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LECTURE NOTES **17**

**Random Material Microstructures
Modelling and Mechanical Behaviour**

edited by

Kazimierz Sobczyk

AMAS Course – RMM'04

**in cooperation with the Sub-Committee SC4
of IASSAR – the International Association
for Structural Safety and Reliability**

Warsaw, February 2-4, 2004



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Foreword

This volume of the Lecture Notes of the Centre of Excellence for Advanced Materials and Structures (AMAS) includes the lectures presented at the Course “*Random Material Microstructures: Modelling and Mechanical Behaviour*”, Warsaw, February 2-4, 2004.

The objective of the Course was to present the basic principles and tools for the modelling and analysis of real microstructures which possess complex, random heterogeneity. Different research experience of the invited lecturers assured, in my opinion, a proper balance between the material science – empirical approach and mathematical/mechanical modelling of random microstructures. The Course attracted interest of about 60 participants, mostly the Ph.D graduate students, from different research institutes in Poland and abroad. This volume of lecture notes should be of interest to graduate Ph.D students and researchers in industry and at universities who want to gain the in-depth knowledge on the methods of stochastic modelling and analysis of actual materials with complex internal structure.

Finally, I wish to express my cordial thanks to all the authors for their efforts in presenting the lectures and preparing the manuscripts for publication. In addition, I would like to thank to Ms Iza Ślęczkowska and Dr. Jerzy Trębicki for their tremendous organizational contribution to the success of the Course.

Kazimierz Sobczyk

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