



175  
YEARS OF  
IIT ROORKEE  
ESTD. 1847

# DEPARTMENT OF CIVIL ENGINEERING

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE  
ROORKEE - 247 667 (UTTARAKHAND) INDIA



## FROM THE HOD'S DESK



Dear All,

First of all, I wish all a very Happy New Year 2022 and pray that the year may usher new hope and bring relief to the prevailing pandemic conditions. Despite this unusual situation, the Department of Civil Engineering has continued to excel in its activities in various domains. Faculty members have been nominated to various National committees and students have been awarded numerous awards. It gives me immense pleasure to present before you the activities of the department from July 2021 to Dec 2021. I hope that you will find this newsletter informative, and it will provide us the opportunity to know more about the department. It is a humble attempt to stay connected with you. Further, this year has its own importance in the timeline of this Institute. From November 25, 2021 to November 24, 2022, it is celebrating its 175<sup>th</sup> year of engineering education.

Thanks

**Prof. Sanjay Kumar Ghosh**

## ACHIEVEMENTS IN BRIEF

Placement Offer : 104 Nos  
Internship Offer : 17 Nos  
Ph.D. Awarded : 15 Nos  
Foreign Students - 07 (Ph.D.),  
31 (M.Tech.)

UG Students - 636  
M.Tech. - 107 (MHRD-62, Part Time-45)  
Ph.D. - 56 (MHRD-41, ICCR-3, PART  
TIME-1, QIP-1, SPONSORED-4,  
PROJECT-6)

No of Research Projects	11
Amount (₹ Lakhs)	608.53
No of Consultancy Projects	313
Amount (₹ Lakhs)	2524.58
No. of Testing works	57
Amount (₹ Lakhs)	28.92

## RECOGNITIONS



**Prof. C. S. P. Ojha**  
Chair Professorship  
A S Arya Institute Professorship &  
Member Expert Group, Brahmaputra  
Board, MoJS, Itanagar



**Prof. Z. Ahmad**  
Co-Opted Member  
IAHR Hydraulic Structures  
Leadership Team



**Prof. Rahul Dev Garg**  
Chairman  
JEE (Advanced) 2022

## MEMBERS OF IRC COMMITTEES



**Prof. Sanjay Kumar Ghosh**  
Academician Member,  
Highway Research Board(HRB)



**Prof. Manoranjan Parida**  
Convenor,  
H-8 Committee, Urban Roads  
& Streets



**Prof. N. K. Samadhiya**  
Member  
H-4 Committee: Embankment,  
Ground Improvement and Drainage



**Prof. Rajat Rastogi**  
Member,  
H-8 Committee, Urban Roads  
& Streets



**Prof. Praveen Kumar**  
Member  
H-2 Committee: Flexible Pavement,  
Airfields and Runways



**Prof. R. N. G. D. Ransinchung**  
Member  
B-8 Committee : Management,  
Maintenance and Rehabilitation



**Prof. Indrajit Ghosh**  
Member,  
H-7 Committee: Road Safety &  
Design



**Prof. Amit Agarwal**  
Member,  
G-7 Committee: Intelligent  
Transport System



**Prof. Pushpa Choudhary**  
Member  
H-10 Committee: Hill Roads and Tunnels

## AWARDS



**Prof. Kamal Jain**  
"Satish Dhawan Award-2020"  
and "JISRS Best Paper Award-2020" by  
Indian Society of Remote Sensing (ISRS)



**Prof. Satyendra Mittal**  
"Eminent Author Award"  
by the Institution of Engineers (India) during "36th  
Indian Engineering Congress" in Vigyan Bhawan, New Delhi



**Prof. C. S. P. Ojha**  
"ISH Jal Vigyan Puraskar"  
(Best Paper in ISH Journal) 2021  
by the Indian Society for Hydraulics (ISH)



**Prof. S. K. Jain**  
"Prof. S. N. Gupta Memorial Award"  
for the year 2021 by the Indian Society for  
Hydraulics (ISH)



**Prof. Indrajit Ghosh**  
"Outstanding Teacher Award 2021"  
Indian Institute of Technology Roorkee



**Dr. Vinay Kumar Tyagi**  
"Hiyoshi Think of Ecology Award 2021"  
by Hiyoshi Corporation, Japan



**Ms. Sheetal Kumari** of Central University of Jharkhand under the guidance of **Prof. Saurabh Vijay** was adjudged as one of the best project under **SPARK 2021**.



