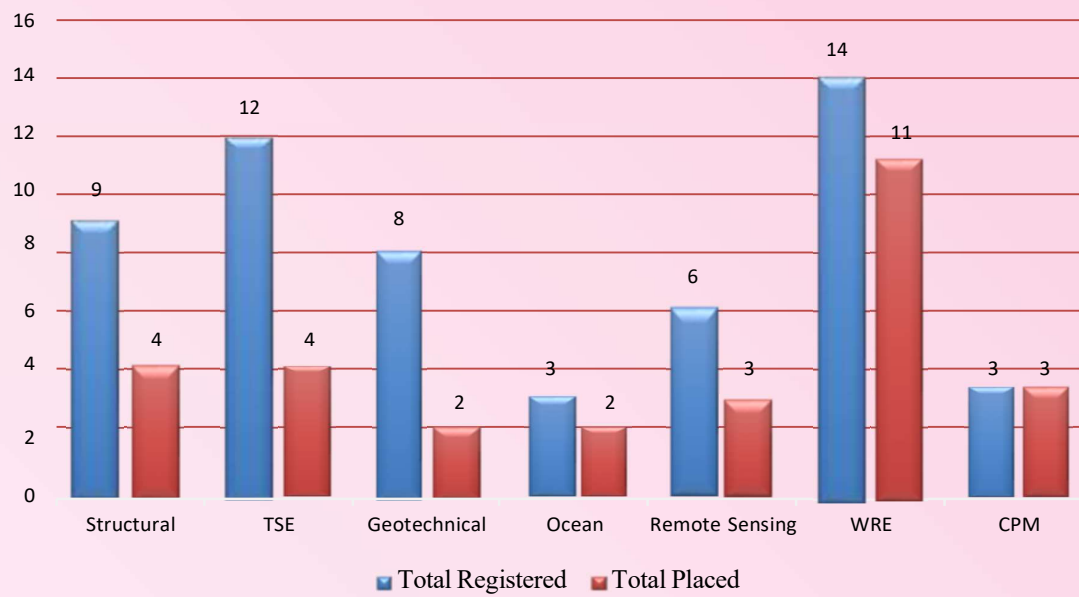
Placements at IITB have always been the best in India. The amount and quality of profiles offered are class-leading as in the compensation. The placement process is completely managed by a student body, who works under the supervision of a placement manager. The placements stats for the department are as follow:



### Placement statistics of Civil Department M-tech 2021-22 batch

Total number of registered students	60
Total number of students registered for placement	55
Total Placed	29
Percentage placed	<b>48.33%</b>

### Specialization Wise Placement Statistics



## Placement Companies



# Grading Policy

The Indian Institute of Technology Bombay follows the grading system. Based on the combined performance in all assessments, the student is awarded a letter grade in every course taken as per the curriculum. These letter grades not only indicate a qualitative assessment of the student's performance but also carry a quantitative (numeric) equivalent called the Grade Point. The letter grades and their equivalent grade point are given below:

Letter Grade	Grade Point
AP	10
AA	10
AB	9
BB	8
BC	7
CC	6
CD	5
DD	4
FF	o (Fail- Re-examination)
FR	o (Fail- Repeat the course)
DX	o (Attendance below 80%- Repeat the course)
PP	Pass
NP	Not Pass
AU	Audit
II (a)	Incomplete
DR (b)	Dropped
W	Withdrawn

(a) Placeholder, awarded on medical grounds; gets converted to an appropriate grade after Semester end re- examination

(b) Placeholder indicating that the course has been dropped and it has to be cleared in subsequent semesters.

i. A student passes the course if he/she gets any grade in the range of AP to DD (AU in the case of an audit course), but fails if he/she gets the grade FF, FR or DX. II and DR are placeholders. II is awarded temporarily on medical grounds and gets converted to an appropriate grade after the Semester end re-examination. On the other hand, DR indicates that the course has been dropped and it has to be cleared in subsequent semesters.

ii. The grade AP indicates exceptional performance and is awarded only in the Course/(s) in which the number of registered students is more than 50. It should not exceed 2 % of the total strength of the theory or lab course. The grade AP is not awarded for projects/seminars.

iii. FF grade will be awarded in case/(s) where the students' performance in the examinations is not satisfactory (falls below the DD grade). A student is eligible for re-examination, which is conducted as per the Academic Calendar. A student taking the re-examination after FF grade may get (1) DD grade if she/he passes the



re-examination or (2) FR grade if she/he fails in the re-examination or fails to appear for re-examination.

iv. FR grade will be awarded in case/(s) where, in the opinion of the instructor (panel of examiners in the case of projects), the student has inadequate academic exposure to the course / has very poor performance in the in-semester and/or semester-end examinations.

v. The grade DX in a course is awarded if (i) a student does not maintain the minimum 80% attendance in the Lecture/Tutorial classes, or (ii) severely incomplete in semester evaluation record due to non-medical reasons (for example when a student has missed all tests and midsem), (iii) incomplete assignment submissions etc. The DX grade will be declared one week before the semester-end examination and intimated to the academic office immediately thereafter. A student with DX grade in a given course is not permitted to take the semester-end examination. The DX grade is treated as FR for CPI calculation and requires re-registration for the course.

vi. "II" is awarded in a lecture/laboratory course if a student has satisfactory in - semester performance and has fulfilled the attendance requirement but has not appeared for the semester-end examination due to medical reasons. Such students are eligible for make-up for the Semester-end examination only on medical grounds / valid reasons AND on the production of medical certificate issued/authenticated by CMO, IIT Bombay Hospital rother supporting documents as required. The application must be submitted to the Academic Office, for consideration by PGAPEC, before the last date for registration for such make-up examination announced in the Academic Calendar. (See Sec.3.5 and 3.6 for full details). For a student resent in the semester-end re-examination, the instructor will award a regular performance grade (AP-FR) depending on the overall performance in the course including the re-examination. If a student fails to appear for the re-examination too, the instructor will award II grade again. If the absence is due to medical/valid reasons, the student must submit supporting documents as mentioned above, within seven days of the scheduled date of the re-examination, to the Academic Office. PGAPEC will examine such cases and convert the II grade into a dropped course status (DR) in bonafide cases. In all other cases, the II grade will be converted to FR grade. In any case, the II grade will not be continued beyond the commencement of the subsequent semester.

vii. There are, however, a few other academic requirements for the Program. The following two grades viz., PP (Pass) and NP (Not pass), will be awarded for non - credit courses. No grade points are associated with these grades and performance in these courses is not considered in the calculation of the performance indices (SPI, CPI). However, the award of the degree is subject to obtaining a PP (Pass) grade in all such courses, as part of the course curriculum.

viii. AU grades are awarded for those who have audited a course, in accordance with the prescribed procedure.



