

## DISTINGUISHED INVITED LECTURE

Thursday, December 15, 2022      TIME: 12:30:14:30 CET  
Building 8 – Aula Croce – Via Claudio 21 (NA)

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### Balanced Mix Design Plus and Performance-Related Specifications

#### Abstract

The asphalt pavement network is the largest investment in the United States' civil infrastructure. However, the letter grade given by the American Society of Civil Engineers (ASCE) in its infrastructure report card for the condition of the nation's pavement network has been hovering around 'D' over the last decade or so. Furthermore, the introduction of new materials and recycling techniques has made the long-term performance prediction of asphalt pavement an even more difficult task. This presentation summarizes the test methods, mechanistic models, and software programs that have been developed under the sponsorship of the United States Federal Highway Administration (FHWA) to meet these challenges. This presentation introduces the framework of balanced mix design plus (BMD+) and performance-related specifications (PRS) and concludes by proposing the BMD+ and PRS together as a foundation to integrate asphalt mixture design and construction QA specifications.



Dr. Y. Richard Kim is the Jimmy D. Clark Distinguished University Professor and Alumni Association Distinguished Graduate Professor in the Department of Civil, Construction, and Environmental Engineering at North Carolina State University. He has been a member of the NC State faculty since 1989.

Dr. Kim's primary research areas include characterization and performance modeling of asphaltic materials and asphalt pavement systems, condition assessment of asphalt pavements, pavement evaluation by accelerated pavement testing, and pavement preservation.