**Mr. Abhishek Adhikari, Prof. R.D. Garg, Mr. Sunil K. Pundir, Mr. Anupam Singhal** have been awarded BEST Paper at National Symposium on Advances in Remote Sensing (NS-ARS21), BIT, Mesra, Ranchi during 9 - 11 December, 2021.



## WINNER OF THE SMART INNOVATIVE URBAN MOBILITY CHALLENGE



**Prof. Amit Agarwal, Mr. Arpit Shrivastava, Mr. Devesh Pratap Singh, Ms. Itisha Jain** won the First prize in Smart Innovative Urban Mobility Challenge, an initiative of the Ministry of Housing and Urban Affairs supported by the Smart Cities Mission, National Institute of Urban Affairs and GIZ India. The top 3 proposals will be provided contracts jointly worth 20,00,000 with a minimum contract value of 5,00,000. Additionally, the winning teams will have an opportunity to present their solution to Smart Cities Mission, the Government of India. The event started in November 2020 to accelerate the smart city mission of India, inviting proposals from around the globe. Out of 80 teams that participated in the first phase, ten finalists teams presented their work in front of the Jury on 22<sup>nd</sup> Oct 2021. Team IIT Roorkee developed an interactive passenger information system and integrated a route-planning algorithm into it. The route planning application integrates advanced ML and AI models to predict the crowding levels in the public transit system. The information system empowers the decision-making of public transit users in planning the safest journey in COVID recovering times.

## AWARDS & NOMINATION (STUDENTS)



**Mr. Sunni Kanta Prasad Kushwaha**, Ph.D. student from Geomatics Engineering Group is visiting Technical University in Zvolen, Zvolen, Slovak Republic from September 01, 2021 to June 30, 2022 under National Scholarship Programme of the Slovak Republic.

## CONVOCATION AWARDS (STUDENTS)

### B.TECH. STUDENTS



**Aditya Hriday  
Upadhyay**






1. Manmohan Das Seth Department Gold Medal.
2. Institute Silver Medal 2<sup>nd</sup> highest CGPA of student of B.Tech and B.Arch.
3. Prof. C. L. Toshniwal Award for obtaining highest marks in Environmental Engineering Subject.
4. Prabhakar Swarup Award for obtaining highest CGPA in B.Tech Civil Engineering.
5. Shri Shiv Nandan Swarup and Awadh Bhatnagar cash prize for obtaining the highest CGPA in B.Tech Civil Engineering.
6. Madhusudan Dayal Mithal Medal.
7. Rai Bahadur Sohan Lal Bhatia Medal.

 <b>Harsh Vardhan</b> 1. Best B.Tech Project Award. 2. Shri M. A. Rao cash prize for the 2 <sup>nd</sup> highest CGPA. 3. Vinay Krishna cash prize for obtaining 2 <sup>nd</sup> highest CGPA.	 <b>Sakshi Gupta</b> Prof. (Mrs.) Renu Bhargava award for Excellence in Environment Engineering to graduating girl in B.Tech Civil and obtaining a CGPA of 8.00	 <b>Yashraj Bimalbhai Jariwal</b> 1. Best B.Tech Project Award. 2. Tara Chand Kanti Devi cash prize in design project
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## BEST B.TECH. PROJECT AWARDS

 <b>Mohd. Shadab Siddique</b>	 <b>Mehul Srimali</b>	 <b>Mudit Agarwal</b>	 <b>Vedant Kumar</b>
 <b>Nikita Singh</b>	 <b>Vishwas Rawat</b>	 <b>Yash Khandelwal</b>	 <b>Vedant Neebhra</b>