# Civil Engineering Association



The Civil Engineering Association (popularly known as CEA) at IIT Bombay, was established with a prime objective to proliferate knowledge & address industrial issues by bringing corporates, professors, and students on a common platform. We aim to promote Civil Engineering by providing the much-needed practical exposure to the community members through its regular activities like technical seminars, research symposiums, talks on ongoing research practices throughout the globe and many other related topics from distinguished practitioners of the trade. Collaboration between the school and industry is important for the advancement of engineering teaching and research. With this aim, to give our students some practical insight into Civil Engineering, we organize several visits throughout the year to ongoing construction sites and research centers thus giving them a chance to interact with key personnel of the industry.

CEA also undertakes the responsibility of proper nurturing of students by organizing some social events as a part of extracurricular. Valedictory function for the introduction of students with insights into the department and AKAAR team, kurta day for the healthy interaction between freshers and seniors, department T-shirt competition, department trips, sports weekend including sports like badminton, volleyball, basketball, etc. and many more for newcomers at UG and PG level which are organized by CEA throughout the year.

**CEA General Secretary (2021-22):** Harshvardhan Tidke  
📞 9175856144  
E-Mail: [harshtidke12@gmail.com](mailto:harshtidke12@gmail.com)

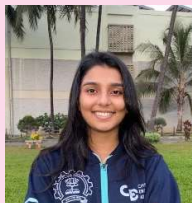




The student body of Civil Engineering Association, IIT Bombay, organizes AAKAAR, the annual festival of Civil Engineering Department, IIT Bombay. AAKAAR provides a platform to budding civil engineers across the country to create, innovate and learn various aspects of civil engineering through competitions, events, and Symposium (research paper conference). AAKAAR has gone on to become the undisputed front-runner among civil engineering festivals.



# Department Council



**ADITI GUPTA**

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MTech Representative (2022-23)  
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**PRANAY PATEL**

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# PG Sports



PG Sports has a place of pride in the IITian's calendar for obvious reasons. It is an event that witnesses the confluence of sports enthusiasts and celebrates excellence, endeavor, and team spirit. This is a much-needed diversion from the rigorous routine academics, bringing with it promises of an energizing and exhilarating experience. At the participation and organizational levels, this is a wide entry into a whole new world of opportunities. IIT Bombay exposes the adage 'a sound mind in a sound body'. A delicate balance between a robust physique and a sharp mind is the prerequisite for a healthy, meaningful life. All PG aspirants can be a part of this celebration.



# PG Culturals



PG Cult is the annual cultural festival targeted exclusively for the postgraduate community of IIT Bombay (or PG junta in short). Since its inception in the year 2008, this would be the 10th edition of this cultural extravaganza. The events spread across nine genres-3 performing arts: Dance, Music and Dramatics and five nonperforming arts: Fine Arts, Literary Arts, Speaking Arts, Design, Photography, and Film & Media. Interspersed throughout the calendar year, the PG Cultural Council headed by the PG Cultural Nominee along with the PG Coordinators and Conveners foreach genre organizes several workshops to cater to the varied tastes and skills of the multitalented PG's of IITB.



# Department Highlights

## Awards and Honors

- Prof. Subimal Ghosh has being listed among one of those top 75 scientists under age of 50 years in the list who are shaping today's India through their outstanding research contributions.
- Prof. Arpita Mondal has been selected to feature in the second edition of the 'She Is' book series by the Office of PSA, Govt of India and the Red Dot Foundation featuring 75 Women in STEAM in India.
- Prof. Eswar Rajasekaran, has been selected for the Prof. K.K. Nageswara Rao Young Achiever Award-2021, given by the Indian Society of Geomatics.
- Prof. Riddhi Singh has been appointed as “Associate Editor” of Journal of Hydrology, Elsevier (<https://www.journals.elsevier.com/journal-of-hydrology>), for a period of two years starting from Jan 2022.
- Akhila Padmajan (MTech) and Dr. Rameeza Moideen (PhD), supervised by Prof. Manasa Ranjan Behera, have been selected for the ISH G.M.Nawathe Puraskar 2021- Analytical Category (Best Paper presented in Hydro- 2020 International), from the Indian Society for Hydraulics (ISH), Pune, India.
- Selection of PhD thesis of our department’s former PhD scholar, Dr. Tinesh Pathania, supervised by Prof. T. I. Eldho, for “Prof. U. C. Kothiyari - ISH Best PhD Thesis Award”, instituted by the Indian Society for Hydraulics (ISH).
- IGS-Prof. A.V. Shroff Biennial Award - 2021 to Prof. Ashish Juneja and Dr. Shrikant Tanaji Shinde for the paper titled “Undrained Yielding of Black Cotton Soil Treated with Calcium Carbide Residue” published in Indian Geotechnical Journal
- IGS-Mr. H.C. Verma Diamond Jubilee Award - 2021 to Dr. Saptarshi Kundu and Prof. B. V. S. Viswanadham for the entry on “Innovative Instrumentation Design” titled “Design and Development of an Actuator for Simulating Dynamic Compaction Induced Ground Remediation of Geomaterials”.
- IGS-Prof. Shamsher Prakash Biennial Award - 2021 to Ms. Pradnya Singbal, Prof. Santiram Chatterjee and Prof. Deepankar Choudhury for the paper titled “Assessment of Seismic Liquefaction of Soil Site at Mundra Port, India, Using CPT and DMT Field Tests”, published in Indian Geotechnical Journal.
- IGS-Kolkata Chapter YGE Award - 2021 to the Young Geotechnical Engineer Dr. Dipankana Bhattacharjee for the paper titled “Centrifuge Model Studies on Performance of Hybrid Geosynthetic–Reinforced Slopes with Poorly Draining Soil Subjected to Rainfall” by Dipankana Bhattacharjee and B.V.S. Viswanadham published in Journal of Geotechnical and Geoenvironmental Engineering.
- Prof. Siddhartha Ghosh and their team won IEEE CTU Challenge 1st place Award.
- Prof. Nagendra Rao Velaga has been selected to receive the IIT Bombay Research Publication Award 2020.
- Mr. Kaushlendra Verma, PhD scholar working with Prof. J. Indu, has received Virtual Student Travel Grant to participate in the 2021 American Geophysical



Union (AGU) Fall Meeting, 13-17 December 2021, in New Orleans, LA, USA.

