Ilyas Ahmad Bhat

(Ph. D Geotechnical Engineering)

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Objective:

Dedicated and research-oriented professional with a passion for teaching and interacting with students and professionals in the field of Civil Engineering. Skilled in encouraging students to take on challenging tasks and fostering their innovation skills, growth and development.

Education:

- **PG certification Internet of Things, IIT Jammu, (June- Dec-2024), sponsored by AICTE (Rank 1)**
- **Ph.D. Civil Engineering, NIT Jalandhar (September - 2023)**
- **M.Tech Geotechnical Engineering, GNDEC Ludhiana, 2018 (Silver Medalist, GPA 8.88)**
- **B.Tech Civil Engineering, PTU Jalandhar, 2016 (With Distinction, 77.53%)**
- **HSC, J&K Sainik School Manasbal, Jammu and Kashmir, India**
- **Qualified NET in Disaster Mangement-2025**
- **Qualified GATE in 2017**

Work Experience:

1. **Assistant Professor (Contractual),**

Department of Civil Engineering, Governemnet college of engineering and technology safapora, J&K, India-193504, **(Jan 2025-Present).**

Courses Taught

Courses	Semester
1. Geotechnical Engineering	5Th
2. Elements of Earthquake engineering	8th
3. Major Project II	8th
4. Environmental Pollution Management	6th
5. Engineering Geology	6th

2. **Assistant Professor (Regular),**

Department of Civil Engineering, SVKM's Institute of Technolgy, Dhule Maharashtra, India-424001, **(Nov 2023-Dec 2024).**

Courses Taught:

Courses	Semester
1. Engineering Mechanics	1st
2. Geotechnical Engineering	5Th

3. Elements of Earthquake engineering 6th
4. Major Project II 8th

Adminstrative Responsibilities:

1. Innovation Ambassador, Institute Innovation Cell, by MOE, Govt. of India
2. Yukti Portal Incharge, by MOE, Govt. of India
3. Institute Innovation Lab Incharge,
4. NSS Coordinator, Civil engineering Department
5. NBA Institute Committee member

5. **Consulting Geotechnical Engineer,**
   Minhas Techno Economical Consultancy limited, **(Mar 2023- September 2023)**

Responsibilities: Providing Geotechnical design aspects in construction of check dams in Himacha State

6. **Teaching Assistant and Research Fellow,** NIT Jalandhar **(Aug 2018 - Feb 2023)**

Responsibilities: Assisting professors in teaching activities, conducting tutorials, grading assignments, and providing academic support to students.

7. **Graduate Engineer Trainee (GET),** L&T **(Dec 2015 - May 2016)**

Responsibilities: Gained hands-on experience in civil engineering projects, including site supervision, quality control, and project coordination.

Skills:

1. **PLAXIS**

Experience: I have used Plaxis for my M.Tech dissertation Titled **"Numerical Analysis of Behavior of Geo-Synthetically Reinforced Slopes Under Seismically Active Conditions"** and published an article incorporating the studies based on Plaxis software. Further, as an educator cum researchh scholar at Dr. BR Ambedkar National Institute of Technology, I have taught Plaxis to B.Tech and M.Tech students, fostering practical skills and a deep appreciation for its applications in geotechnical engineering and beyond. This journey with Plaxis transformed me into a proficient researcher and an enthusiastic educator, shaping my academic identity profoundly. In addition I have been aiding virtual help in using Plaxis to a few students pursuing M.S in Germany universities.

2. **Abaqus**

Experience: During my PhD, my research ventured into the field of coal mechanics, highlighting a profound understanding of material behavior under dynamic loads. Here, I improved my expertise in Abaqus, a remarkable finite element analysis software. Utilizing Abaqus, I researched into the complex task of estimating constitutive characteristics of coal subjected to impact loads.

3. **Matlab Programming**

I established a strong proficiency in MATLAB coding during my doctoral endeavors. With MATLAB, I engineered a sophisticated coupled model that examined the constitutive behavior

within coal mines. This novel model integrated element-free Galerkin analysis and the disturbed state concept, allowing for a comprehensive study of complex interactions in coal mechanics. The intricacies of this model provided a deeper understanding of how coal responds under varying conditions, shedding light on critical factors influencing safety and stability in coal mining operations. My adeptness in MATLAB empowered me to tailor and optimize the model, enhancing its accuracy and relevance in the domain of geotechnical engineering and mining practices.

Other Skills:

3.
4. Internet of Things
5. Geotechical Designing and Testing
6. AutoCAD
7. Basic Microsoft Office applications

Publications and Patents:

Patents

1). Dr. B. R. Ambedkar National Institute of Technology, Kasilingam, S., Rupali, S., **Bhat, I.**, and Kumar, A. (2021). "variable head free falling impact testing machine." Controller general of patents, India, Journal No. 29/2021, *(337579-001, pp-32629)* ***(Patent-Published)***.

