I.M.A.T.I.-C.N.R.
Dipartimento di Matematica “Felice Casorati”
via Ferrata,1 – 27100 Pavia (Italia)

Seminario di Matematica Applicata

Martedì 1 Ottobre 2002 alle ore 16 nella Sala Conferenze dell'I.M.A.T.I.-C.N.R. il

Prof. Ivo M. Babuška
(University of Texas at Austin)

terrà la conferenza:

Analysis of fiber composites used in the airplanes. Mathematical modelling, numerical treatment and interpretation.

Abstract. Fiber composites are widely used in the airplanes (for example Airbus). The lecture will present the problems of modelling (validation) and numerical analysis of the problem. Linear elasticity PDE's is used as the basic model. Various aspects will be addressed:

- Micro and nano structure of the composite will be shown and applicability of linear elasticity PDE will be discussed;
- Detailed description of the position of the fibers from the experiments will be shown. Statistic characterization will be addressed;
- Numerical treatment of the deterministic problem (based on the knowledge of exact position of the fibers) will be mentioned;
- Problem of the stochastic information and their use in mathematical formulation will be mentioned.

Ls S.V. è cordialmente invitata.

Dopo la conferenza verranno offerti ai partecipanti biscotti e caffé.