- Prof. Jayadipta Ghosh of Civil Engineering department of IIT Bombay has been invited to join ASCE Journal of Bridge Engineering as an Associate Editor.
- Mr. Sanjay, Ms. Ekta and Mr. Sashank received “Certificate of Appreciation” from the Institute for contributing outstandingly much above their regular duties during the Covid-19 pandemic period for the growth of the Civil Engg. department at IIT Bombay.
- Prof. Raaj Ramsankaran has been selected for Prof. R.J. Garde Research Award (2020) by Indian Society of Hydraulics.
- Prof. M.C. Deo: Life-time Achievement Award Indian Society for Hydraulics Headquarter: Central Water and Power Research Station, Pune 411024 December 2019.

## Other Highlights

- Annual magazine of civil department “Civil Insights” was launched on the Convocation Day 23 Aug 2020.  
[http://www.civil.iitb.ac.in/resources/frontend/documents/CivilInsights\\_2020.pdf](http://www.civil.iitb.ac.in/resources/frontend/documents/CivilInsights_2020.pdf)
- Civil convocation for the batch of 2020 was organized on 23<sup>rd</sup> august 2020.  
[http://www.civil.iitb.ac.in/resources/frontend/documents/DepartmentConvocation2020\\_Final.m4v](http://www.civil.iitb.ac.in/resources/frontend/documents/DepartmentConvocation2020_Final.m4v)
- Department went on a trip to ESSEL world pre covid.



# Department Staff

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6	Anil Kumar Vishwakarma	Jr. Lab Assistant	anilkumar[at]civil.iitb.ac.in	2225764303
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8	Mahendra Kumar Palsania	Jr. Mechanic	mahendra[at]civil.iitb.ac.in	2225764321
9	Sameer Sakharam Gurkhe	Jr. Mechanic	sameersg[at]civil.iitb.ac.in	2225767306
10	Barshana Dutta Gupta	Jr. Lab Assistant	barshanadg[at]civil.iitb.ac.in	2225764322
11	Preshit Thakur	Technical Superintendent	preshit[at]civil.iitb.ac.in	2225764338
12	Gurudatta Narvekar	Jr. Mechanic	gurudatta[at]civil.iitb.ac.in	2225764338
13	Pratap Shingade	Technical Superintendent	prataps[at]civil.iitb.ac.in	2225764318
14	Prem Pun	Sr. Lab Helper	punpb[at]civil.iitb.ac.in	2225764318
15	Vikas Manere	Jr. Mechanic	i15006[at]iitb.ac.in	2225764318
16	Shekhar Singh	Technical Superintendent	ssinghranaz[at]iitb.ac.in	2225764302
17	Sarvesh S Gangal	Jr. Mechanic	sarugang[at]gmail.com	2225764311
18	Nilesh Sawant	Jr. Lab Assistant	nilesh.s[at]iitb.ac.in	2225764311
19	Tushar S Aughade	Jr. Mechanic	tusharsa[at]iitb.ac.in	2225764303
20	Vinod Potjale	Jr. Mechanic	io6o41[at]iitb.ac.in	2225764328
<b>Administrative Staff</b>				
1	Sanjay Shivsharan	Administrative Officer	sanjays[at]civil.iitb.ac.in	2225764313
2	Vijay Dhanve	Administrative Assistance	t10vijaybd[at]civil.iitb.ac.in	2225767306
3	Ekta Warik	Jr. Assistant	ektasw[at]civil.iitb.ac.in	2225767301
4	Sashank Bastav	Jr. Attendant	shashankmb[at]civil.iitb.ac.in	2225767306
5	Sandeep Chaturvedi	Jr. Administrative Assistant	sandeep[at]civil.iitb.ac.in	2225767303
6	Aravind Jadhav	Jr. Assistant	aravindjadhav@civil.iitb.ac.in	2225767306



# Useful Information

- **LDAP Id:** It is a unique identification number of each individual in IIT Bombay. LDAP Id essentially is the student's roll number. LDAP Id is used to access various IIT B services. Once the registration process of a student is completed, a password will be generated which can be used to login along with LDAP id to various IIT B internal websites and services.
- **Application Software Centre (ASC):** <https://asc.iitb.ac.in/acadmenu/index.jsp>  
Purpose: This website is the primary interactive website for a student for all of his/ her administrative requirements. From paying your fees to checking your grades, all can be done on this website. The website also has links to all other websites of the institute. Some of the important facilities offered by this website are given under:
  - Payment of fees
  - Registration and deregistration from courses
  - Checking previous year's grading stats for any subject
  - Brief contents of all subjects being offered
  - Own personalized timetable
  - Checking of own academic performance (grades)Note: VPN connection may be needed to access ASC.
- **Secure Webmail:** <https://webmail.iitb.ac.in/>  
Purpose: This is your personalized email in IIT. Every student gets one when you enroll. Along with regular mail, here you also get alerts for registration/ deregistration of courses, fees payment and any broadcast on Moodle among others. The general email Id looks like: [yourrollnumber]@iitb.ac.in
- **Moodle:** <https://moodle.iitb.ac.in/>  
Purpose: This website provides academic interaction between students and faculty for all courses enrolled by a student. You can download study material/ books/ notes uploaded by a professor/ TA and also submit projects etc. here. The website also offers an interactive platform where you can interact with the Professor/ TAs/ other students on any subject related matter.
- **IITB library:** <http://www.library.iitb.ac.in/index.php>  
Purpose: The website for the central library offers a search engine for books available in the library. You can also check the number of books issued at any given time, renew them and "queue" up for any book already drawn by some other individual.
- **VPN setup instructions:** <https://www.cc.iitb.ac.in/page/services-vpnssh>  
Purpose: To access IIT B internal websites, one must be connected through VPN.
- **IITB Wireless configuration:** <https://www.cc.iitb.ac.in/page/configurewireless>  
Purpose: To access IIT B wireless (Wi-Fi) in your mobile phones, laptops or desktops, you must configure the wireless settings following these instructions.