2). Dr. B. R. Ambedkar National Institute of Technology, Senthil, K., Rupali, S., **Bhat, I.**, and Kumar, A. (2021). "Soil Sample Extruder" Controller general of patents, India, Journal No. 38/2021, *(345760-001, pp-43562)* ***(Patent-Published)***.

3). **Bhat,I.** and Aggrawal, A. "Laboratory instrument to investigate variable flow of Contaminated liquid obtained after passing of water from materials mixture" Controller general of patents, India, Journal No. 04/2024, *(401563-001, pp-10028)* ***(Patent-Published)***.

4**). Bhat,I. et,al.** Device For Structural Strength Monitoring And Predictive Maintenance of Civil Construction Controller general of patents, India, Journal No. 17/2025, *(445473-001, pp-41068)* ***(Patent-Published)***.

Journal Publications

1). **Bhat, I.,** Rupali, S. & Kumar, A. Estimation of impact force and fracture pattern characteristics of coal against low velocity impact loading. *Sādhanā* **50**, 258 (2025). https://doi.org/10.1007/s12046-025-02935-3 **(SCI-Indexed)**

2). Dogra, A.K., Rupali, S. & **Bhat, I.** Damping Behavior of Bituminous Coal Under Impact Loading: A Comparison of Numerical and Experimental Study. Indian Geotech J 55, 2492–2502 (2025). https://doi.org/10.1007/s40098-025-01349-6 **(ESCI-Indexed)**

3). **Bhat, I.,** Rupali, S. & Kumar, A. Experimental and numerical analysis of constitutive characteristics in bituminous coal. Sādhanā 47, 159 (2022). https://doi.org/10.1007/s12046-022-01911-5 **(SCI-Indexed)**

4). **Bhat, I**., Rupali, S., and Arvind, K. (2022). "Evaluation of Shear Strength Parameters in Unreinforced and Shotcrete Reinforced Coal through Experimental and Numerical

Methods." Disaster Advances, 15(7), 10-17. https://doi.org/10.25303/1507da10017 **(SCOPUS-Indexed)**

Conferences and Book Chapters

1). **Bhat I.**, Rupali S., Kumar A. (2021) Seismic Stability of Nailed Slopes for Undrained and Drained Conditions, Lecture Notes in Civil Engineering, vol 138. Springer, Singapore. https://doi.org/10.1007/978-981-33-6564-3_18

2). Burhan, M., Rupali, S., and **Bhat, I**. (2021). "Response of Crumb Rubber Additives on Shear Strength Characteristics of Poorly Graded Soils." *International Conference on Recent Advancements in Civil Engineering (ICRACE)*.(Accepted)

3). Dogra, A.K., Rupali, S., **Bhat, I**. (2025). Numerical Analysis of Rockfall in Bituminous Coal Mines Susceptible to Dynamic Loads. *Soil Dynamics and Computational Geomechanics*. Lecture Notes in Civil Engineering, vol 428. Springer, Singapore. https://doi.org/10.1007/978-981-96-1368-7_11

6). **Bhat, I.,** Rupali, S., and Kumar, A. (2019). "Environmental Impact Assessment of Soil Stabilization Materials." *Lecture Notes in Civil Engineering Sustainable Environment and Infrastructure*, p. 401–407 https://doi.org/10.1007/978-3-030-51354-2_37 (Scopus Indexed).

7). Senthil, Rupali & TR, Arvind & **Bhat, I.** & Kasilingam, Senthil & Agnihotri, AK. (2018). Influence of vibrations by rolling stock metro rail on pile-soil interaction. *Proceedings on the National Conference of Advanced Structures, Materials and Methodology in Civil Engineering.*

8). **Bhat, I.,**S. Rupali, Arvind Kumar, and K. Senthil.(2022.) "Numerical Analysis of Behavior of Geo-Synthetically Reinforced Slopes Under Seismically Active Conditions." In *ASPS Conference Proceedings, vol. 1*, no. 5, pp. 1563-1568. https://doi.org/10.38208/acp.v1.689

Academic Affiliation

1. Life member of Indian Geotechnical Society (LM-4682).
2. Life member of National Information Centre of Earthquake Engineering India
3. Reviewer of Journal of Korean Society of Civil Engineering.
4. Reviewer Indian Geotechnical Conference 2025 and 2024.
5. Innovation Ambassador, Institute Innovation Cell, by MOE, Govt. of India

I have attended numerous national and international GIAN courses, short-term courses, workshops, webinars, and conferences. The details of these experiences can be provided upon request from the relevant authority.

I hereby declare that the Information furnished above is true to the best of my knowledge

Place: Ganderbal

Ilyas Ahmad Bhat

Date: 10th Jan 2026