

CURRICULUM VITAE

Deviprasad B S

Geotechnical Engineering Division,
Department of Civil Engineering,
Indian Institute of Technology Madras (IIT Madras),
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EDUCATIONAL QUALIFICATIONS

- **Doctor of Philosophy (Civil Engineering)** **2015-2021**
Indian Institute of Technology Madras (IIT Madras)
Chennai, Tamil Nadu, India
Thesis Title: *Performance-based analysis of bridge pier with rocking shallow foundation*
CGPA: 8.7/10
- **Master of Technology (Geotechnical Engineering)** **2013-2015**
National Institute of Technology Warangal (NITW)
Warangal, Telangana, India
Project Title: *Probabilistic seismic hazard analysis of Warangal*
CGPA: 8.99/10
- **Bachelor of Engineering (Civil Engineering)** **2008-2013**
BMS College of Engineering (BMSCE)
Bengaluru, Karnataka, India
Project Title: *Effect of fibres in improving the engineering properties of granite sludge paver blocks*
CGPA: 9.2/10

SCHOLASTIC SCHIEVEMENTS

- Assistantship from Ministry of Education, Govt. of India (2013-2015) for M. Tech. in Civil Engineering
- Assistantship from Ministry of Education, Govt. of India (2015-2020) for Ph. D. in Civil Engineering

PROFESSIONAL EXPERIENCES

EMPLOYER: IIT MADRAS.

Year of Joining: January 2021 to Present

Position: Senior Project Officer

Department: Civil Engineering

WORK EXPERIENCE

- Technical support for Geotechnical consultancy of Kalpasar Dam Project for building a 60 km dam across the Gulf of Khambat in India for establishing a fresh water coastal reservoir for irrigation, drinking and industrial purposes (Client: National Centre for Coastal Research and Coastal Marine Construction & Engineering Ltd). Responsibilities included:
 - Idealization of cross sections for different locations along the length of the dam.
 - Determination of soil and structural parameters for finite element modelling of the dam cross sections.
 - Stability, settlement, seepage, hydrodynamic and dynamic analyses of idealised cross sections at different locations along the length of the dam.
 - Bearing capacity and settlement calculation for assessing the need for ground improvement.
 - Evaluation of liquefaction potential for the dam site.
 - Design of ground improvement methodology.
 - Design of construction methodology.
 - Usage of Indian, European, American and Japanese codes.
 - Usage of PLAXIS 3D, Slope/W and VBA
 - Preparation of technical reports and reviewing geotechnical reports.

- Technical support for project on Ground Improvement for the Construction of Tankages in Coastal Storage & Supply Terminal at Krishnapatnam, Nellore, Andhra Pradesh, India (Client: Keller Ground Engineering India Pvt. Ltd). Responsibilities included:
 - Safety and settlement analysis of untreated and treated soil with stone columns using PLAXIS 3D and theoretical calculations
 - Review of design and geotechnical reports

- Miscellaneous projects for various clients. Responsibilities included:
 - Liquefaction analysis for the proposed construction of Thomas Sebastian Indoor Stadium, Edava, Trivandrum.
 - Liquefaction analysis for Geotechnical consultancy of Assam cancer hospitals
 - Proposal report for department of science and technology on development of predictive equation for estimating the axial and lateral capacities of monopile for bridges

OTHER ACADEMIC EXPERIENCES

- Assisted for project on seismic site characterization and development of site spectra for new CATF building site at ISITE campus, Indian Space Research Organization Bengaluru, Karnataka, India
- MASW tests (40 no.) for seismic site characterization of Warangal District, India.
- Seismic hazard analysis of the cities of Chennai, Suratkal and Warangal in India as part of multiple postgraduate and doctoral projects.
- Teaching assistantship. Subjects included:
 - Probability methods in civil engineering applications
 - Earthquake geotechniques
 - Soil dynamics and earthquake engineering
 - Computational geomechanics (lab)

