



# DEPARTMENT OF MECHANICAL ENGINEERING Purdue School of Engineering and Technology

## FALL 2003 SEMINAR SERIES

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Date: **Thursday, September 11, 2003**  
Time: 11:00 am - 12:00 pm  
Room: **SL 165**

Reception at 10:45 am (cookies and refreshments served)  
Everyone is invited

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### Modeling and Analysis of Reinforced Structures

**Dr. Hassis Hedi**

*Professor of Civil Engineering, Director of Civil Engineering Laboratory  
Ecole Nationale d'Ingénieurs de Tunis, Tunisia*

**Abstract.** The reinforced structures studied in this presentation include twisted cords reinforced with rubber materials and soils reinforced with recycled tire materials. The modeling techniques used are in general a combination between 2 D and 1D structures or 1 D (or 2 D) and 3D type with specific characteristics of the microstructures. For modeling these reinforced structures, an equivalent 2D and the multiphase models were developed and will be presented. Examples related to micro – macro type analysis using these models will also be presented.

**About the Speaker.** Dr. Hedi obtained his Ph.D. in Mechanical engineering from Pierre and Marie Curie University Paris in (1990). He is currently a Professor at Ecole Nationale d'Ingénieurs de Tunis and also Director of Civil Engineering Laboratory . He published 20 publications in reputed journals in the areas of mechanics of materials, composites, modeling, and dynamics. He has supervised over 20 Master's thesis students and 3 Ph.D. students.

He is currently visiting Dr. Pidaparti at IUPUI on an NSF-sponsored collaborative project and has been involved in this project for the past three years.