

# Abhinov Bharadwaj

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## Qualification

Degree	Institute	Specialisation	Year
Ph.D	IIT (ISM) Dhanbad	Civil Engineering	2023
Post Graduation	IIT (ISM) Dhanbad	Structural Engineering	2015-17
Graduation	Assam Engineering College, GU	Civil Engineering	2010-14

## Experience

- Assistant Professor in the Department of Civil, School of Manufacturing and Construction, Assam Skill University, Mangaldai.
- Guest Faculty in the Department of Civil Engineering, Tezpur University from 20/03/2023 to 31/12/2024.
- Junior Research Fellow and Senior Research Fellow in the Department of Civil Engineering, IIT (ISM) Dhanbad from 1/08/2017 to 15/03/2023.

## Research Interest

- Computational Mechanics, Impact Mechanics, Fatigue Analysis, Heterogeneity Modelling.

## Technical Skills

- Tools : MATLAB, LATEX, OriginPro, Abaqus, AutoCad, Staad Pro, SAP 2000.

## Publications

### • International Journal Articles

- Bharadwaj, A.**, Chakraborty, S. (2022). Numerical investigation on effect of randomized mesoscopic heterogeneity in stochastically located arbitrary shaped aggregates in impact response of reinforced concrete. *Engineering Failure Analysis.*, 106691.  
<https://doi.org/10.1016/j.engfailanal.2022.106691>
- Bharadwaj, A.**, Sharma, M. & Chakraborty, S. (2025). Damage assessment of concrete structures considering meso-scale heterogeneity under quasi-static and impact loading. *Communicated in International Journal of Solids and Structures.*
- Sharma, M., **Bharadwaj, A.** & Chakraborty, S. (2025). A novel hybrid bistable auxetic metamaterials with reusable geometric configuration for energy dissipation. *Accepted in International Journal of Structural Integrity.*

- **Book Chapter**

- **Bharadwaj, A., Chakraborty S. (2022)** A Numerical Approach to Model Heterogeneity of Concrete in RC Beam Subjected to Impact Loading. In: Maiti D.K. et al. (eds) Recent Advances in Computational and Experimental Mechanics, Vol II. Lecture Notes in Mechanical Engineering. Springer, Singapore. [https://doi.org/10.1007/978-981-16-6490-8\\_39](https://doi.org/10.1007/978-981-16-6490-8_39)

## Conference & Workshop

- **Workshop**

- Attended one week training programme on "Seismic Vulnerability of RC buildings using SAP2000 Non-Linear Static -based procedure" organised by Assam Engineering College and NORSAR (Kjeller , Norway). (2014)
- Attended the course on "Nonlinear Continuum Mechanics" organised by Indian Institute of Technology Kharagpur, GIAN. (2017)

- **Conference**

- Presented the paper titled "A Numerical Approach to Model Heterogeneity of Concrete in RC Beam Subjected to Impact Loading" in the International Conference on Computational and Experimental Mechanics (ICRACEM-2020) at Indian Institute of Technology Kharagpur.

## Invited Lectures

- Delivered a lecture as a resource person on the topic titled "FINITE ELEMENT FORMULATION OF CONCRETE CONSIDERING ITS HETEROGENEITY" at a Faculty Development Program organised by Jorhat Engineering College. (2024)
- Delivered a lecture as a resource person on the topic titled "EARTHQUAKE RESISTANT MASONRY STRUCTURE" organised by Assam Disaster Management Authority, Sonitpur. (2024)

## Academic Projects/Research

- **A Comparative Study of Rock Spheroids and River Boulders of Assam**  
(B.E Project | Guide: (Dr. Girindra Deka)) (July, 2013-December, 2013)
- **Design of a Three Storey Residential Building**  
(B.E Project | Guide: (Dr. Diganta Goswami)) (January, 2014-May, 2014)
- **Estimation of Residual Fatigue Life of Steel Railway Truss Bridge**  
(M.Tech Project | Guide: (Dr. Sukanta Chakraborty)) (July, 2016-April, 2017)
- **A Numerical Framework for Damage Assessment of RC Structure Considering Three-Phase Mesoscopic Heterogeneity Under Quasi-Static and Impact Loading**  
(Ph.D Project | Guide: (Dr. Sukanta Chakraborty)) (August, 2017-May, 2023)

## Training

- **Summer Internship | North East Institute Of Science And Technology** (June, 2012)
  - Evaluation of Construction Materials in Laboratory.
- **Summer Internship | North Eastern Electric Power Corporation LTD** (June, 2013)
  - Kameng Hydro-Electric Project.
- **Summer Internship | CPWD, Dhanbad** (June, 2016)
  - Working Site of ISMU.
- **Summer Internship | PWD, Jorhat** (July, 2016)
  - Working Site at Sivsagar, Golaghat and Bokakhat.

## Teaching/ Assistantship

- **Teaching Assistant** for the course, **Engineering Drawing** (IIT (ISM) Dhanbad), supervised the tutorial for the course, evaluated the assignments, quizzes and examination papers. (January'19-January'22)
- **Teaching Assistant** for the course, **Structural Analysis** (IIT (ISM) Dhanbad), supervised the tutorials of the course, evaluated the assignments and quizzes. (August'19-July'21)
- **Teaching Assistant** for the course, **CAD Lab** (IIT (ISM) Dhanbad), supervised the tutorials of the course, evaluated the assignments and quizzes. (June'18-December'20)
- **Teaching Assistant** for the course, **FEM** (IIT (ISM) Dhanbad), supervised the tutorials of the course, evaluated the assignments and quizzes. (January'22-May'22)
- **Faculty in charge** for the course, **Engineering Graphics** (Tezpur University), supervised the course, evaluated the assignments, quizzes and examination papers. (March'23-July'23, January'24-December'24)
- **Faculty in charge** for the course, **Solid Mechanics** (Tezpur University), supervised the course, evaluated the assignments, quizzes and examination papers. (August'23-December'23, August'24-December'24)
- **Faculty in charge** for the course, **Building Materials and Technology** (Tezpur University), supervised the course, evaluated the assignments, quizzes and examination papers. (August'23-December'23, August'24-December'24)
- **Faculty in charge** for the course, **Concrete and Structure Lab** (Tezpur University), supervised the Laboratory works, evaluated the assignments, quizzes and examination papers. (August'23-December'23, August'24-December'24)