

Atanu Behera

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🏢 Work: Department of Civil Engineering, Indian Institute of Technology Dhanbad, 826004, India.

EDUCATION

PhD

Indian Institute of Technology Madras, Chennai, India. [03/07/2017 – 28/02/2024]

Thesis: Mechanical Characterization of Emulsified-asphalt Cold Recycled Mixture

Master of Technology

Indian Institute of Technology Bhubaneswar, Odisha, India [01/07/2015 – 18/03/2017]

Thesis: Performance of Recycled Asphalt Mixes Rejuvenated with Pongamia Oil

RESEARCH PUBLICATIONS

Journal Articles Published or Accepted

1. **A. Behera**, S. Charmot, A. Asif, and J. M. Krishnan, "[Influence of confinement pressure on the mechanical response of emulsified cold-recycled mixtures](#)," *Journal of Materials in Civil Engineering*, 33 (11), pp. 04021297, 2021.
2. **A. Behera**, V. T. Thushara, and J. M. Krishnan, "[Linear viscoelastic response of emulsified cold recycled mixtures](#)," *Mechanics of Time-Dependent Materials*, 28 (2), 2024.
3. **A. Behera**, V. Shiva Sankar, and J. M. Krishnan, "[Influence of Cement and Emulsion Content on the Mechanical Response of Cold Recycled Mixtures](#)," *Journal of Transportation Research Record*. 0(0), 2025.
4. I. J. S. Sandeep, G. M. Sunny, **A. Behera**, and J. M. Krishnan, "[Investigating linear viscoelastic response of cylindrical and prismatic bituminous mixtures subjected to torsion using dynamic shear rheometer](#)," *Road Materials and Pavement Design*, 26 (sup1), pp. 91–109, 2025.
5. V. T. Thushara, **A. Behera**, and J. M. Krishnan, "[Investigating permanent deformation of bituminous mixtures designed using particle-packing based gradation and mastic optimization](#)," *Materials and Structures*, 58 (163) 2025.
6. S. K. Yadav, D. Sasidharan, **A. Behera**, and B. Gottumukkala, "[An investigation on the healing potential of warm mix asphalt binders using linear amplitude sweep test](#)," *Mechanics of Time-dependent Materials*, 29 (46) 2025.
7. S. Saha, R. Kumar, **A. Behera**, and U. C. Sahoo, "[Influence of Constituents on the Evolutionary Response of Bitumen Stabilized Material](#)," *Journal of Materials in Civil Engineering*, 38 (2) 2025.

Conference Proceedings

1. **A. Behera** and V. T. Thushara, “Investigation on stress relaxation of the emulsified cold recycled mixture and hot mix asphalt,” in *Advances in Materials and Pavement Performance Prediction III (AM3P 2023)*, 22–24 May 2023, Hong Kong, 2023.
2. **A. Behera** and J. M. Krishnan, “Stress-strain-time response of emulsified cold recycled mixture in repeated haversine compression loading,” in *Advances in Materials and Pavement Performance Prediction II (AM3P 2020)*, 27–29 May 2020, San Antonio, TX, USA, CRC Press, 2020, p. 256.
3. I. J. S. Sandeep, G. M. Sunny, **A. Behera**, and J. M. Krishnan, Investigating linear viscoelastic response of cylindrical and prismatic bituminous mixtures subjected to torsion using dynamic shear rheometer, *10th International Conference on the European Asphalt Technology Association (EATA 2025)*, Palermo, Italy, June 2025.

WORK EXPERIENCE

Project Associate,

Indian Institute of Technology Madras, Chennai, India [01/07/2022– 22/11/2024]

Research Associate,

Indian Institute of Science Bangalore, India [16/12/2024 – 25/08/2025]

National Post Doctorate Fellow,

Indian Institute of Science Bangalore, India [17/11/2024 – 22/04/2026]

PROJECTS

Mix Design and Structural Design of Cold Central Plant Recycling (CCPR) [2021 – 2023]

Project details: Six-laning of bituminous pavement with 125 km in the Ghaziabad-Aligarh section of NH-34.

My Role: Drafting proposals, executing mix designs, material characterisation and report writing.

Deliverables: The project has been implemented to construct the CCPR technique along 125 km of the Ghaziabad-Aligarh section on NH-34.

Development of Mix Design Method for Dense-Graded Emulsified Asphalt Mixtures [2023 – 2024]

Project Brief: Proposed a rational mix design method for dense-graded emulsified asphalt mixtures

My role: Writing proposal, conducting mix design, and report writing

PEER REVIEW

International Journal of Pavement Engineering; Journal of Transportation Research Record