

Curriculum Vitae

Personal Information

Name	Prof. Neelima Satyam
Employer	Indian Institute of Technology (IIT) Indore
Location	Indore, Madhya Pradesh, India

Employment History

Position	Institution	Duration
Institute Chair Professor	IIT Indore	2025 – Present
Professor	IIT Indore	2022 – Present
Associate Professor	IIT Indore	2017 – 2022
Assistant Professor	IIIT Hyderabad	2009 – 2017

Education

Degree	Institution	Year
Ph.D., Civil Engineering	IIT Delhi	2006
M.Tech., Civil Engineering	IIT Delhi	2001
B.Tech., Civil Engineering	Sri Venkateswara University	2000

Narrative of Research Experience

Prof. Satyam's research integrates geotechnical engineering, geophysics, and data-driven modeling to address geohazards, including landslides, seismic risks, and climate-induced extreme events. Her work combines field instrumentation, real-time monitoring, numerical simulations, and AI/ML approaches to develop early warning systems and risk mitigation strategies. She has led major interdisciplinary and international collaborations across Asia, Europe, and global geoscience platforms, with a strong focus on the Himalayan region. Her research advances nature-based solutions, sustainable ground improvement, and resilience of infrastructure systems, while bridging fundamental science with policy and societal applications in disaster risk reduction.

Key Publications

- Nikhil Kumar Pandey, and **Neelima Satyam** (2025), "Understanding Dynamics of Wet Granular Flow-Induced Erosion and Sediment Entrainment on Narmada Sand Beds at Lab Scale", Powder Technology, Elsevier, <https://doi.org/10.1016/j.powtec.2025.121795> (I.F. 4.6).
- Kunal Gupta, and **Neelima Satyam** (2025), "Enhancing Landslide Hazard Assessment Using Monte Carlo Simulations and Improved Soil Thickness Mapping in Uttarakhand, India", Natural Hazards Review, ASCE Library, <https://doi.org/10.1061/NHREFO.NHENG-2449> (I.F. 2.2).
- Vikas Rawat and **Neelima Satyam** (2025), "Shear Strength and Durability Enhancement of Fly Ash and Bottom Ash Mixed Soil Using Microbial-Induced Calcite Precipitation: A Comparative Study", Journal of

Rock Mechanics and Geotechnical Engineering, Elsevier, <https://doi.org/10.1016/j.jrmge.2025.05.006> (I.F. 10.2).

- Minu Treesa Abraham, **Neelima Satyam**, Biswajeet Pradhan and Hongling Tian (2022), "Debris Flow Simulation 2D (DFS 2D): Numerical modeling of debris flows and calibration of friction parameters", Journal of Rock Mechanics and Geotechnical Engineering, Elsevier, <https://doi.org/10.1016/j.jrmge.2022.01.004>, (I.F. 9.4).
- Minu Treesa Abraham, **Neelima Satyam**, Ascanio Rosi, Biswajeet Pradhan and Samuele Segoni (2021), "Usage of antecedent soil moisture for improving the performance of rainfall thresholds for landslide early warning" Catena, Elsevier, 200, 105147, <https://doi.org/10.1016/j.catena.2021.105147>, (I.F. 5.4).

Honors and Awards

S.No.	Award	Year	Given By
1.	Best Teacher of Geotechnical Engineering Award	2025	Indian Geotechnical Society(Link)
2.	AGU Natural Hazards Mitigation Award	2025	American Geophysical Union (AGU) (Link)
4.	INSA Associate Fellowship	2024	Indian National Science Academy (INSA) (Link)
5.	Best Woman Researcher in Geotechnical Engineering Award	2023	Indian Geotechnical Society (Link)
6.	IGS - Sardar Resham Singh Memorial Award	2023	Indian Geotechnical Society
7.	JSPS BRIDGE Fellowship (ID No. BR230601)	2023	Japan Society for the Promotion of Science (JSPS)
8.	SERB - POWER Fellowship	2022	Science and Engineering Research Board, GoI

Professional Society Memberships

Organization	Role / Contribution
American Geophysical Union (AGU)	Session Convener, contributor to Natural Hazards community
ISSMGE	Technical Committee Member (TC-203, TC-220); JTC-1; GeoWB; Asian Regional Committee
European Geosciences Union (EGU)	Scientific Officer (NH3 – Landslides & Snow Hazards, 2026–2028)
Indian Geotechnical Society (IGS)	Chairman (Indore Chapter); National Executive Committee Member

Research Output & Impact

Journal Publications	Conference Papers	Book Chapters	Citations	h-index	Patents
146+ (high-impact journals including <i>Engineering Geology</i> , <i>Landslides</i> , <i>Earth-Science Reviews</i>)	120+ (International & National)	22	5400+	45	6 Granted