Radhika Prakash Pajgade

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POSITION OF RESPONSIBILITY

- **Indian Institute of Technology, Bombay** *(July,2018–Present)*
  - **Project Research Scientist** *(May, 2025–Present)*
  - **Research Assistant** *(July,2023–May,2025)*
    - Software Development for Optimum Design and Life Cycle Cost Analysis of Steel Girder Bridges.
    - Preliminary Study Comparing Life Cycle Costs of Short Span Bridges-PSC vis-a-vis Steel.
  - **Teaching Assistant** *(July,2018–July,2023)*
    - CE 332: Design of Steel Structures *(Spring,2019)*
    - CE 325: Design of Reinforced concrete structures *(Autumn of 2019, 2020, 2021& 2022)*
    - CE 610: Introduction to Earthquake Engineering (*Spring of 2020, 2021 & 2022)*
    - CE 102: Engineering Mechanics *(Spring, 2020)*
- **EERI, IIT Bombay Student Chapter**
  - **President** *(June, 2022- May, 2023),* **Vice President** *(March, 2021-June, 2022).*
    - One of the founder members of "EERI, IIT Bombay Student Chapter".
    - Conducting Multiple Experts Talks, Quiz under EERI by securing Industry sponsorships.
    - Mentored IIT Bombay Undergraduates for constructing prototype structures for International Seismic Design Competition (SDC) by Student Leadership Council, EERI in United states for Consecutive three years (ie., 2021, 2022, 2023).
- **Institute of Eminence - Seed Funding for Collaboration and Partnership Projects.**
  - **Organizing Committee Member**
    - Contributing to website creation, brochure design, invitations, venue coordination, accommodation arrangements, and more for Workshops conducted under IoE-SCPP.

ACADEMIC QUALIFICATIONS

Degree	Institution	Year	CPI/Percentage
Ph.D(Structural Engineering)	IIT, Bombay	2025	8.04/10
B.Tech(Civil Engineering)	Government College of Engineering, Amravati	2018	8.68/10
XII(MSBHSE)	Dharampeth MP Deo Memorial Science College, Nagpur	2014	89.08 %
X(MSBSE)	St. Francis High School, Amravati	2012	94.18 %

SCHOLASTIC ACHIEVEMENTS

- Secured **97.76 percentile** in GATE 2018 among 1.5 lakh aspirants (**AIR 3434 & Score 615**).

KEY AREAS OF INTEREST

Design of Steel & RCC Structures | Structural Dynamics | Earthquake Engineering| Engg. Mechanics | Non-linear analysis | Hazard analysis | Risk Assessment | Probability | Life cycle assessment | Life cycle cost assessment | Sustainability |

PUBLICATIONS

- **Journal Papers**
  - Pajgade, R. P., Raghunandan, M., & Ghosh, S. (2025). An Integrated Life Cycle Cost Assessment Framework Incorporating Cost of Carbon Dioxide Equivalent for Buildings Subjected to Natural Hazards. Sustainable Cities and Society, 106394. https://doi.org/10.1016/j.scs.2025.106394
  - Pajgade, R.P., Raghunandan, M., & Ghosh, S. (2024). Balancing Risk and Sustainability: Life Cycle Cost-Based Selection of Seismic Retrofit Solutions with Integrated Seismic Loss Assessment. Ready to be submitted to Journal of Constructional Steel Research, Elsevier.
  - Pajgade, R.P., Raghunandan, M., & Ghosh, S. (2024). Comparative Life Cycle Sustainability Assessment of Steel and Reinforced Concrete Buildings Including Natural Hazard Costs. Manuscript in preparation.

- Pajgade, R.P., Raghunandan, M., & Ghosh, S. (2024). Comparative lifecycle cost assessment of structural steel and PSC bridge superstructure with three sustainability impact indicators. Manuscript in preparation.

