

Materials Physics and Mechanics

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on

“Advanced Problems in Mechanics”

Edited by

Dmitry Indeitsev

**Institute of Problems of Mechanical Engineering
Russian Academy of Sciences**

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PREFACE

The XXXI International Summer School – Conference "Advanced Problems in Mechanics – 2003 (APM 2003)", held 22 June – 2 July 2003 in St.Petersburg (Russia), was organized by the Institute for Problems in Mechanical Engineering of the Russian Academy of Sciences under the patronage of the Russian Academy of Sciences and with information support of Gesellschaft fuer Angewandte Mathematik und Mechanik (GAMM). The main purpose of the meeting was to gather specialists from different branches of mechanics to provide a platform for cross-fertilization of ideas. The topics of the conference covered all fields of mechanics, including mechanics of generalized continua (polar and micromorphic continua, mixtures, electromagnetic continua, grains, powders, etc.), solids and structures, phase transitions, wave motion, nonlinear dynamics, chaos and vibration, dynamics of rigid bodies and multibody dynamics, fluids and gases, computational mechanics, mechanical and civilian engineering applications. This special issue contains a selection of articles presented at APM 2003 with a particular emphasis on the study of the behavior of non-classical media.

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Professor Dmitry Indeitsev,
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