## M.TECH. STUDENTS

 <b>Shubham Goyal (Geotechnical Engineering)</b> 1. Departmental Gold Medal for obtaining the highest CGPA of graduating program in M.Tech (Civil). 2. Dr. Jai Krishna Gold Medal highest CGPA in all M.Tech Program. 3. Laxmi Devi and Sri Banadri Das to M.Tech, M.Arch and MURP. 4. Tarachand Kanti Devi cash prize in M.Tech(Civil) in specialization of Geotechnical Engineering.	 <b>Ajay Saraswat (Geomatics Engineering)</b> Amba Prasad and Kalawati Memorial cash prize for obtaining the highest CGPA in M.Tech (Geomatics Engineering)	 <b>Rahul Rao (Environmental Engineering)</b> Kathpalia Award for best M.Tech dissertation in area of Environmental aspects.
 <b>Salman Khan (Environmental Engineering)</b> Prof. C. L. Toshniwal award in Environmental Engineering for obtaining the highest CGPA in Environmental Engineering	 <b>Dheeraj Adwani (Transportation Engineering)</b> Sunita Bahadur Memorial Gold Medal for obtaining the highest CGPA in Transportation Engg.	

## 2<sup>ND</sup> 15-DAYS ROAD SAFETY AUDITORS CERTIFICATION PROGRAM

IIT Roorkee organized the 2<sup>nd</sup> Certification Course for Road Safety Auditors as per the guidelines prepared by MoRTH and IRC for fulfilling eligibility requirements of Road Safety Auditors. The 15-day course was offered online from July 19 to August 2, 2021. The coordinator of this course was Prof. Amit Agarwal, Assistant Professor was the course coordinator. 28 participants from Industry and Govt. organizations, e.g., National Safety Council, Dilip Buildcon, BRO, IBI Group, SAFE Society, WS Atkins, Enel Green Power, and many other consulting organizations located in different places from Chandigarh, Chhattisgarh, Karnataka, Bihar, UP, MP, HP, Haryana, Gujrat, Telangana, Kerala, Tamil Nadu, etc attended the same. Experts are from IIT Delhi, IIT Roorkee, IIT Guwahati, SPA Delhi, CRRI, World Bank, AECOM, Design Aid, ICT Pvt Ltd, iRAP, PwC, WRI, DRAIPL, JR Sarkar and Associates, Delhi Police Accident Cell, AIIMS Rishikesh delivered expert lectures. Apart from online classes, 3 days were devoted to extensive field data collection and analysis.



## 3<sup>RD</sup> 15-DAYS ROAD SAFETY AUDITORS CERTIFICATION PROGRAM

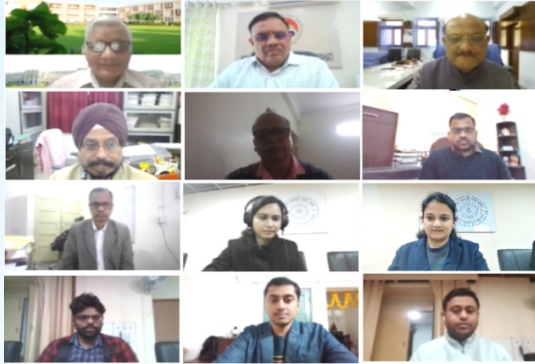
The 3<sup>rd</sup> Certification Course for Road Safety Auditors was organized from November 22 – December 6, 2021 as per the latest course content and guidelines prepared by MoRTH and IRC. The 15-days physical training course was organized by Prof. Pushpa Choudhary, Prof. Indrajit Ghosh, Prof. Amit Agarwal and Prof. Sanhita Das in Greater Noida Extension Center (GNEC), IIT Roorkee. Eighteen candidates having engineering background and work experience in highways and road safety were shortlisted for the course. The participants had interactive sessions with experts from World Bank, IITs, NITs, ICT, iRAP, WRI, SPA Delhi, CRRI, Punjab Police and AIIMS Rishikesh during their lectures. As the practical exercise, the candidates conducted the road safety audits of various sites in Greater Noida, Noida and Delhi for three days covering Urban Area, Rural Roads, Black Spots, Construction Sites, etc