- **Access GPO mail on mobile:** Instructions to set up GPO mail (Webmail) on your mobile.  
<http://homepages.iitb.ac.in/~yatindestel/docs/GPO%20in%20Gmail.pdf>

## Important Links

- **Department Website:** <https://www.civil.iitb.ac.in/>
- **Downloadable Forms**  
<https://www.civil.iitb.ac.in/Form%20to%20be%20uploaded/index.html>
- **Registration Instructions:**  
<https://docs.google.com/document/d/1IilyR49FuNJE7l2cgrT-iWWPCFItvNVR4A57N1hA-NA/>
- **IITB Computer Centre:** <https://www.cc.iitb.ac.in/>
- **Student Wellness Centre:** <http://www.iitb.ac.in/swc/en>
- **Entrepreneurship cell:** [www.ecell.in](http://www.ecell.in)
- **Gymkhana IITB:** <https://gymkhana.iitb.ac.in>
- **SARC:** <http://www.sarc-iitb.org/#>
- **International relations:** <http://www.ir.iitb.ac.in/>
- **Lost and found:** <https://gymkhana.iitb.ac.in/~hostels/lostnfound.php>
- **ISCP:** <https://gymkhana.iitb.ac.in/~scp/scp/index.html>

## Important Apps

- **InstiApp:** InstiApp is an Android App that helps you navigate through the IIT Bombay Campus. It is a one-stop solution for all the aspects of one's insti life, weaving around hostels, academics, co-curricular activities and recreation.  
[https://play.google.com/store/apps/details?id=app.insti&hl=en\\_IN](https://play.google.com/store/apps/details?id=app.insti&hl=en_IN)
- **SAFE App:** App for smart, authentic, fast online exams  
<https://safe.cse.iitb.ac.in>
- **BANDHU App:** A self-help website is here to improve the emotional well-being of the students', finely designed with experts speaking on positive mental health, curated reads, motivational alumni journeys and fun lessons.  
<https://www.iitb-bandhu.org>
- **OpenVPN Connect App:** OpenVPN Connect is the official VPN application for Android developed by OpenVPN, Inc. It can be used for connecting with IITB Internal sites using VPN.  
[https://play.google.com/store/apps/details?id=net.openvpn.openvpn&hl=en\\_IN](https://play.google.com/store/apps/details?id=net.openvpn.openvpn&hl=en_IN)



- **m-Indicator:** This app contains the Local Train Timings of Mumbai and also details the local train routes for IIT Bombay. One can also find the various bus routes and the bus numbers on this app.  
<https://play.google.com/store/apps/details?id=com.mobond.mindicator>
- **MYBYK App:** Whether you want to ride a cycle at home or use it to commute within your campus, whenever you need a cycle, find a MYBYK near you. Unlock using your smartphone and pedal your way to a healthy life.  
<https://play.google.com/store/apps/details?id=in.greenpedia.mybyk>
- **SHIRU CAFÉ:** Wanna have a free drink? Just tap a button on this app and you can get free refreshing juice or hot tea and coffee.  
<https://play.google.com/store/apps/details?id=jp.co.enrission.shirucafe>





# Important Softwares

- **MATLAB:** MATLAB is a high-performance language for technical computing. It integrates computation, visualization, and programming in an easy-to-use environment where problems and solutions are expressed in familiar mathematical notation.  
<https://www.cc.iitb.ac.in/>
- **ArcGIS:** ArcGIS is a platform for organizations to create, manage, share, and analyze spatial data. It consists of server components, mobile and desktop applications, and developer tools.  
(available in Department Computer Lab)
- **QGIS:** QGIS is a free and open-source cross-platform desktop geographic information system (GIS) application that supports viewing, editing, and analysis of geospatial data.  
<https://qgis.org/en/site/forusers/download.html>
- **Codeblocks:** Codeblocks is a free C, C++ and Fortran IDE. It's used for programming and is commonly used in Computing in Civil Engineering course.  
<http://www.codeblocks.org/downloads>
- **AutoCAD:** AutoCAD is a commercial computer – aided design (CAD) and drafting software application. Developed and marketed by Autodesk. AutoCAD is used in industry by architects, project managers, engineers, graphic designers, city planners and other professionals.  
For Student Version (should be used only for educational purposes):  
<https://www.autodesk.com/education/free-software/autocad>
- **Python:** Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built-in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together.  
<https://www.python.org/downloads/>
- **R:** R is a programming language and free software environment for statistical computing and graphics supported by the R Foundation for Statistical Computing. The R language is widely used among statisticians and data miners for developing statistical software and data analysis  
<https://rstudio.com/>
- **Staad Pro:** STAAD Pro is a structural design-oriented program with a user interactive interface which allows for the user working on it extremely easy. It can be used for modelling, designing and analyzing various structures and structural configurations.

## Geotechnical Engineering

- **Plaxis:** Plaxis is a computer programme that performs finite element analysis (FEA) within the realm of geotechnical engineering, including deformation,



stability and water flow. The input procedures enable the enhanced output facilities provide a detailed presentation of computational results.

<https://www.plaxis.com/support/software-updates/plaxis-2d-2019-00/>

### **Ocean Engineering**

- **OpenFOAM:** OpenFOAM is a C++ toolbox for the development of customized numerical solvers, and pre-/post-processing utilities for the solution of continuum mechanics problems, most prominently including computational fluid dynamics (CFD).  
<https://openfoam.org/>
- **SACS:** SACS is an integrated finite element structural analysis suite of applications that uniquely provides for the design, fabrication, installation, operations, and maintenance of offshore structures, including oil platforms and wind farms.
- **SESAM:** Sesam is a software suite for structural and hydrodynamic analysis of ships and offshore structures. It is based on the displacement formulation of the Finite Element Method.
- **Reef 3D:** REEF3D is an open-source computational fluid dynamics program. With a strong focus on hydraulic, coastal, offshore and environmental engineering, as well as Marine CFD, the use of the level-set method enables it to calculate complex free surface flows.  
<https://sourceforge.net/projects/reef3d/>
- **SimCLIM:** SimCLIM is a software tool designed to facilitate the assessment of risks from climate change for sustainability officers, consultants, policymakers, academics, non-governmental and governmental organizations and students.

### **Remote Sensing**

- **Erdas Imagine:** Erdas Imagine is an image processing software package that allows users to process both geospatial and other imagery as well as vector data. Erdas can also handle hyperspectral imagery and LiDAR from various sensors. (available in Department Computer Lab)
- **SNAP:** SNAP stands for Sentinels Application Platform and is a common software architecture on which a collection of free open-source toolboxes for the scientific exploitation of Earth Observation missions is available.  
<http://step.esa.int/main/download/snap-download/>

### **Transportation Systems Engineering**

- **IITPAVE:** IITPAVE is a multilayer analysis programme specifically used for analysis programme specially used for analysis and design of pavement based on IRC: 37 – 2012.  
(would be provided with the course material)
- **Civil 3D:** Civil 3D is a civil engineering design software that supports BIM (Building Information Modelling) with integrated features to improve drafting, design and construction documentation.  
For Student Version (should be used only for educational purposes):  
<https://www.autodesk.com/education/free-software/civil-3d>



- **NLOGIT:** NLOGIT software is used in transportation planning. It provides programs for estimation, model simulation and analysis of multinomial choice data, such as brand choice, transportation mode and for survey and market data in which consumers choose among a set of competing alternatives.  
(would be provided with the course material)

