

Arpit Jain
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Indian Institute of Technology Roorkee

Area of Interest

Geotechnical earthquake engineering, Soil dynamics, Cyclic triaxial testing, Liquefaction phenomenon in the stratified soils, Energy dissipation approach, Numerical modeling using PLAXIS and MIDAS, **SPT and PLT field tests**, Stabilization of expansive soils, Use of ***waste plastic products*** in Civil Engineering, ***Artificial Intelligence in Civil Engineering***

Education

Year	Degree/Examination	Institution/Board	CGPA/ Percentage
2018	Ph.D. 1st Year	Indian Institute of Technology, Roorkee, Uttarakhand, India	8.71
2016	Postgraduate (M.Tech)	NIT Jamshedpur, Jharkhand, India	8.64
2014	Graduate (B.Tech)	Central university Bilaspur, Chattishgarh, India	8.29
2009	Intermediate(Class XII)	Creative convent H.S. school, Madhya Pradesh, India	86.80%
2007	Matriculate (Class X)	Saroj convent HS school, Madhya Pradesh, India	89.40%

Experience

Assistant Professor | BIET Jhansi — July 2016 - June 2018

The role was assigned as an assistant professor to take regular Civil Engineering classes and labs for B.Tech and M.tech students. During this period, I have supervised the M. Tech thesis and conducted research work with B.Tech and M.Tech students.

Internships

Underpass construction to divert the vehicular traffic | Indian Railways — May 2012 - July 2012

In this project, a detailed study of the underpass to divert traffic was considered. The project was related to Indian Railways, in which a useful site was chosen based on the regular traffic jams. During this period, I learned about the construction of underpasses and their staged methodology.

Projects

Design of Self-Closing Flood Barrier — December 2013–April 2014

| Central University, Bilaspur

B. Tech Project

Influence of Rice Husk Ash on swelling and shrinkage characteristics of the Expansive Soil

| NIT Jamshedpur

May 2015 - May 2016

M.Tech Project

Awards / Scholarships / Academic Achievements

- ***MHRD*** scholarship as a Ph.D. candidate
- Received conference grant from the ***Department of Science and Technology (SERB)***, *Government of India* (Under ITS scheme) for ***Turkey Visit (2022)***
- Qualified GATE
- Permanent member of the Indian Geotechnical Society (IGS)
- Life Member of the Indian Society of Earthquake Technology (ISET)
- Student Member of the American Society of Civil Engineers (ASCE)
- Given lectures in webinars organized by the IGS-Bhubaneswar chapter and Graphic Era Hill University
- ***Times of India, CNBC and Hindustan*** (leading media Houses) reported my work on waste plastic bottles

Skills and Consultancy project experience

AUTOCAD, MATLAB, ***PLAXIS, MIDAS***, Geostudio

Handled several ***consultancy projects*** related to ground improvement and liquefaction

Active involvement in projects of **Mahindra & Mahindra, BHEL** and several others with my supervisor

Profusely visited many project sites during my PhD

Experience with SPT tests, PLT, PIT (pile integrity tests) etc.

Languages: English. Hindi

Research Publications/ Patent

- Arpit Jain, Satyendra Mittal and Sanjay Kumar Shukla, "Use of polyethylene terephthalate fibres for mitigating the liquefaction-induced failures", in **Geotextile and Geomembrane**, (**Q1, IF 5.839,SCI**) Elsevier 2022

- Arpit Jain, Satyendra Mittal and Sanjay Kumar Shukla, "Dynamic behavior of fine sand with silt interlayers based on cyclic triaxial testing with the development of regression models", in **Journal of Rock Mechanics and Geotechnical Engineering**, (**Q1, IF 5.915, SCI**) Elsevier , 2022

- Arpit Jain, Satyendra Mittal and Sanjay Kumar Shukla, "Cyclic Behaviour of Stratified Soil under Liquefied States", in **Marine Georesource and Geotechnology**, (**Q2, 2.673, SCI**) Taylor and Francis, 2022