## RESEARCH CONCLAVE 2021, DECEMBER 4-5, 2021 [VIRTUAL EVENT]

The first ever Research Conclave 2021 was jointly organized by the Indian Geotechnical Society (IGS) Roorkee Student Chapter and the Department of Civil Engineering in virtual mode on 4<sup>th</sup>-5<sup>th</sup> December 2021. The event was inaugurated in the honorable presence of Chief Guest Prof. T.G. Sitharam, Director of IIT Guwahati, Prof. N.K. Samadhiya, President of IGS and Prof. S.K. Ghosh, Head of the Civil Engineering Department, IIT Roorkee. Prof. Mahendra Singh, Chairman of IGS Roorkee Local Chapter and Prof. V.A. Sawant, Faculty coordinator of IGS Roorkee Student Chapter also addressed the participants. The 2-day conclave hosted four keynote lectures by renowned geotechnical experts, namely Mr. H.L. Arora (Former Director (Technical) THDC India Ltd), Prof. M.R. Madhav (IIT & JNTU Hyderabad), Prof. S. Haldar (IIT Bhuvaneshwar) and Prof. N.R. Patra (IIT Kanpur). The event received an overwhelming response of over 40 abstracts from various National and International Institutes, out of which 17 full-length papers and 2 extended abstracts were invited for presentations.



First Row: Prof. N.K. Samadhiya, President of IGS; Prof. T.G. Sitharam, Director of IIT Guwahati; Prof. S.K. Ghosh, Head of the Civil Engineering Department, IIT Roorkee;

Second Row: Prof. Mahendra Singh, Chairman of IGS Roorkee Local Chapter; Mr. H.L. Arora, Former Director (Technical) THDC India Ltd.; Prof. S.P. Pradhan, Department of Earth Sciences, IIT Roorkee;

Third Row: Prof. V.A. Sawant, Faculty coordinator of IGS Roorkee Student Chapter; Prof. Anumita Mishra, Coordinator; Prof. Akanksha Tyagi, Co-coordinator

Fourth Row: Kami Venkata Balaiah, Student member; Prof. Kaustav Chatterjee, Organising Member; Sukanta Das, President of IGS Roorkee Student Chapter

## CPMU TEAM VISIT - CENTRAL WATER COMMISSION (CWC) : 09.II.2021



The Central Project Management Unit (CPMU) team of CWC, headed by Mr. Gulshan Raj, Chief Engineer, Dam Safety Organisation visited the Dept. of Civil Engineering, IIT Roorkee on November 8, 2021. Prof. S. K. Ghosh, Head of Civil Engineering Department welcomed the team and had a meeting with them along with faculty members of the department. Prof. Ghosh introduced the faculty members and shared some salient features of the Dept. Mr. Gulshan Raj appreciated the efforts of the faculty members for running the M.Tech. in Dam Safety and requested to submit proposal for enhancing the research in the field of Dam safety. After interaction with faculty members, the team visited the Hydraulics Laboratory, Geotechnical Laboratory and Geomatics Laboratory of the Department. Prof. S. K. Ghosh thanked the team for

visiting the Dept. and providing opportunities for enhancing the capacity building of the Department.

## MOU WITH CSIR-CRRI, NEW DELHI : 14.I2.2021

IIT Roorkee and CSIR-CRRI signed an MoU by Prof. Ajit K. Chaturvedi, Director, IIT Roorkee and Prof. Satish Chandra, Director, CSIR-CRRI in presence of Prof. Manish Shrikhande, Dean, SRIC, Prof. S. K. Ghosh, HoD, Civil Engineering, Prof. Indrajit Ghosh and Prof. Sanhita Das. The MoU shall allow exchange of personnel through deputation, organization of joint conferences, Seminar, Practical Training of IIT-Roorkee students at CSIR-CRRI, Joint guidance of student projects / thesis at IIT Roorkee by CSIR-CRRI. Further both the institutions shall make provisions in order to promote academic and research interaction in the area of Transportation Engineering and Pavement Design.