### **Construction Technology and Management**

- **Microsoft Project (MSP):** Microsoft Project is a project management software product, developed and sold by Microsoft. It is designed to assist a project manager in developing a schedule, assigning resources to tasks, tracking progress, managing the budget, and analyzing workloads.  
<https://www.cc.iitb.ac.in/>
- **Primavera:** Primavera is an enterprise project portfolio management software. It includes project management, scheduling, risk analysis, opportunity management, resource management, collaboration and control capabilities, and integrated with other enterprise software such as Oracle and SAP's ERP systems.
- **Autodesk Revit:** Revit is a building information modelling software for architects, landscape architects, structural engineers, mechanical, electrical, and plumbing (MEP) engineers, designers and contractors.  
For Student Version (should be used only for educational purposes):  
<https://www.autodesk.com/education/free-software/revit>
- **Autodesk Navisworks:** Navisworks is a 3D design review package for Microsoft Windows. Used primarily in construction industries to complement 3D design packages, Navisworks allows users to open and combine 3D models; navigate around them in real time; and review the model using a set of tools.  
For Student Version (should be used only for educational purposes):  
<https://www.autodesk.com/education/free-software/navisworks-manage>
- **SimaPro:** SimaPro is the professional tool to collect, analyze and monitor the sustainability performance data. The software can be used for a variety of applications, such as sustainability reporting, carbon and water foot printing, product design, generating environmental product declarations and determining key performance indicators.
- **DesignBuilder:** DesignBuilder is an EnergyPlus based software tool used for energy, carbon, lighting and comfort measurement and control. It is developed to ease up the building simulation process.
- **Microsoft Visio:** Visio is a vector graphics application and is part of the Microsoft Office family.  
<https://www.cc.iitb.ac.in/>
- **Origin:** Origin is a proprietary computer program for interactive scientific graphing and data analysis. It is produced by OriginLab Corporation and runs on Microsoft Windows. Graphing support in Origin includes various 2D/3D plot types.  
<https://www.cc.iitb.ac.in/>



## Structural Engineering

- **ETABS (Extended Three-dimensional Analysis of Building Systems):** Engineering software product that caters to multi-story building analysis and design, modelling tools and templates, code-based load prescriptions, analysis methods and solution techniques, all coordinate with the grid-like geometry unique to this class of structure
- **ANSYS (Analysis System):** Finite element analysis software for simulating computer models of structures, electronics, or machine components for analyzing strength, toughness, elasticity, temperature distribution, electromagnetism, fluid flow, and other attributes  
For Student Version (should be used only for educational purposes):  
<https://www.ansys.com/en-in/academic/free-student-products>
- **SAP 2000:** 3D object based graphical modelling software for wide variety of analysis and design options completely integrated across powerful user interface and well-integrated, productive and practical general-purpose structural program
- **MIDAS:** To create high quality designs with unprecedented levels of efficiency and accuracy distinctively user-friendly interface and optimal design solution functions that can account for construction stages and time dependent properties, highly developed modelling and analysis functions enable engineers to overcome common challenges and inefficiencies of finite element analysis
- **OpenSees:** Finite element applications for simulating the response of structural and geotechnical systems subjected to earthquakes  
<https://opensees.berkeley.edu/OpenSees/user/download.php>
- **FEAST (Finite Element Analysis of Structures):** Structural and heat transfer analysis software based on finite element method
- **PACT (Performance Assessment Calculation Tool):** Electronic calculation tool, and repository of fragility and consequence data, that performs the probabilistic calculations and accumulation of losses.  
<https://femap58.atcouncil.org/pact>
- **SeismoStruct:** Finite Elements package capable of predicting the large displacement behavior of space frames under static or dynamic loading, taking into account both geometric nonlinearities and material inelasticity
- **CSiBridge:** Graphic designing software for analysis, and design of bridge structures
- **LS-DYNA:** Advanced general-purpose Multiphysics simulation software package

## Water Resources Engineering

- **Gephi:** Gephi is open-source software for network visualization and analysis. It helps data analysts to reveal patterns and trends, highlight outliers intuitively and tells stories with their data. It uses a 3D render engine to display large graphs in real-time and to speed up the exploration.  
[gephi.org](http://gephi.org)



- **KYPipe:** KYPipe models' water, petroleum, refined products, chemicals, refrigerants, low-pressure sewer systems, and more. It can be used for selecting and sizing pipes, pumps, valves, tanks, and other devices. Calibration tools and pump operation optimization features help ensure sound modelling.  
[www.kypipe.com](http://www.kypipe.com)
- **EPANET:** EPANET is a software application used throughout the world to model water distribution systems. It was developed as a tool for understanding the movement and fate of drinking water constituents within distribution systems and can be used for many different types of applications in distribution systems analysis.  
<https://www.epa.gov/water-research/epanet>
- **HEC-HMS:** The Hydrologic Modeling System (HEC-HMS) is designed to simulate the precipitation-runoff processes of dendritic drainage basins. It is designed to be applicable in a wide range of geographic areas for solving the widest possible range of problems.  
<https://www.hec.usace.army.mil/software/hec-hms//downloads.aspx>
- **SWMM:** EPA's Storm Water Management Model (SWMM) is used throughout the world for planning, analysis, and design related to stormwater runoff, combined and sanitary sewers, and other drainage systems.  
<https://www.epa.gov/water-research/storm-water-management-model-swmm>
- **Ansys FLUENT:** Ansys FLUENT software contains the broad physical modelling capabilities needed to model flow, turbulence, heat transfer, and reactions for industrial applications ranging from airflow over an aircraft wing to wastewater treatment plants with Unparalleled breadth of turbulence models and acoustics modelling tools.  
[ftp://ftp.iitb.ac.in/IITB\\_private/Ansys/](ftp://ftp.iitb.ac.in/IITB_private/Ansys/)
- **QUAL2K:** A Modeling Framework for Simulating River and Stream Water Quality. e. Application of the model extends to the presence of multiple pollution discharges and withdrawal locations and tributaries flowing into the mainstream. Data input to the QUAL2K model include geometric data of the river system, hydraulic data, parameters, and data of the surroundings  
<https://www.qual2k.com/>



# Gender Cell IIT Bombay



IIT Bombay's Gender Cell is an institutional body which works towards promoting equality, non-discrimination and gender justice on the campus. It inquires into complaints of sexual harassment through its Internal Complaints Committee (GC - ICC). Its objectives are:

- To uphold the dignity of any person at IITB.
- To facilitate a gender sensitive and congenial working environment at IITB so that any gender whether employee or student, are not subjected to gender specific discrimination or sexual harassment.

