

Berichte aus der Mechanik

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Inverse Problems in Experimental Structural Analysis

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Preface

During the past fifteen years I have hold seminar lectures in the frame of the EU-ERASMUS/SOKRATES-program at the Transilvanian University Braşov in Romania. In the beginning the lectures referred to recent achievements in experimental mechanics techniques. There was a lot of catch up in the modern developments in experimental mechanics at that time in the Middle and East European countries. I have been involved also in the TEMPUS-program, fitting out several laboratories for experimental mechanics at Romanian universities. In 2003 a revised version of my lecture notes had been published in Romanian language with the title "*Noi Aspecte in mecanica experimentală*". In the following years I have focussed my lectures on the comprehensive evaluation of experimental results to open up their complete potentials of information in supervising and health monitoring of structures. It turns out to be one of the most important challenges in engineering, to ensure stability and safety of any kind of technical structures and to save economical resources. The publication on hand contains the revised version of the respective lecture notes.

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Wuppertal, 2008

Karl-Hans Laermann

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