## MOU WITH INLAND WATERWAY AUTHORITY OF INDIA (IWAI)

A MOU was signed by IIT Roorkee and IWAI project on Stabilisation of navigational channel of River Ganga from Varanasi to Sahibganj at total project cost of ₹ 5.1 Crores and to be completed within 25 months. Shri Jayant Singh, Vice Chairman, Shri Ashutosh Gautam, Member Technical, Shri Ravikant, Chief Engineer and Shri A. K. Mishra from IWAI and Prof. P. K. Garg, Prof. A. A. Kazmi, Prof. P. K. Sharma, Prof. Z. Ahmad were present at the time of the signing of the MOU.





## RESEARCH PROJECT AWARDED

Name of the Principal Investigator	Research Project	Sponsoring Agency	Amount (₹ Lakhs)
 Prof. Z. Ahmad	Submerged Vanes for River Training and Sediment Management in Streams and their Field Application.	Ministry of Ports, Shipping and Waterways, New Delhi, India	172.50
 Prof. G. D. Ransinchung R. N.	Evaluation of Efficacy of "GEOPAVE" Stabilizer for Pavement Construction	M/S. Garg Sons Estate Promotech Pvt. Ltd., Chandigarh.	14.78
	Optimal Route Alignment in Sikkim	DRDO Chandigarh	46.00
 Prof. Shubhankar Roy Chowdhury	Computational Multiscale Modeling as a Virtual Experimental Setup for Prediction of Elastic and inelastic Response of Unidirectional Fibre Reinforced Polymer Composites.	ARB, DRDO	36.27
	Multiscale Virtual Testing & Experiments of FRP Composites for High-Speed Train and Infrastructure Applications	SERB, New Delhi	22.00
 Prof. Alok Bhardwaj	Rapid Estimation of Flood Extents Using Synthetic Aperture Radar and Deep Learning	SERB, New Delhi	28.00
 Prof. R. Vinnarasi	Hindon Roots Sensing (HIROS): River Rejuvenation through Scalable Water and Solute Balance Modelling and Informed Farmers' Actions	DST, New Delhi under Indo Dutch DST-NWO Cleaning Ganga and Agri Water Call	152.50
 Prof. Amit Agarwal	Deployment of T-CPS for Intelligent Mobility and Efficient Traffic Control in Smart Cities: A promising Future	TIH, IIT Roorkee	40.00
 Prof. Priti Maheshwari	Probabilistic analysis of failure criteria of rocks under triaxial state of stress	SERB, New Delhi	32.30
 Prof. Saurabh Vijay	Interlinked seasonal evolution of supraglacial lakes and ice velocity changes in Greenland	Space Technology Cell, ISRO-IIT Roorkee	24.18
 Prof. Indrajit Ghosh	Intelligent Predictive and Prescriptive Systems for Traffic and Pavement Condition Management in a smart City	TIH, IIT Roorkee	40.00

## OUTSTANDING ALUMNI



**Prof. Sudhir K. Jain, (B.E.Civil, 1979)** has been honoured with **Padma Shri (2020)** for distinguished service in the field of **Science and Technology**, he is also appointed as the **new Vice-Chancellor (VC) of Banaras Hindu University (BHU) in Varanasi, Uttar Pradesh**. Prof. Jain, a renowned academician and researcher has been a faculty of the Department of Civil Engineering at IIT Kanpur. He has also served prior to this appointment as Director IIT Gandhinagar for 3 terms. The Department of Civil Engineering, IIT Roorkee is proud of its alumnus in achieving such a unique achievement and congratulates him, on this prestigious appointment.



**Prof. Prem Krishna (B.E.Civil, 1964)** and **Former Head of the Department (1984-87)** of Civil Engineering, IIT Roorkee has been conferred the **Presidential Award of the International Association for Wind Engineering** for his life-long contribution to Wind Engineering. He has been the founder President of the Indian Society of Wind Engineering.

