

Pavan G S

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EDUCATION

December 2018	Ph.D., Civil Engineering Indian Institute of Science , Bangalore Thesis: "Isogeometric based formulations for the bending analysis of laminated composite structural elements"	(Aug 2012 - Dec 2018)
August 2012	M.Sc. (Engg.), Civil Engineering Indian Institute of Science , Bangalore Thesis title: "Behavior of FRP Strengthened Masonry Under Compression and Shear"	(Aug 2009 - Aug 2012)
May 2009	B.Tech., Civil Engineering National Institute of Technology Karnataka , Surathkal, India (CGPA 8.63/10.0)	(Aug 2005 - May 2009)

WORK EXPERIENCE

October 2023 Present	Assistant Professor Gr - I Department of Civil Engineering, National Institute of Technology Karnataka, Surathkal
December 2019 October 2023	Assistant Professor Gr - II Department of Civil Engineering, National Institute of Technology Karnataka, Surathkal
December 2018 December 2019	Assistant Professor Department of Civil Engineering, School of Engineering, Shiv Nadar University, Uttar Pradesh

SPONSORED PROJECTS

- 'Strength, serviceability and hazard assessment of Global Vipassana Pagoda considering as built information and in – situ material properties', A three year research project sponsored by Global Vipassana Foundation, Mumbai. **P.I. Dr. Pavan G S**, Co - PI Dr. Sreevalsa Kolathayar, Dr. Prashanth M H. Budget Rs. 18,50,000/-.
- 'Stability analysis of masonry and earthen dam sections of UKAI Dam Under DRIP.' Sponsored by Water Resources Department, Government of Gujarat. Budget 59.0 Lakhs. **Consultants in charge: Dr. Pavan G S and Dr. Sreevalsa Kolathayar**
- 'Computation of Site Specific Earthquake Parameters and Dynamic Analysis of Bhandaradara Masonry dam section.' Funded by Water Resources Department, Government of Maharashtra. Budget 24 Lakhs. **Role: Co - Princial Investigator**
- 'Seismic Stability analysis of masonry and earthen dam sections of DHAROI Dam Under DRIP.' Sponsored by Water Resources Department, Government of Gujarat. Budget 88.5 Lakhs. **Consultants in charge: Dr. Sreevalsa Kolathayar and Dr. Pavan G S**

LABS AND RESEARCH CENTERS DEVELOPED

- Established CENTER FOR SAFETY EVALUATION OF DAMS AND SPECIAL STRUCTURES in the Dept. of Civil Engineering, NITK in December, 2022 along with Dr. Sreevalsa Kolathayar. The Center was started to serve as hub for safety assessment of critical infrastructure assets of our country like Dams, Bridges, Towers and Heritage Structures, using advanced numerical simulation methodologies.

STUDENT GUIDANCE

SI No.	Program	Completed	Ongoing
1	PhD	3*	6
2	M.Tech(Res)	3	Nil
3	M.Tech	29	6
4	B.Tech	8+	1

Note*: One PhD guidance completed is as an Administrative Guide due to superannuation of Prof. K Swaminathan from service in March 2023.

JOURNAL PUBLICATIONS

- Gireesh Mailar; **Pavan, G. S.**, K S Nanjunda Rao “Development of GGBS-Red mud based one-part geopolymer stabilized earthen blocks,” *Journal of Materials in Civil Engineering, ASCE*, Accepted (In Press)
- S J Pavithra Reddy, **Pavan, G. S.**, I D Gupta “Assessment of progressive damage evolution in masonry gravity dams under earthquake ground motion.” *Journal of Structural Design and Construction Practice, ASCE*, Accepted (In Press)
- Vishnu, O. S., **Pavan, G. S.** “Multiscale numerical simulation of progressive damage mechanisms in woven carbon/carbon composites.” *Composites Part A: Applied Science and Manufacturing*.10.1016/j.compositesa.2026.109664
- Vishnu, O. S., **Pavan, G. S.**, Sudhanva R, and Andrea Thomas. 2026. “Numerical Studies on Modeling Heterogeneity in Elastic Properties of 8HS Woven C/C Composites.” *Mechanics of Advanced Materials and Structures* 33 (1). doi:10.1080/15376494.2025.2484429.
- Vishnu OS, **Pavan, G. S.** Insights into the influence of microstructure on strength and damage progression in carbon/carbon composites. *Journal of Composite Materials*. 2026;60(15):1385-1405. doi:10.1177/00219983251384771
- Vishnu, O. S, **Pavan, G. S.** “Multiscale Numerical Modeling of 2D C/C Composites considering Pore Size Distribution.” *Journal of Aerospace Engineering ASCE*, Volume 37, Issue 4, 2024.
- Santoshgouda Honnali, Vishnu, O. S, **Pavan, G. S.** “Multiscale numerical modeling of clay brick masonry under compressive loading”. *Innovative Infrastructure Solutions*, Volume 9, Issue 6, 2024.
- Afsal, K. P., Swaminathan, K., **Pavan, G. S.** “EFG Meshless-ANN Approach for Free Vibration Analysis of Functionally Graded Material Plates on Elastic Foundation in Thermal Environments” *Mechanics Based Design of Structures and Machines* (In Press)
- **Pavan, G. S.**, Hemanth Muppidi, and Jagabandhu Dixit. “Static, free vibrational and buckling analysis of laminated composite beams using isogeometric collocation method.” *European Journal of Mechanics-A/Solids*, 96 (2022): 104758.
- **Pavan, G. S.**, Keshava Kumar, S., Nanjunda Rao, K. S. ”Bending analysis of laminated beams using isogeometric variational asymptotic method.” *International Journal of Advances in Engineering Sciences and Applied Mathematics*, 12 (1), 2020.
- **Pavan G. S.**, Ullas S. N., Nanjunda Rao K. S., “Interfacial behaviour of cement stabilized rammed earth: Experimental and numerical study”, *Construction and Building Materials*, 257, 2020, 119327.
- **Pavan G. S.**, Ullas S. N., Nanjunda Rao K. S., “Shear behavior of cement stabilized rammed earth assemblages”, *Journal of Building Engineering*, 27, 2019, 100966
- **Pavan, G. S.**, Nanjunda Rao, K. S., “Bending analysis of laminated composite plates using Isogeometric collocation method”, *Composite Structures*, 176, 715-728, 2017.
- **Pavan, G. S.**, Nanjunda Rao, K. S., “Behavior of brick–mortar interfaces in FRP-strengthened masonry assemblages under normal loading and shear loading ”, *Journal of Materials in Civil Engineering ASCE*, 28(2), 2015