- Anil Kumar Choudhary. Arpit Jain. J. N. Jha, "Assessment of Swelling and Strength Characteristics of Expansive Soil with Addition of WRP", in **Geomechanics and Geo Engineering**, (**Q2, SCOPUS**) Taylor and Francis, 2021

- Arpit Jain, Satyendra Mittal, Sanjay Kumar Shukla, "Effect of Specimen Preparation Technique on the Post-Liquefaction Behaviour of Fine Sand Under Cyclic Loading", in **Indian Geotechnical Journal**, Springer, (**Q2 *SCOPUS***)2021

- Arpit Jain, Satyendra Mittal, Tshering Cheki, "Liquefaction mitigation measures of fine sand using cement grout under cyclic loading", in ISET Journal of Earthquake Technology, ISET, 2021(**Q4**)

- Arpit Jain, Anil Kumar Choudhary. J. N. Jha, "Influence of Rice Husk Ash on the Swelling and Strength Characteristics of Expansive Soil", in **Geotechnical and Geological Engineering**, Springer, 2019 (**Q2, SCOPUS**)

- Arpit Jain, Satyendra Mittal and Sanjay Kumar Shukla, "An Energy Dissipation Approach to Investigate the Liquefaction Resistance of Fine Sand Reinforced with Polyethylene Terephthalate Fibers", in Third International Conference on Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering, ***EGRWSE-2022, Turkey***, Springer, 2022

- Arpit Jain, Satyendra Mittal and Sanjay Kumar Shukla, "A study on liquefaction in homogeneous and stratified soils under consolidated undrained cyclic loading: an energy-based approach", in **Engineering Geology (IF: 6.902, SCI) Elsevier** (Under Review), 2022

- Satyendra Mittal, Tshering Cheki, Arpit Jain, "Settlement of Saturated Sand Under Horizontal Excitation on Vibration Table for Liquefaction Study", in In book: Soil DynamicsEdition: ISBN: 978-981-334-000-8, Springer Singapore, 2021

- Arpit Jain, Abhijit Chakraborty, Sukanta Das and Satyendra Mittal, "Cyclic Triaxial Test to Measure Strain-

Dependent Dynamic Properties-A Comprehensive Study", in Indian Geotechnical conference 2019, Springer

- Arpit Jain, Anil Kumar Choudhary. J. N. Jha, "Influence of Rice Husk Ash On the Swelling and Strength Characteristics of Expansive Soil", in Indian Geotechnical conference 2017, Indian Geotechnical Society, 2017

- Arpit Jain, Satyendra Mittal and Sanjay Kumar Shukla, "Development of Air Pluviator to prepare specimens for element tests", ***(Patent in process)***

Positions of Responsibility & Extra Curricular

Training and Placement Co-Ordinator | NIT Jamshedpur

- I have coordinated with several geotechnical companies on behalf of NIT Jamshedpur. Several M.Tech students got placed in L&T and others in firms. The overall experience after interacting with HRs helped me to understand the concept of Placement cells and related works.

Certified guitarist | Bangiya Sangeet Parishad July 2014 - May 2015

- Learned several aspects of guitar. This helped me to understand the basics and advanced levels of guitar.

Secretary | Indian Geotechnical Society (Student Chapter, IIT Roorkee) October 2019 - Present

- IGS (Indian Geotechnical Society) is a leading society that is responsible for involving several activities among geotechnical researchers, professors, and engineers. As a Secretary of the Students' chapter (IIT Roorkee), I have been involved in several activities regarding guest lectures, symposiums, and conferences.

Volunteer | Child Rights and You (Student Chapter, CRY IIT Roorkee) October 2018 - October 2022

- I have been involved with several activities related to the education of underprivileged children. During this period, I was involved with several activities related to child sexual abuse, malnutrition, and awareness.

References

1. Prof. Satyendra Mittal
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2. Sanjay Kumar Shukla
Associate Professor
Edith Cowan University, Australia
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3. Jagdish Prasad Sahoo
Associate Professor
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4. Prof. Anil Kumar Choudhary
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