## FORTHCOMING EVENTS



The Civil Engineering Department, Indian Institute of Technology Roorkee is organizing **"Geo-Innovation Challenge on Innovation in Geospatial Sciences"** from February 25-27, 2022 virtually supported by National Geospatial Program, Department of Science and Technology, Government of India, New Delhi. The Principal Investigator of this program is Prof. Sanjay Kumar Ghosh, Professor and Head, Co- Principal Investigators are Prof. Pradeep Kumar Garg, Professor, Dr. Alok Bhardwaj, Assistant Professor, Department of Civil Engineering, Indian Institute of Technology Roorkee.



The Department of Civil Engineering is organizing the **2<sup>nd</sup> International Conference on Transportation Infrastructure Projects Conception To Execution (TIPCE 2022)** from September 14-17, 2022. This conference aims at bringing together the Industry and Academia involved in the Transportation Sector to emphasize A two-way learning process, i.e., from Industry to Academia and from Academia to Industry.



The **9<sup>th</sup> International Symposium on Hydraulic Structures (ISHS) 2022 of the International Association for Hydro-Environment Engineering and Research (IAHR)** will be held at IIT Roorkee, during October 24-27, 2022. The IAHR is a worldwide independent organization of engineers and water specialists working in fields related to hydro-environmental sciences and their practical application. IAHR has several committees that regularly organize conferences and symposia in their own specific fields. Hydraulic Structure Committee is one of them, that works for advancement in Hydraulic structures. The program will be an international event that will bring together academia and industry from across the globe to discuss issues and solutions in the design and construction of hydraulic structures. The symposium will provide a distinctive opportunity for engineers and researchers to present their works. Please visit symposium website <http://ishs2022.iitr.ac.in/> and brochure link <http://ishs2022.iitr.ac.in/wp-content/uploads/2021/10/ishs22.pdf> for details.

**4<sup>TH</sup> 15-Days Road Safety Auditors Certification program** will be organized by Civil Engineering Department, IIT Roorkee from May 30 - June 13, 2022 as per the latest course content and guidelines prepared by MoRTH and IRC.

### TRAINING PROGRAMME ON WASTEWATER SAMPLE ANALYSIS TO PUBLIC HEALTH ENGINEERING DEPARTMENT (PHED), HARYANA, NOVEMBER 15-19, 2021

Prof. Sudipta Sarkar, Prof. Bhanu P. Vellanki and Prof. Bihu Suchetana conducted a 5-day hands-on Training Programme on Wastewater sample analysis from November 15-19, 2021 for 18 chemists from PHED Haryana. The participants were introduced to the theoretical aspects and laboratory procedures for Wastewater Quality Testing.



## ALUMNI CONNECT

10 Civil Engineering Diamond Jubilee Alumni of 1960 visited the department on Oct 29, 2021 and shared their memories and experiences with the faculty members of the department

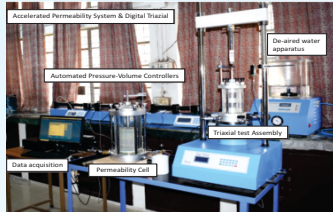




32 Civil Engineering Golden Jubilee Alumni of 1971 visited the department on Nov 24, 2021 and shared their memories and experiences with the faculty members of the department



## INFRASTRUCTURE (NEW LAB INSTRUMENTS)



### Accelerated Permeability System using Triaxial [Cost ₹ 14.5 lakhs]

The Accelerated Permeability System using Triaxial has the capability to test the permeability of very low-permeable materials such as compacted clays, admixture stabilised soils and grout specimens of sizes 100mm dia x 100mm height, which is in general not possible with the conventional permeability measurement systems. In addition, the conventional digital triaxial test assembly can be utilised for strength testing of geomaterials in undrained and drained conditions.



### Automated Dynamic Shear Rheometer (MCR-302) [Cost ₹ 19.99 lakhs]

Dynamic Shear Rheometer MCR 302 is an advanced system to carry out rheological experiments on asphalt binders in rotational and oscillatory modes. DSR enables determination of various rheological parameters of visco-elastic materials under varying temperature and load conditions. The compact machine is designed with an air bearing, supported electronically commutated synchron motor drive system for rheological measurements. It comprises of sample-adaptive motor controller in rotation (TruRate) and oscillation (TruStrain). It has fully automatic stand for a high precision Automatic Gap Setting (AGS). The patented gap measurement technology has easy and modular extension of the application area due to various special accessories.