## Procedure to Complain

- Do not ignore harassment in the hope that it will stop on its own. Come forward and complain.
- Do not feel the sense of shame. Tell the harasser clearly that you find behavior offensive.
- If informal methods such as telling the perpetrator to stop harassing do not help, the victim can contact any of the member of gender cell directly through their email or phone call and should lodge complaint at
- One can take help of their companion for filing complaint and can talk to someone who they trust.
- Keep a record of all incidents of harassment, so that it will be helpful when you register a complaint.
- The complainant's name and identity are always kept confidential.

## Location

3<sup>rd</sup> floor Main Building

Next to Student Wellness Center

IIT Bombay, Powai, Mumbai 400076

Office Hours: Monday and Thursday: 10.00 am to 12.00 pm

Tuesday, Wednesday and Friday: 3.00 pm to 5.00 pm

## Contact Info

Email id: [gendercell@iitb.ac.in](mailto:gendercell@iitb.ac.in)

Office number: 5052 (available during office hours)

Website: <http://www.gendercell.iitb.ac.in/>



# Student Wellness Center



After securing admission at the Institute and starting your stay here, you may feel that a lot of parameters around you are different. There are a few issues that almost everyone in the Institute faces initially like academic concerns, social (family and peer) pressure etc., leading to feelings of loneliness, low confidence, anxiety, stress, anger and sadness, to name a few. Student Wellness Center provides counselling opportunity for individuals to learn to make better choices, improve interpersonal skills, develop confidence and increase educational effectiveness.

Typical concerns you can seek counselling for are:

- Transition and change
- Uncertainty about values and goals
- Academic pressure
- Personal relationships with the special one and with friends
- Family concerns
- Issues of grief and loss
- Stress, depression and anxiety
- Lack of motivation; concentration difficulties
- And others...

**Location:** Student Wellness Centre  
3rd floor, above Academic section, Main building

**Timing:** Monday to Friday:  
Timing: 9.30-5.30

**Contact:** 022-2576-9070

**Website:** <http://www.iitb.ac.in/swc/en>

For appointment, visit website.



# Know Your Seniors

## CE1 – Transportation Systems Engineering



**SHADAB AKHTAR**



**UTTAM SINGH**



**SHUBHAM KHANDARE**



**KUMARI PRERNA MALLIK**



**AKSHAY VIJAY DESAI**



**KESHAV PRAKASH**



**GOPAL LAXMANRAO RABBEWAR**



**PRANAYA PATEL**



**ANKT PANDEY**





# PROJECTS

## CE1- Transportation Systems Engineering

Name	Roll No.	Title	Guide
Shadab Akhtar	213040007	Augmenting of transit network in metropolitan areas for enhancing transit ridership	Prof. K.V. Krishna Rao
Uttam Singh	213040002	Modelling maneuverability of powered two wheelers during filtering	Prof. Tom V Mathew
Shubham Khandare	180040103	Improving the efficiency of intersections via adaptive signal control with connected vehicle data	Prof. Tom Mathew
Kumari Purna Mallik	213040003	Cold Recycling of Asphalt Pavements	Dr. Dharamveer Singh
Akshay Vijay Desai	213040004	Extraction of As-built Geometric Details of Rural Highways	Prof. Avijit Maji
Keshav Prakash	213040009	Investigation of efficiency of phone banning applications while driving	Prof. Nagendra Rao Velaga
Gopal Laxmanrao Rabbewar	213040006	Rural Flexible Public Transportation and Assessment of Performance of Operators	Prof. Gopal R Patil
Pranaya Patel	213040010	Conventional and advance data collection methods for various traffic studies	Prof. Perumal Vedagiri
Ankit Pandey	213040005	Augmenting of transit network in metropolitan areas for enhancing transit ridership	Prof. Perumal Vedagiri



## CE2 – Geotechnical Engineering



**VISHAL GAJANAN JADHAV**



**UZZWAL KUMAR**



**AKHIL SURESH**



**ADITYA KUMAR SINGH**



**GANESH RATH**



**SANJIT KUMAR BHATTARI**



**PRADEEP K KARANDI**



**HARSHADA KADAM**



**ADITI VIRUPAKSH KHURD**



**VIKASH RAI**



# PROJECTS

## CE2- Geotechnical Engineering

Name	Roll No.	Title	Guide
Vishal Gajanan Jadhav	213040013	Field instrumentation using slope inclinometers and optical fiber sensors	Prof. Dasaka Satyanarayana Murthy
Uzzwal Kumar	213040025	Studies on evaluation of the performance of rockfall protection measures	Prof. B.V.S. Viswanadham
Akhil Suresh	213040024	Prefabricated Vertical Drains	Prof. Prasenjit Basu & Prof. Santiram Chatterjee
Aditya Kumar Singh	213040023	Gabion walls for coastal protection works	Prof. Ashish Juneja
Ganesh Rath	213040019	Characterization of sand and rubber tire mixes	Prof. Daska Murthy
Sanjit Kumar Bhattarai	203042002	Studies on the behavior of polymeric strip reinforced soil walls	Prof. B.V.S. Viswanadham
Pradeep K Karandi	213040020	Soil stabilization using EICP	Prof. Ashish Juneja
Harshada kadam	213040018	Characterization of rubber tire-sand mixes for geotechnical applications	Prof. Dasaka Murthy
Aditi Virupaksh Khurd	213040014	Soil Dynamics / Geotechnical Earthquake Engineering	Prof. Deepankar Choudhury
Vikash Rai	213040015	Inverse analysis algorithms for updating geotechnical engineering parameters.	Prof. Pinom Ering