TECHNICAL SKILLS

- Software skills: PLAXIS, MATLAB, SLOPE/W, ABAQUS, ArcGIS, CRISIS, VBA, MS-Office, OpenSees.
- Reliability analysis, Seismic hazard analysis
- MASW testing and analysis
- Numerical modelling

INTERNSHIPS, TRAININGS & SHORT COURSES

- Internship at Sarathy Geotech & Engineering Services Pvt Ltd., Bengaluru, Karnataka, India
- Internship at United Foundations Pvt Ltd., Bengaluru, Karnataka, India.
- Advances in seismic Hazard Analysis and Soil Structure Interaction (GIAN course)
- Mechanics of Unsaturated Soils (GIAN course)
- Open-Source Software for Civil Engineering Applications (Workshop)

COURSES & LABS

- Advanced Foundation Engineering
- Advanced Soil Mechanics
- Applied Soil Mechanics
- Computational Methods in Geotechnical Engineering
- Design with Geosynthetics
- Earth and Rock Fill Dams
- Earth Retaining Structures
- Earthquake Geotechniques
- Experimental Geotechniques (Lab)
- FEM & Constitutive Modelling in Geomechanics
- Geotechnical Exploration and Instrumentation
- Ground Improvement Techniques
- Probability Methods in Civil Engineering
- Rock Mechanics (Lab)
- Soil Dynamics & Earthquake Engineering

PUBLICATIONS

Journal Papers (Published/manuscript submitted)

- Deviprasad, B. S. and Dodagoudar, G. R. (2020), "Seismic response of bridge pier supported on rocking shallow foundation", *Geomechanics and Engineering*, 21(1), 73-84, <https://doi.org/10.12989/gae.2020.21.1.073>.
- Deviprasad, B. S., Ramanandan, S. and Dodagoudar, G. R. (2022), "Reliability analysis of bridge pier with rocking shallow foundation", *International Journal of Geomechanics, ASCE*, DOI:10.1061/(ASCE)GM.1943-5622.0002287.
- Deviprasad, B. S., Ramanandan, S. and Dodagoudar, G. R. (under review), "Fragility analysis of bridge pier with rocking shallow foundation". *Earthquake Engineering and Soil Dynamics*
- Nirbhay, N. S., Deviprasad, B. S. and Kalyan, K. G. (2015), "Analysis of earthquake catalogue for seismic hazard analysis of Warangal city", *Discovery*, 41(190), 136-142.

Journal Papers (manuscript ready)

- Deviprasad, B. S., Ramanandan, S. and Banerjee, S. (2022), "Probabilistic procedure for evaluating the liquefaction potential of cohesionless soil using standard penetration test" (**manuscript ready**)
- Deviprasad, B. S., Vijaya, R., Sriram, K. R., Tanwee, M., Neeraj, P. and Banerjee, S. (2022), "Deterministic and probabilistic measures of liquefaction susceptibility: A comparison" (**manuscript ready**)
- Sundaravel, V., Deviprasad, B. S., Ramanandan, S. and Dodagoudar, G. R. (2022), "Serviceability and global stability performance assessment of earth retaining structures: A review" (**manuscript ready**)

Journal Papers (planned to be submitted in 2022)

- Sundaravel, V., Deviprasad, B. S., Ramanandan, S. and Dodagoudar, G. R. (2022), "Finite element analysis of earth retaining structures: Parametric study"
- Sundaravel, V., Deviprasad, B. S., Ramanandan, S. and Dodagoudar, G. R. (2022), "Deformation and stability analyses of shored mechanically stabilized earth wall"
- Sundaravel, V., Ramanandan, S., Deviprasad, B. S. and Dodagoudar, G. R. (2022), "Reliability analysis of mechanically stabilized earth wall using response surface method"
- Sundaravel, V., Ramanandan, S., Deviprasad, B. S. and Dodagoudar, G. R. (2022), "Reliability analysis of soil nail wall using response surface method"
- Sundaravel, V., Ramanandan, S., Deviprasad, B. S. and Dodagoudar, G. R. (2022), "Deterministic and probabilistic prediction of shored mechanically stabilized earth wall performance using response surface method"
- Sundaravel, V., Ramanandan, S., Deviprasad, B. S. and Dodagoudar, G. R. (2022), "Reliability-based load and resistance factors for hybrid earth retaining structures"
- Sundaravel, V., Ramanandan, S., Deviprasad, B. S. and Dodagoudar, G. R. (2022), "Finite element analysis of hybrid earth retaining structures: A case study"
- Ramanandan, S., Deviprasad, B. S. and Dodagoudar, G. R. (2022), "System reliability analysis of pile-stabilized slope"
- Ramanandan, S., Deviprasad, B. S. and Dodagoudar, G. R. (2022), "Calibration of load and resistance factors for pile-stabilized slopes"

