

Dr. G Vamsi Krishna

Scientist

Flexible Pavement Division,

CSIR-Central Road Research Institute (CRR),

Delhi-Mathura Road, New Delhi, India-110025

Email: vamsikrishna.iiit@gmail.com

Mobile: +91-849-985-9567



Education Details

Ph.D. (Transportation System Engineering - Civil Engineering) January 2025

Indian Institute of Technology Bombay (IIT Bombay), Mumbai, India

M.Tech. (Transportation Engineering - Civil Engineering) July 2019

Maulana Azad National Institute of Technology (MANIT), Bhopal, India

B.Tech. (Civil Engineering) May 2015

Rajiv Gandhi University of Knowledge Technologies (RGUKT), Kadapa, India

Research Interests

- Characterization of Sustainable and Alternative Pavement Materials.
- Performance-based Balanced Mix Design (BMD) of Asphalt Mixtures.
- Aggregate Morphological Characterization using Digital Image Technique.
- Laboratory and in-field Performance Assessment of Asphalt Mixes.
- Analysis, Design, Evaluation, and Forensic Investigation of Flexible Pavements.

Publications in Peer Reviewed Journals

- **Vamsikrishna, G.,** and Singh, D. (2023). "Comparison of Rutting Resistance of Plant Produced Asphalt Mixes Using Hamburg Wheel Tracker and Surrogate Simple Performance Tests: IDEAL-RT and HT-IDT." *Journal of Materials in Civil Engineering (ASCE)*, 35(12), 04023471.
- **Vamsikrishna, G.,** and Singh, D. (2023). "Exploring Potential of Marshall-RT as Simple Performance Test to Evaluate Rutting Resistance of Asphalt Mixtures." *International Journal of Pavement Engineering (Taylor & Francis)*, 24(1), 2265030.
- **Vamsikrishna, G.,** Dangi, J., and Singh, D. (2024). "Rutting and Cracking Performance of Asphalt Mixtures for 150 mm and 100 mm Diameter Samples Using Simple Performance Tests." *Journal of Materials in Civil Engineering (ASCE)*, 36(10), 04024307.

- **Vamsikrishna, G.,** Sasidharan, D., Bharath, G., Rajput, S. P., and Kuna, K. K. (2024). "Performance Evaluation of Dense Graded Emulsion Mixes with Rejuvenated Reclaimed Asphalt Pavement." *Road Materials and Pavement Design (Taylor & Francis)*, 25(4), 860-873.
- **Vamsikrishna, G.,** & Singh, D. (2025). "Understanding Rutting Susceptibility of Polymer Modified Asphalt Mixes for Different Traffic Loading Conditions Using Binder Characterization and Simple Performance Tests." *Construction and Building Materials (ELSEVIER)*, 497, 143887.
- **Vamsikrishna, G.,** Mondal, P. G., and Singh, D. (2025) "Prediction of Shear Strength Properties of Asphalt Mixes Using Simple Indicative Tests." *Road Materials and Pavement Design (Taylor & Francis)* [Under Review].

Peer-Reviewed Conferences

- **Vamsikrishna, G.,** Dangi, J., and Singh, D. (2024). "Cracking and Rutting Performance of Asphalt Mixes Based on IDEAL-CT and IDEAL-RT Tests for 150 mm and 100 mm Diameter Samples and Establishing Threshold Limits." In *103rd TRB Annual Meeting, 2024*, Washington, D.C, United States.
- **Vamsikrishna, G.,** and Singh, D. (2024). "Rutting Resistance of Plant-Produced Modified Asphalt Mixtures: A Comparative Evaluation Using HT-IDT and Marshall-RT." In *13th Asia-Pacific Conference on Transportation and the Environment (APTE), 2024*, National University of Singapore (NUS), Singapore.
- **Vamsikrishna, G.,** Sasidharan, D., and Bharath, G. (2025). "Influence of Curing Parameters on the Mechanical and Performance Characteristics of Cold Recycled Emulsion Mixes using 100% RAP." In *Transportation Research Efforts for Ecological Sustainability (TREES), 2025*, Hyderabad, India.

Academic Projects

Ph.D. Research Work

Title: Effectiveness of Simple Performance Tests in Predicting Rutting Resistance of Asphalt Mixes and Establishing Threshold Limits.

Supervisor: Dr. Dharamveer Singh, Professor, IIT Bombay, India

M.Tech. Research Work

Title: Laboratory Investigation of Dense-Graded Emulsion Mixes with 100% RAP Using Rejuvenators.

Supervisors: Dr. G. Bharath (Principal Scientist, CSIR-CRRI, New Delhi); Prof. SPS Rajput (Assistant Professor, MANIT Bhopal).

Reviewer

Reviewer of reputed scientific journals and international conferences

Journal

- Journal of Materials in Civil Engineering (JMCE - ASCE).
- Road Materials and Pavement Design (RMPD - Taylor & Francis).
- International Journal of Pavement Engineering (IJPE - Taylor & Francis).
- International Journal of Pavement Research and Technology (IJPRT - Springer).

Conferences

- Transportation Research Board Annual Meeting (TRBAM)
- Conference of Transportation Research Group (CTRG).
- International Conference on Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC).
- International Conference on Transportation Infrastructure Projects: Conception to Execution (TIPCE).
- Conference on Transportation Research Efforts for Ecological Sustainability (TREES).

Technical Talk

- *“Exploring Potential of Marshall-RT as Simple Performance Test to Evaluate Rutting Resistance of Asphalt Mixtures”*, 82nd Annual Session, Indian Road Congress (IRC), Gandhinagar, India.
- *“Advance Pavement/Highway Laboratory Facilities at IIT Bombay”*, Workshop on Quality of Bitumen and Bituminous Mixes, Mumbai, India.
- *“Performance-Based Mix Design Approach for Design of Asphalt Mixtures”*, Training Program for Delegates of College of Military Engineering, Pune, India.
- *“Aggregate Gradations and Bituminous Mix Design Practice in India”*, An International Webinar (Online) on an Overview of Materials, Design, and Constructions Practices for Bituminous Pavements in India.