



Aman Srivastava (Ph.D. Earthquake Engineering)

Specialization in soil-structure interaction (Bridges) under seismic loading. Looking for opportunities to pursue research in seismic risk assessment of transportation networks on slope through finite element modeling or experimental methods.

Contact Information

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Education

Year	Degree	Institution	Topic
2020-2025	Ph.D. (Earthquake Engg.)	Indian Institute of Technology Roorkee, India	Seismic Performance Evaluation of Bridge Abutments and Piers on Deep Foundation in Flat and Hilly Terrains
2017-2019	M.Tech. (Earthquake Engg.)	Indian Institute of Technology Roorkee, India	Seismic Fragility of Bridge Abutment
2013-2017	B.Tech. (Civil Engg.)	Raj Kumar Goel Institute of Technology, India	Comparative Study of Compressive Strength of Steel FRC and Plain Concrete

Experience

Research Associate (Indian Institute of Technology Roorkee, India)	(May 2019-August 2020)
Proof-checking of design of superstructure, substructure and foundation of 13 railway bridges part of transportation infrastructure project in Indian Himalayas (Rishikesh-Karnaprayag railway line).	
Intern (Delhi Development Authority, India)	(June 2016-July 2016)
Supervising and assisting the construction of 20 story DDA flats.	

Research Skills

Software:	Finite Element	ABAQUS; PLAXIS2D & 3D; OPTUM G2, G3 & GX; MIDAS CIVIL & FEANX; SAP2000; ETABS; STAAD-Pro
	Miscellaneous	OpenQuake; Shake2000; Deepsoil; Adsec
Programming:		Python; JAVA; C++

Research Publications

- **Aman Srivastava**, Yogendra. Singh and Subhamoy Bhattacharya. "V-H-M Capacity of Well Foundations under Gravity and Seismic Loading.", *Bulletin of Earthquake Engineering*. <https://doi.org/10.1007/s10518-024-02083-9>.
- **Aman Srivastava**, Yogendra. Singh and Subhamoy Bhattacharya. "V-H-M Capacity Envelopes for Well Foundations on Slopes under Gravity and Seismic Conditions.", *International Journal of Geomechanics*, ASCE. <https://doi.org/10.1061/IJGNAI.GMENG-10548>.
- **Aman Srivastava**, Yogendra. Singh and Subhamoy Bhattacharya. "Geotechnical Capacity of Bridge Abutments Located on C- Φ Soil Slopes Under Combined Gravity and Seismic Loading.", *Journal of Earthquake Engineering*. <https://doi.org/10.1080/13632469.2025.2586537>.
- **Aman Srivastava**, Yogendra. Singh and Subhamoy Bhattacharya. "Structural Design of Well Foundations on Slopes for Static and Seismic Conditions considering V-H-M Interaction.", *International Journal of Geomechanics*, ASCE. (In Press)
- **Aman Srivastava**, Dhiraj Raj and Yogendra Singh. "Effect of Backfill on Seismic Fragility of a Bridge Abutment.", 18th World Conference on Earthquake Engineering.
- **Aman Srivastava** and Yogendra Singh. "Effect of seismic loading on V-H-M capacity of well foundation.", Japanese Geotechnical Society Special Publication <https://doi.org/10.3208/jgssp.v10.OS-43-03>.
- **Aman Srivastava**, Dhiraj Raj and Yogendra Singh. "Displacement-based Seismic Design of Retaining Walls." Indian Geotechnical Conference 2023.
- **Aman Srivastava**, Dhiraj Raj and Yogendra Singh. "Seismic Earth Pressure Coefficients for Vertical Wall Using Force-Displacement Curves.", Indian Geotechnical Conference 2019. https://doi.org/10.1007/978-981-33-6564-3_70

Research Interest

- Non-linear modelling of well/caisson-soil interaction located on slope.
- Non-linear time history analysis of bridge abutment/retaining walls.
- Seismic fragility of bridge pier supported on well foundation.
- Seismic risk assessment of bridges located on slope.
- Probabilistic and deterministic seismic hazard assessment.
- 1D/2D/3D site response analysis.
- Performance-based design of bridges.

Teaching Experience

Teaching Assistant (Indian Institute of Technology Roorkee, India)	(July 2023-November 2023)
Led tutorials and software class for "Finite Element Modelling" (36 Students)	

Professional Affiliations

Member (American Society of Civil Engineering)	(December 2024-Present)
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References

Prof. Yogendra Singh (PhD Supervisor)	Earthquake Engg. Department, Indian Institute of Technology Roorkee, India	yogenfeq@iitr.ac.in ; yogendra.eq@gmail.com
Prof. Subhamoy Bhattacharya (PhD Co-Supervisor)	Department of Civil and Environmental Engg., University of Surrey, UK	s.bhattacharya@surrey.ac.uk
Prof. Pradeep Bhargava	Civil Engg. Department, Indian Institute of Technology Roorkee, India	p.bhargava@ce.iitr.ac.in