



Preface

This special issue of the Archives of Mechanics contains selection of some papers presented at the 33rd Solid Mechanics Conference, Zakopane, 5-9 September, 2000.

Let me recall that the series of Polish Solid Mechanics Conferences have been organised by the Institute of Fundamental Technological Research of the Polish Academy of Sciences since 1953, when the first conference was held in Karpacz, south of Poland. Initially, these conferences had a more national character and concentrated mostly on problems of elasticity, plasticity and structural mechanics. Later on, they became international conferences with considerable participation of scientists from Poland as well as from foreign countries, and with much wider scope covering actual active research areas in solid mechanics.

This beautiful idea of the organisation of such conferences was due to two leading scientists from the Institute of Fundamental Technological Research, namely Waclaw Olszak and Witold Nowacki.

These conferences have maintained high scientific standard and served as a real forum for exchange of new ideas and research information in the field of mechanics of solids.

Our aim was to keep this beautiful tradition and to bring together researchers engaged in all major areas of contemporary mechanics of solids and structures. The program of the Conference included 13 general lectures, 21 key-note sectional lectures and 180 contributed presentations. Besides general sessions, the Conference included special sessions dealing with the following specific topics:

- Biomechanics
- Damage and Fracture Mechanics
- Sensitivity Analysis and Optimization
- Homogenization and Composites
- Nonlinear Structures
- Computational Methods
- Porous Media and Geomechanics
- Strain Localization and Localized Fracture
- Experimental Mechanics
- Elasticity and Thermoelasticity
- Thermomechanics of Phase Transformation

- Nonlinear Waves
- Vehicle – Infrastructure Interactions and Structural Dynamics
- Inelastic Structure
- Plasticity and Thermoelasticity
- Plastic Forming Processes
- Contact Problems

The Editorial Board of the Archives of Mechanics kindly offered to publish a special conference issue of the journal, in order to assemble some papers presented at the 33rd Solid Mechanics Conference and not yet available in scientific journals. The interest of the Editorial Board in the Conference papers and the assistance in publishing this volume are gratefully acknowledged.

Finally, I would like to thank the authors who have contributed to this special Conference issue.

Warsaw, September 28, 2001

Piotr Perzyna
Chairman of the 33rd Solid Mechanics Conference