Conference Papers

- Deviprasad, B. S. and Dodagoudar, G. R. (2019), "Modelling the behaviour of shallow foundation using beam on nonlinear Winkler foundation", *7th International Conference on Earthquake Geotechnical Engineering*, Rome, Italy, 17-20 June, 2019.
- Deviprasad, B. S., Akshay, T. S., Srikanth, E. and Kalyan, K. G. (2015), "Analysis of composite earthquake catalogue of Warangal city", *6th International Geotechnical Symposium on Disaster Mitigation in Special Geoenvironmental Conditions*, Chennai, India, 21-23 January, 2015.
- Nirbhay, N. S., Deviprasad, B. S., Hari Krishna, P. and Kalyan, K. G. (2015), "Probabilistic seismic hazard analysis for Warangal considering single seismogenic zoning", *50th Indian Geotechnical*, Pune, India, 17-19 December, 2015.
- Akshay, T. S., Deviprasad, B. S., Srikanth, E. and Kalyan, K. G. (2015), "Seismic site characterization of Ramalingeshwara temple at Warangal, Telangana", In proc. *International conference on Sustainable Energy and Built Environment*, Vellore, India, 12-13 March, 2015.

- Akshay, T. S., Deviprasad, B. S., Parasad, H. and Kalyan, K. G. (2015), “Seismic site characterization of Warangal district”, *50th Indian Geotechnical*, Pune, India, 17-19 December, 2015.

CURRICULAR AND EXTRACURRICULAR ACTIVITIES

- Secretary of Geo-Forum, student body of Geotechnical Engineering Division, IIT Madras (2016-2019)
- Student secretary of Kannada Samskrutika Sangha, IIT Madras (2016-2019)
- Member of student legislative council, IIT Madras (2016-2017)
- Department legislator, Department of Civil Engineering, IIT Madras (2016-2017)
- Member of Research Affairs Council (2016-2017)
- Volunteer for Indian Geotechnical Conference (IGC-2016), IIT Madras
- Volunteer for International Symposium on Geotechnical aspects of Heritage Structures (SGHS-2019), IIT Madras
- Volunteer for workshop at IIT madras under One Lab-One School
- 1st runner up in one-act-play at 12th VTU youth fest - 2010, Gubbi, Karnataka
- Performed in a theatrical drama in Alliance Française de, Bengaluru, Karnataka (2013)
- Runner up at state level science modelling competition held at St. Aloysius College, Mangalore, Karnataka (2007)
- Best outgoing student of Vidyarashmi Vidyalaya for the year 2006

AREA OF INTEREST

- Soil dynamics and earthquake engineering
- Foundation design and analysis
- Reliability and fragility analysis
- Experimental and numerical geomechanics
- Finite element modelling
- Seismic hazard analysis
- Liquefaction analysis

LANGUAGES KNOWN

- English
- Kannada
- Hindi
- Tulu
- Telugu, Malayalam, and Tamil (can understand)

PERSONAL INFORMATION

Name : Deviprasad B. S.
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 Permanent address : #2-261, Anuragha, Pattethana house, Kudmar post and village, Puttur taluk, Dakshina Kannada district, Karnataka – 574202, India

DECLARATION

I hereby declare that the above mentioned is true to the best of my knowledge.

Deviprasad B S

REFERENCES

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Dr. Rakesh J Pillai

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