



3<sup>RD</sup> KEYNOTE LECTURE : 8:30 AM – 9:10 AM JUNE 8, 2016



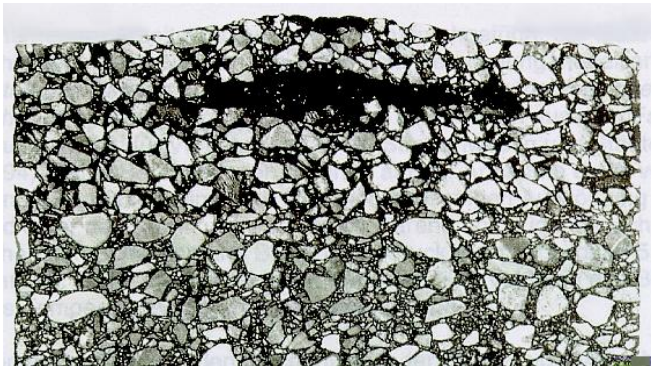
## Characterization and Detection of Debonding Phenomena in Asphalt Pavements and on Concrete Bridge Decks



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### ABSTRACT

Debonding of pavement layers and interfaces is one of the major problems in asphalt pavement technology. It has not only major impact on durability and mechanical performance of asphalt pavements but also on structural damage of concrete bridge or tunnel decks with bituminous overlays. The reason why it has been neglected for many years, is possibly due to the fact that debonding is not only a materials issue but a phenomenon that is affected by the whole structural system. It is therefore heavily influenced by a great variety of indefinite parameters depending on techniques and field conditions of construction, thus creating quite a bit of challenge for assessing debonding from a laboratory point of view.



This presentation deals with several phenomena of debonding such as interlayer shear behavior between asphalt pavement layers under different conditions and pavement configurations. It provides an overview on recent own research on characterization of adhesion of pavement joints and asphalt pavement plug joints as well as on understanding phenomena of blister formation on bridge decks waterproofing systems. Measurement methods for detecting debonding and blistering are considered and possibilities of artificial healing of debonding are addressed.