

Manik Barman, PhD	
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EDUCATION

- PhD, Civil Engineering, University of Pittsburgh, 2014
- M. Tech., Civil Engineering, IIT Kharagpur, India, 2004
- B. Tech., Civil Engineering, NERSIT, India, 2002
- ASCE ExCEED, 2019

ACADEMIC EXPERIENCE

- University of Minnesota Duluth (UMD), Associate Professor, 2020–present
- University of Minnesota Duluth (UMD), Assistant Professor, 2015–2020
- The University of Oklahoma (OU), Post-Doctoral Research Fellow, 2013–2015
- Indian Institute of Technology (IIT), BHU, Varanasi, India, Lecturer, 2007–2008
- National Institute of Technology Agartala, India, Lecturer, 2004–2007

CURRENT PROFESSIONAL ORGANIZATION MEMBERSHIPS

- American Society of Civil Engineers (ASCE)
- International Society of Concrete Pavement (ISCP)
- Indian Road Congress (IRC), India
- Institution of Engineers (IEI), India

HONORS AND AWARDS

- Concrete Material Section Best Paper Award, Transportation Research Board, 2020
- Nomination for Graduate Faculty Advisor, university level, UMD, 2021
- Nomination for Outstanding Faculty Advisor, college level, UMD, 2020
- Nomination for SCSE Young Teacher's Award, college level, UMD, 2018
- Faculty Scholar for University of Minnesota Center for Transportation Studies, \$2,500/year Scholarship, 2017–current
- Indian Road Congress Commendation Certificate for the Year, national level, 2009
- Sir J. C. Bose Award (Young Researcher of the state), Tripura, India, state level, 2007
- Innovation Potential of Students Projects at Bachelor level for the B. Tech Thesis Project, Indian National Academy of Engineers, INAE, national level, 2002

SELECTED SERVICE ACTIVITIES

- Member, Board of Directors for International Society of Concrete Pavements (ISCP)
- Member, Curriculum Committee, Swenson College of Science and Engineering, UMD
- Associate Member, National Road Research Alliance (NRRRA), Minnesota, US

- Member, Transportation Research Board, Standing Committee on Pavement Maintenance (AKT 30), Washington, DC, US, August 2020–present
- Member, Transportation Research Board, Standing Committee on Design and Rehabilitation of Concrete Pavements (AKP 20), Washington, DC, US

SELECTED PUBLICATIONS

- Barman, M. (*corresponding author*) and B. Hansen. 2021. Post-Crack Flexural and Joint Performance Behaviors of Fiber-Reinforced Concrete for Pavements. *Transportation Research Record: Journal of the Transportation Research Board*, (in press).
- Munch, J., U. M. Arepalli, and M. Barman (*corresponding author*). 2020. Decision Trees for Selecting Asphalt Pavement Crack Sealing Method. *Transportation Research Record: Journal of the Transportation Research Board*. doi:10.1177/0361198120960135.
- Hansen, B. and M. Barman (*corresponding author*). 2019. New Method to Evaluate the Post-Crack Performance of Fiber Reinforced Concrete. *Transportation Research Record: Journal of the Transportation Research Board*, pp. 1–10. DOI:10.1177/0361198119848408.
- Barman, M., J. M. Vandebossche, and D. Jansen. 2019. Small-Scale Joint Performance Test for Concrete Pavements. *ACI Structural Journal*, Vol. 116, No. 6. DOI:10.14359/51718067.
- Imran, A., M. Barman, S. Commuri, M. Zaman, and M. Nazari. 2018. Artificial Neural Network-Based Intelligent Compaction Analyzer for Real-Time Estimation of Subgrade Quality. *International Journal of Geomechanics*, Vol. 18. DOI:10.1061/(ASCE)GM.1943-5622.0001089.
- Barman, M. (*corresponding author*), C. Crick, and T. R. Burnham. 2021. Behavior of Ultra-Thin and Thin Fiber-Reinforced Pavements on Granular Base. *Proceedings of 12th International Conference on Concrete Pavements*, ISCP, September 27–October 1. Online.
- Burnham, T. R., M. G. Wallace., and M. Barman. 2021. Quantifying the Impact of Structural Fibers on the Performance of Concrete Overlays on Asphalt. *Proceedings of 12th International Conference on Concrete Pavements*, ISCP, September 27–October 1. Online.

SELECTED RESEARCH PROJECTS

- *Towards the Development of Pavement-Specific Structural Synthetic Fibers*. Co-PI: Mr. Gerald J. Welch, FORTA Corporation; Clifford N. MacDonald, Vigilant Enterprise LLC. Sponsor: National Road Research Alliance (NRRRA). \$100,000. 04/01/2021–03/31/2023
- *Optimizing Asphalt Mixture Designs for Low-Volume Roads of Minnesota*. Co-PI: Mihai Marasteanu, University of Minnesota, Twin Cities (UMN-TC). Sponsor: LRRB, MN. \$161,333; 07/01/2019–12/31/2021
- *Establishing Fresh Properties of Fiber Reinforced Concrete for Performance Engineered Mixture (PEM)*. Sponsor: MnDOT. \$147,070. 07/01/2019–06/30/2021
- *Performance Benefits of Fiber-reinforced Concrete Pavement and Overlays*. Sponsor: NRRRA. \$149,999. 07/01/2019–12/30/2021
- *Cost Estimate of B vs. C Grade Asphalt Binders*. PI: Mihai Marasteanu (UMN-TC). Co-PIs: Manik Barman Sponsor: LRRB, Minnesota. \$169,776. 07/01/2021–06/30/2023
- *Cost/Benefit Analysis of the Effectiveness of Crack Sealing Techniques*. Sponsor: LRRB, MnDOT. \$108,504. 07/01/2017–06/30/2019