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Research Interests

- Pavement Materials, Design, Maintenance and Rehabilitation
- Forensic Evaluation
- Sustainable and Alternate Materials
- Pavement Management Systems

Brief Summary of Research

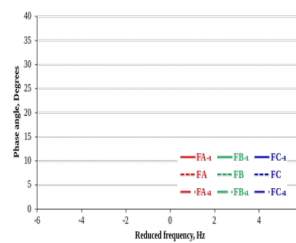
Research focussed on developing a laboratory mix design practices for Asphalt-Rubber gap graded (AR-Gap) mixtures suitable for heavy traffic conditions through the evaluation of their structural performance characteristics. Both AR binders and AR-Gap mixtures were investigated to arrive at the best suitable combination. The best AR-Gap mixtures were demonstrated in the field by constructing AR-Gap pilot test sections. A set of recommendations was developed based on the laboratory studies carried out as part of this research to develop superior performing AR-Gap mixtures. This research provided a good background to AR-Gap mixture development, its performance and field implementation.



Materials & Design



Characterization



Performance Optimization



Field Implementation

Recent Publications

- Veena Venudharan, & Krishna P. Biligiri, (2020). Development and performance analysis of asphalt-rubber gap-graded mixtures: study on aggregate gradations. *Journal of Testing and Evaluation*, 48(4).
- Veena Venudharan, & Krishna P. Biligiri, (2019). Rutting performance of asphalt-rubber gap-graded mixtures: evaluation through statistical and reliability approaches. *Road Materials and Pavement Design*, 1-17.
- Veena Venudharan, & Krishna P. Biligiri, (2019). A novel design toolkit to assess asphalt-rubber gap-graded mixture performance: Target properties and parametric relationships. *Construction and Building Materials*, 219, 69-80.
- Veena Venudharan, & Krishna P. Biligiri, (2019). Investigation of Cracking Performance of Asphalt-Rubber Gap-Graded Mixtures: Statistical Overview on Materials' Interface. *Journal of Testing and Evaluation*, 47(5).