## CE3 – Water Resources Engineering



**ROUNIT MISHRA**



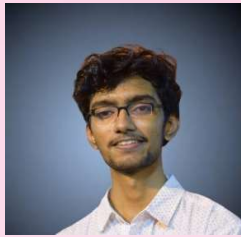
**UDAY SHANKAR DWIVEDI**



**AMAR SINGH**



**HARSH GUPTA**



**SAUTRIK CHAUDHURI**



**ABHISHEK RAMAN**



**ABHISHEK SINGH**



**MANISH KUMAR**



**ANKIT KUMAR SONI**



**PINKESH BARODIYA**



**SOMYA SAHANA**



**MANEESH KR. MEENA**



**PRABHAT TEWARI**



**AMRUTA C. NAIK**



# PROJECTS

## CE3 - Water Resources Engineering

Name	Roll No.	Title	Guide
Rounit Mishra	213040027	Climate change Impact on Irrigation Water Requirements in River water Basin	Prof. T.I. Eldho
Uday Shankar Dwivedi	213040028	Flood modeling of critical infrastructure: Coastal flooding	Prof. Kapil Gupta
Amar Singh	213040030	Use of ML and sensors for leak detection and localization in water distribution systems	Prof. Janga Reddy Manne
Harsh Gupta	213040031	Flood risk modeling of critical infrastructure - Riverine flooding	Prof. Kapil Gupta
Sautrik Chaudhuri	213040032	Explainable Deep Learning for hydroclimatic teleconnections	Prof. Subimal Ghosh
Abhishek Raman	213040033	Groundwater analysis using nonlinear dynamic and chaos methods	Prof. B Sivakumar
Abhishek Singh	213040034	Flood Modelling	Prof. Basudev Biswal
Manish Kumar	213040035	Resilience of eco-hydrological network	Prof. Subimal Ghosh
Ankit Kumar Soni	213040036	A case study of spatial rainfall variability in peninsular india	Prof. B Sivakumar
Pinkesh Barodiya	213040037	Reservoir operation under changing climate	Prof. V Jothiprakash
Somya Sahana	213040038	Quantifying the impact of climate change on water resources	Prof. Riddhi Singh
Prabhat Tewari	213040081	AI/ML Applications in reservoir operations	Prof. Janga Reddy Manne
Amruta C. Naik	213044001	Recession flow analysis	Prof. Basudev Biswal



# CE4 – Structural Engineering



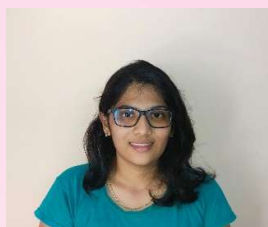
**INDER CHHETIYA**



**SRIJON PAL**



**HAROONRASHEED SAFI**



**DASARI SANDHYA RANI**



**SHUBHAM KUMAR SAHU**



**NIRAJ KUMAR**



**MUDIT AGARWAL**



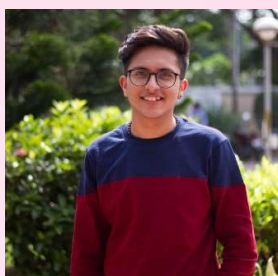
**ARYAN RAJ**



**MOHAMMAD IBRAHIM**



**SUSMITA TROPA BARAI**



**RITIK DHALWANI**



**ARJUN CHANDRA BISWAS**



# PROJECTS

## CE4 – Structural Engineering

Name	Roll No.	Title	Guide
Inder Chhetiya	213040045	Bamboo Structural Design for a Communication Tower	Prof. Siddhartha Ghosh
Srijon Pal	213040049	Fatigue Assessment of Railway Steel Bridges	Prof. Alok Goyal
Haroonrasheed Safi	213040014	Fire Damage in Tall RC Buildings	Prof. Manish Kumar
Dasari Sandhya Rani	213040056	Finite Element Stress Analysis of Tubular Joints	Prof. Yogesh Desai
Shubham Kumar Sahu	213040053	Experiments on Bamboo	Prof. Siddhartha Ghosh
Niraj Kumar	213040052	Fragility curves for bridges under different loading conditions	Prof. Swagata Basu
Mudit Agarwal	213040047	Performance Based Earthquake Engineering in India	Prof. Ravi Sinha
Aryan Raj	213040050	Structural Health Monitoring of Bridge	Prof. Pradipta Banerji
Mohammad Ibrahim	213041004	Scour Protection of Bridge Piers using Grout Filled Bag Mattress	Prof. Swagata Basu
Susmita Tropa Barai	213042002	Seismic Hazard Analysis and Conceptual Seismic Design in Performance-based Earthquake Engineering	Prof. Yogesh Desai
Ritik Dhalwani	213040001	Study on High-Speed Railway Bridges	Prof. Alok Goyal
Arjun Chandra Biswas	213041012	A Framework for Assessing the Community Seismic Resilience	Prof. Meera Raghunandan



## CE5 – Ocean Engineering



**PAWAN**



**MAYANK VIKAS APTE**



**SUBHASH RAJ**



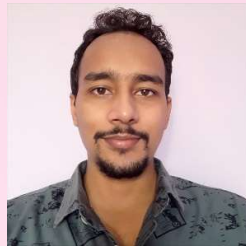
**MANDAR BHARAT GAVALI**



**SANJAY KUMAWAT**



**AMAN SHRIVASTAVA**



**MOHIT KUMAR**

## CE6 – Remote Sensing



**CHIRANJIV KUMAR PANDEY**



**SACHIN MODI**



**AKASH NIGAM**



**SUSHANT SEEPANA**





# PROJECTS

## CE5- Ocean Engineering

Name	Roll No.	Title	Guide
Pawan	213040059	Numerical modelling for hydrodynamic of wave vegetation	Prof. Srineash V K
Mayank Apte	213040061	Rate of shoreline change analysis for major ports in India using empirical and numerical techniques	Prof. M.C. Deo
Subhash Raj	213040063	Wave vegetation interaction	Prof. Srineash. V. K
Mandar Bharat Gavali	213046001	Maintenance Dredging Quantity Estimation of Thane Creek Navigation Channel by Numerical Modelling Technique	Prof. R. Balaji
Sanjay kumawat	213040082	Offshore wind energy in india and effect of climate change and other factor	Prof. Balaji Ramakrishnan
Aman Shrivastava	213040060	Understanding the effects of arrangement of Tidal turbinies on hydrodynamics using numerical modeling	Prof. R Balaji
Mohit Kumar	213040062	Hydrodynamic modelling of Chilika lake, Odisha for climate change	Prof. Manasa Ranjan Behera

## CE6- Remote Sensing

Name	Roll No.	Title	Guide
Sushanth Seepana	213040067	Improvement of Near-Real-Time Satellite-Based Rainfall Estimates by Integrating Soil Moisture through SVM-based Machine Learning Approach	Prof. Raaj Ramsankaran
Sachin Modi	213040065	Flood mapping	Prof. Indu J
Chiranjiv Kumar Pandey	213040066	Surface Water and Ocean Topography (SWOT)	Prof. Indu J
Akash Nigam	213040064	Crop classification using machine learning	Prof. Raaj Ramsankaran