- **Conference Papers**

- Ghosh, S., Marbaniang, A. L., Mahasrankintakam, A. B., Pajgade, R., Dutta, S., Belur, S. B., & Jensen, M. (2021, October). Bamboo towers: A low-cost and sustainable technology for connecting the unconnected regions. In 2021 IEEE 4th 5G World Forum (5GWF) (pp. 523–528). IEEE.
- Pajgade, R. P., Raghunandan, M., & Ghosh, S. (2021). Life cycle cost assessment of structures integrating seismic losses and environmental impacts. In 13th International Conference on Structural Safety and Reliability (ICOSSAR 2021), Shanghai, China.
- Pajgade, R. P., Raghunandan, M., & Ghosh, S. (2022). Influence of occupancy on seismic life cycle cost. In 17th Symposium on Earthquake Engineering (17 SEE), IIT Roorkee, India.
- Pajgade, R. P., Raghunandan, M., & Ghosh, S. (2024). Use of life cycle cost assessment framework to identify sustainable retrofit solutions. In 18th World Conference on Earthquake Engineering (18 WCEE), Milan, Italy.
- Pajgade, R. P., Mahasrankintakam, A. B., Ghosh, S., & Raghunandan, M. (2025). A comparative life cycle cost assessment of short-span road bridges with prestressed concrete girders and steel girders. In 9th International Symposium on Life Cycle Civil Engineering (9 IALCCE 2025), Melbourne, Australia (Accepted).

- **Book Chapters**

- Pajgade, R. P., Raghunandan, M., & Ghosh, S. (2022). Influence of occupancy on seismic life cycle cost. In 17th Symposium on Earthquake Engineering (17 SEE), IIT Roorkee, India.

- **Reports**

- Ghosh, S., Raghunandan, M., Thomas, A., Pajgade, R.P., (2023) "Preliminary Study Comparing Life Cycle Costs of Short Span Bridges- PSC vis-à-vis Steel", Detailed Technical Report, IIT Bombay, India.

- **Posters**

- Pajgade, R.P., Raghunandan, M., Ghosh, S. (2022) "Life cycle framework for sustainable and resilient buildings", Sustainability Conclave, IIT Bombay Research Park
- Pajgade, R.P., Raghunandan, M., Ghosh, S. (2023) "Life cycle cost incorporating seismic hazard related losses", 1st Ph.D. Connect Conclave, Civil Engineering, IIT Bombay

RELEVANT ACADEMIC PROJECTS

- **Sustainability incorporated life cycle cost assessment of structures including natural hazard losses**
  (Ph.D. Thesis) [Prof. Siddhartha Ghosh, Dr. Meera Raghunandan] (*May, 2025)*
- **Comparative analysis of Pre-Engineered Steel buildings with Indian and American codes.**
  (B.Tech Project) [Dr. P. S. Lande] (*April, 2018*)
- **Tensile Fabric structures.**
  (B.Tech Seminar) [Dr. P. S. Lande] (*April, 2018*)

INTERNSHIP EXPERIENCE

- **Balaji Structural Consultancy** *(Rajapeth, Amravati, Maharashtra)* *(Nov, 2016–Jan, 2017)*
  - Developed reinforced concrete steel design worksheets on Excel.
  - Assisted in analysis and structural designing using STADD Pro. in projects including residential, commercial building.
  - Inspection of construction progress of hotel site as a Site Engineer.

TECHNICAL SKILLS

- **Engineering Software:** PACT, ETABS, SAP2000, STAAD.Pro, OpenSEES, OpenQuake, AutoCAD, Seismosoft
- **Programming Software:** MATLAB, R
- **Document Preparation Software:** VTex, MS Office
- **Other Software:** Learning Management Systems & Tools (ie., Moodle, SAFE IITB, Bodhitree)

PROFESSIONAL MEMBERSHIPS

- Earthquake Engineering Research Institute (EERI); Student Member
- Institute for Steel Development and Growth (INSDAG); Life Member
- Indian Society for Earthquake Technology (ISET); Life Member