- Nanjunda Rao, K.S., **Pavan, G. S.**, “FRP-confined brick masonry assemblages under axial compression: experimental and analytical investigations ” *Journal of Composites for Construction ASCE*, 19(4), Aug 2014

ADMINISTRATIVE ROLES AT NITK SURATHKAL

- Member, Career and Curriculum Guidance Committee, NITK, 2026-27
- Member, Career and Curriculum Guidance Committee, NITK, 2025-26
- Member, Curriculum Revision and Implementation Committee, NITK, 2024-25
- Faculty Advisor for 2020 - 2024 batch of B.Tech Civil Engineering students. Mentor for 122 students advising them related to academic matters.
- Secretary, Department Under Graduate Committee, Civil Department, NITK Surathkal
- Secretary, Doctoral Research Programme Committee., Civil Department, NITK
- Warden, Trishul Block, NITK Hostels.
- Program Officer, NSS NITK Unit, January 2022 - January 2024.
- Organizing Secretary, International Conference on Sustainable Infrastructure: Innovations, Opportunities and Challenges 2023 (SIIOC - 2023) Conference, 20 - 21 April, 2023.
- Organizing Secretary, Second International Conference on Sustainable Infrastructure: Innovations, Opportunities and Challenges 2024 (SIIOC - 2024) Conference, 30 April - 1 May, 2024.

CONFERENCES, BOOK CHAPTERS (SELECT) AND BOOKS (AS EDITOR)

- Balaji, N. C., Venkataramana, K., **Pavan, G. S** (Editors.). (2026). Structural engineering innovations for resilient infrastructure: Select proceedings of SIIOC 2024. Springer Nature Singapore
- Pavan, G. S., Rao, K. S. N. Subhash C. Yaragal (Editors.). (2024). Sustainable built environments: Challenges and innovations: Select proceedings of SIIOC 2024. Springer
- Jayalekshmi, B. R., Rao, K. S. N., **Pavan, G. S** (Editors.). (2024). Technologies for sustainable buildings and infrastructure: Select proceedings of SIIOC 2023 [. Lecture Notes in Civil Engineering (Vol. 528). Springer
- Shalini, S., Honnalli, S., **Pavan, G. S.** (2023). Determining elastic properties of CSEB masonry using FEA-based homogenization technique. Materials Today: Proceedings
- Chethan, J., **Pavan G. S.** (2023). Isogeometric Analysis of Composite Sandwich Plates Using Equilibrium-Based Stress Recovery Procedure. In: Saha, S., Sajith, A.S., Sahoo, D.R., Sarkar, P. (eds) Recent Advances in Materials, Mechanics and Structures. Lecture Notes in Civil Engineering, vol 269. Springer, Singapore.
- Pavan Kumar Reddy, T., **Pavan G. S.** (2023). Modelling Interfacial Behaviour of Cement Stabilized Rammed Earth Using Cohesive Contact Approach. In: Ranadive, M.S., Das, B.B., Mehta, Y.A., Gupta, R. (eds) Recent Trends in Construction Technology and Management. Lecture Notes in Civil Engineering, vol 260. Springer, Singapore.
- Sharmili Wasnik, **Pavan G. S.**, Susant Kumar Padhi, “ Replacement of river sand with coal bottom ash as fine aggregate in cement mortar”. Submitted to Virtual Conference on Disaster Risk Reduction (VCDRR) 2021.
- Vasavi G S, Mourougane R, **Pavan G. S.** “ Strength and Durability properties of Alkali activated Flyash Earth bricks”. Submitted to Virtual Conference on Disaster Risk Reduction (VCDRR) 2021. Congress on Computational Methods in Applied Sciences and Engineering, Crete, Greece, 5-10 June, 2016. (Presented the paper)