# CE7 – Construction Technology and Management



**ABHAY SAINI**



**BHUVNESH KUMAR BAJRE**



**BOMAN ALI MOHAMMADI**



**GUNJA SHAH**



**HIDHARTHA SHANKAR DAS**



**HIRANYA JEET MALLA**



**IDREES NISAR**



**KIRAN R JANJALKAR**



**K NANDA GOPAL**



**MAYUR JAIN**



**TEJYAS DASA SINGH**



# PROJECTS

## CE7- Construction Technology and Management

Name	Roll No.	Title	Guide
Abhay Saini	213040078	Digital Twin in Construction	Prof. Albert Thomas
Bhuvnesh Kumar Bajre	213044002	Research on lean six sigma and green lean six sigma	Prof. Albert Thomas
Boman Ali Mohammadi	213041010	Building Energy Co-simulation	Prof. Albert Thomas
Gunja Shah	213041003	Ballistic performance of UHPC (Ultra High Performance concrete exposed at low temperature.	Prof. Prakash Nanthagopalan
Hidhartha Shankar Das	213040077	Application of Natural Language Processing(NLP) in construction contracts	Prof. Venkata Santosh Kumar
Hiranya Jeet Malla	213041006	3D Printing of Concrete	Prof. Prakash Nanthagopalan
Idrees Nisar	213041009	Smart Coatings and their Contribution in Corrosion Control	Prof. Swathy Manohar
Kiran R Janjalkar	213045001	Optimizing the maintenance of building by adopting lean construction	Prof. Venkata Santosh Kumar
K Nanda Gopal	213044004	Corrosion and service life assessment in structures with CPCC Rebars	Prof. Muhammad Salman
Mayur Jain	213044003	Pull out test	Prof. Muhammad Salman
Tejyas Dasa Singh	213041008	Recycled concrete aggregates	Prof. Muhammad Salman



# Reaching IIT Bombay

## Reaching Mumbai through Train

Stations for through trains Coming to Mumbai

**Central Railway:** CST, Dadar, Kurla, Thane.

**Western Railway:** Mumbai Central, Dadar, Bandra, Andheri, Borivali.

Those coming by **Central Railway** can take the Central Railway Suburban train and get down at **Kanjur Marg** station which is the nearest stations from IITB. Please ensure to take only a **slow local train** as the fast ones do not stop at Kanjur Marg.

If you come via **Western railway**, you can board a **Western Railway line** suburban train and reach **Dadar**, where you can change to the **central railway line** and board a suburban train to **Kanjur Marg**.

Once you get down at Kanjur Marg railway station, come out through the **western-side** gate and take a bus or, auto-rickshaw to IIT main gate.

## Reaching Mumbai through Aero plane

Those travelling by air can take **taxis/auto-rickshaws** from the domestic (40 -60 min travel time)/international (20-40 min travel time) airport to reach IIT Bombay.

## Campus Map

SEARCH BY GROUPS AND SERIAL NUMBERS	
<b>Academic, Non academic and Lab's</b>	<b>Auditoriums and Halls</b>
Aerospace Engg.....D5... 1	Convocation Hall.....C3... 21
Bio-diesel Lab.....B4... 4	G Gaitonde Lecture Hall.....C4... 32
Bio-science & Bio-energy 1.....C4... 5	Lecture Hall Complex-1.....D4... 47
Bio-science & Bio-energy 2.....C5... 6	Lecture Hall Complex-2.....D4... 48
Bio-science & Bio-energy 3.....B4... 7	PC Saxena Auditorium (LT).....C4... 64
Central Library.....B3... 12	Seminar Hall.....C4... 72
Centrifugal Lab.....B4... 14	Victor Menezes CC.....C4... 89
CESE.....C5... 15	<b>Food</b>
Chemical, Chemistry.....D4... 16	Brewberry Cafe.....B2... 9
Civil Engg.....C4... 17	Gulmohar Restaurant.....D3... 35
Computer Science & Engg.....D3... 18	Nestle Cafe (Coffee Shack).....C3... 61
Computer Science Dept.....B4... 19	Staff Canteen.....C3... 77
Construction Div.....C5... 20	<b>Micro Fluidics Lab</b>
CSRE.....C4... 22	Micro Fluidics Lab.....B5... 57
Cummins Engine Research facility.....B5... 23	<b>NanoTech &amp; Science</b>
Earth Science.....C4... 26	Research Centre (ACRE).....B4... 58
Electrical Engg.....C4... 27	NASA.....C5... 59
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Estate Stores.....C5... 31	Power House.....B5... 67
Heat Pump Lab.....B4... 36	Printing Press.....C5... 68
Heat Transfer Lab.....B4... 37	SAC.....B3... 69
Heavy Structure Lab.....B4... 38	SAMEER.....A4... 70
Hostel 1.....A3... H1	SEMT Lab.....C5... 72
Hostel 2.....A2... H2	SITAC.....B4... 74
Hostel 3.....A2... H3	Solar Lab.....B4... 75
Hostel 4.....A2... H4	SOM.....C3... 45
Hostel 5.....B2... H5	Sophisticated Analysis
Hostel 6.....B1... H6	Instrument Facility (SAIF).....B4... 58
Hostel 7.....B1... H7	Stems Power Lab.....B4... 80
Hostel 8.....B2... H8	Stems and Estate office.....C5... 81
Hostel 9.....B1... H9	Thermal Hydraulic Test Facility.....B5... 87
Hostel 10 Girls' Hostel.....D3... H10	UG Lab/S2 Boy.....C5... 88
Hostel 11 Girls' Hostel.....C2... H11	<b>Residential</b>
Hostel 12.....A1... H12	Ananta.....A4... 2
Hostel 13.....B1... H13	Director's Bungalow.....E3... 24
Hostel 14.....B1... H14	DRDO.....A3... 25
Humanities and Social Sciences (HSS).....D4... 40	Guest House/ Javihar.....D2... 33
Hydraulics Lab.....B4... 41	Guest House/ Vanvihar.....D3... 34
Hydraulics Lab (new).....B4... 42	Staff Hostel.....C3... 76
IC Engine Lab.....B4... 43	Tansa House (Proj. Staff).....B2... 84
IDC.....C4... 44	Vihar House.....B5... 90
	White House.....F2... 91

The campus map can be accessed using the following link:  
[http://www.iitb.ac.in/sites/default/files/article/images/IITB-Map---2D\\_ENG-PRINT.jpg](http://www.iitb.ac.in/sites/default/files/article/images/IITB-Map---2D_ENG-PRINT.jpg) or in Insti app: <https://insti.app/map>



# Credits

## Content

▶ Department Website

• <https://www.civil.iitb.ac.in/>

▶ ISCP Website

• <https://gymkhana.iitb.ac.in/~scp/scp/index.html>

▶ AAKAAR Website

• <http://aakaariitb.in/>

▶ PG Sports Facebook Page

• <https://www.facebook.com/groups/414517262018650/about/>

▶ PG Cult Website

• <https://gymkhana.iitb.ac.in/~cultural/pg-cult/about.php#about>

▶ IIT B Placements Website

• <http://placements.iitb.ac.in/>

Compiled by:

Team ISCP

**Welcome to IIT Bombay**