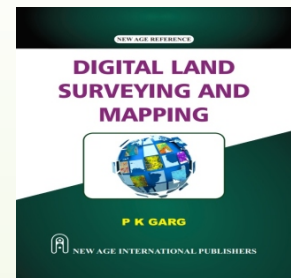


### Structural Engineering Computational Mechanics Laboratory

The Structural Engineering Group has recently set up a Computational Mechanics Laboratory to provide a state-of-the-art computational facility to the research scholars of the group. The facility currently has 16 high-performance workstations, each offering more than 40 computing cores and around 128 GB RAM, capable of deploying large-scale parallel programs. Ph.D. students are given access to these machines at present only remotely for a limited duration after assessing their requirements and recommendations from the supervisor and the OC of the lab.

## BOOK PUBLISHED

The Book titled “**DIGITAL LAND SURVEYING AND MAPPING**” is authored by **Prof. P.K. GARG**, Civil Engineering Department, IIT Roorkee. This book is published by New Age International (P) Limited Publishers, New Delhi. The aim of the book is to provide information about the modern tools and methods which are commonly used world-wide for digital surveying and mapping tasks.



## WELCOME



**Mr. Prashant Singh** joined as a Technical Officer-I on Nov 01, 2021. He has carried out his M.Tech. at Indian Institute of Technology, Roorkee, & B.Tech. at UPTU Lucknow. His area of specialization is Geomatics Engineering. He has served at ABES Institute of Technology, Ghaziabad as Assistant Professor.

## FAREWELL



**Congratulation to Prof. J.P. Sahoo**, Assistant Professor, Geotechnical Engineering Group has joined the Indian Institute of Technology, Kanpur as Associate Professor.



**Prof. Pramod Kumar**, faculty in Environmental Engineering Group has taken voluntary retirement. Prof. Kumar had joined Civil Engineering Department at IIT Roorkee in the year 2001. The Department of Civil Engineering wishes him happy and healthy retirement life.



## OBITUARY

The department expresses its sincere condolence to the family of Retd. Prof. Anand Prakash who left for his heavenly abode on May 2, 2021 and prays that he attains salvation.



## New testing rates as approved by the Institute is available for

### Environmental Engineering:

<https://civil.iitr.ac.in/assets/TestingCharges/EnvironmentalEngineeringRevisedTestCharges.pdf>

### Structural Engineering

<https://civil.iitr.ac.in/assets/TestingCharges/StructureEngineeringRevisedTestCharges.pdf>

### Transportation Engineering

<https://civil.iitr.ac.in/assets/TestingCharges/TransportationEngineeringRevisedTestCharges.pdf>

## PHOTOGRAPHIC JOURNEY TO THE PAST



**GANGES CANAL, LOOKING UPSTREAM**  
The Purn Kalyan Bridge in the front, & the Ramnagar Regulating Bridge in the distance  
London: Smith Elder & Co's, Cornhill



**NEW QUARTERS FOR EUROPEAN STUDENTS ENGINEER CLASS**  
COMPLETED 1868



**SOLANI AQUEDUCT**



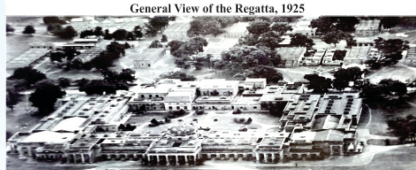
**General View of the Regatta, 1925**



**SNOWY RANGE FROM COLLEGE**



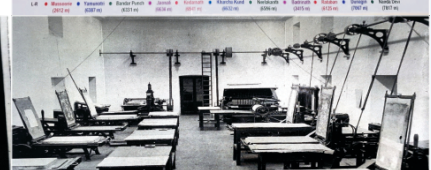
**HIMALAYAN SNOWY PEAKS** - As viewed from the campus of Indian Institute of Technology Roorkee - 1965



