CIVIL & ENVIRONMENTAL ENGINEERING GRAD STUDENT SEMINAR

Design and Evaluation of Porous Asphalt Mixture towards Low Noise and High Durability

Friday, September 11
12:30 PM
COE A322

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PROFESSOR
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ABSTRACT: Porous asphalt mixture features a high permeability and is primarily used on pavement surface to reduce vehicle hydroplaning or stormwater runoff. The mixture may also offer additional functional and environmental benefits such as noise reduction through appropriate design. This talk presents recent research efforts in testing and analyzing porous asphalt mixture to improve its acoustic performance, durability, and environmental sustainability. Laboratory experiments were performed to evaluate the mixture performance in terms of permeability, surface texture, resistance to raveling, tensile strength, and sound absorption. A mechanistic-empirical model was developed for tire-pavement noise based on mixture design parameters. The potential of incorporating renewable or waste materials into the mixture was also evaluated.

This event is sponsored by FAMU-FSU College of Engineering and Department of Civil and Environmental Engineering

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