Structural design of pavements with stabilized layers

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The talk will primarily be divided in three parts, namely analysis of pavement structure, empirical design and mechanistic-empirical design approaches. First, the basic formulation for the analyses of bituminous, concrete and composite pavements will be mentioned. The governing equations and the boundary conditions will be discussed briefly. In the next part, various design philosophies for the design of pavements with stabilized/ cemented layer(s) will be covered. The philosophy of empirical approaches (for example, equivalent thickness approach, structural number approach etc.) will be discussed. An example will be presented on how the equivalent CBR (of stabilized sub-base resting on soil subgrade) can be estimated. Further, the mechanistic-empirical design approach for the design of pavements with stabilized layer(s) will be discussed. The assumptions used, specific to such a design, will be highlighted. As a closing remark, the current need of research on structural design of pavements with stabilized layer(s) using mechanistic-empirical design will be identified.