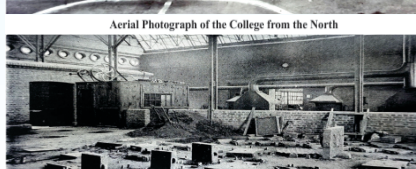
**Aerial Photograph of the College from the North**



**COLLEGE CORRIDOR**



**PRESS MACHINE ROOM**



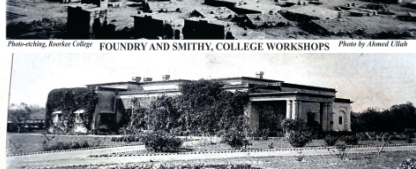
**FOUNDRY AND SMITHY, COLLEGE WORKSHOPS**



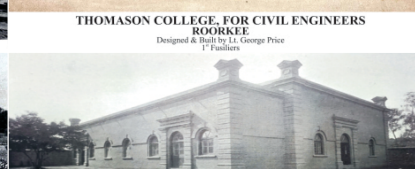
**THOMASON COLLEGE, FOR CIVIL ENGINEERS**  
ROORKEE  
Designed & Built by Lt. George Price  
1<sup>st</sup> Frontier



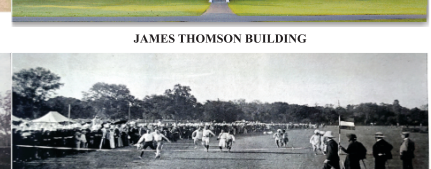
**JAMES THOMSON BUILDING**



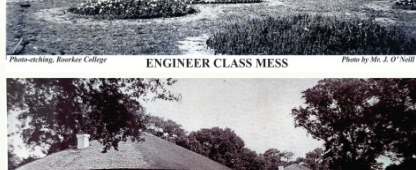
**ENGINEER CLASS MESS**



**NEW BUILDING FOR COTTON MACHINERY,**



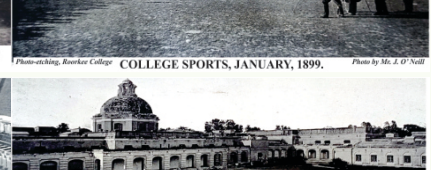
**COLLEGE SPORTS, JANUARY, 1899,**



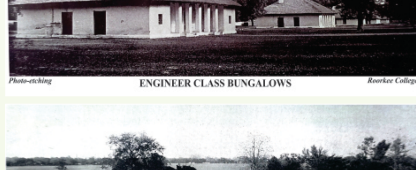
**ENGINEER CLASS BUNGALOWS**



**COTTON MACHINERY, COLLEGE WORKSHOPS**



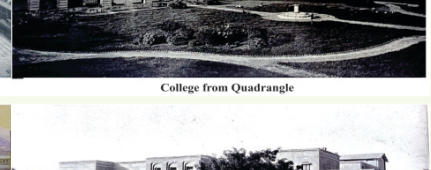
**College from Quadrangle**



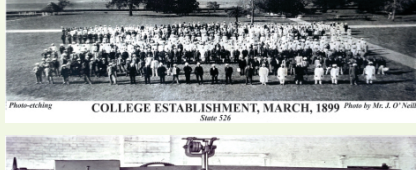
**COLLEGE ESTABLISHMENT, MARCH, 1899**



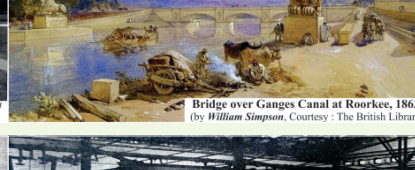
**Bridge over Ganges Canal at Roorkee, 1863,**  
(by William Simpson, Courtesy : The British Library)



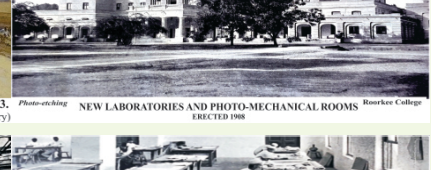
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