PREFACE

The XIVth Polish Conference on Computer Methods in Mechanics – PCCM'99 – took place in Rzeszów on May 26–29, 1999. The Conference was organised by the Faculty of Building and Environmental Engineering of Rzeszów Technical University under the leadership of Leonard Ziemiański, Assoc. Prof., D. Sc., the Chairman of the Organising Committee. The XIVth Conference continued the biennial cycle of PCCMM Conferences, initiated in 1975 by the Structural Mechanics Section of Civil Engineering Committee of the Polish Academy of Sciences together with the Polish Association of Computational Mechanics.

The Conference proceedings, published in English by the Publishing House of Rzeszów Technical University, included two-page summaries of 199 papers. The aim of the Scientific Committee was to encourage the Authors of outstanding papers to publish their full text papers in scientific journals.

Following this aim special issues were arranged by Archives of Civil Engineering (Vol. 46, No. 2, 2000 with 10 papers) and Computer Assisted Mechanics and Engineering Sciences (Vol. 7, No. 4, 2000 with 28 papers).

Engineering Transactions has also jointed this action. In this Special Issue 6 papers, presented at the XIVth Conference, are published. Three papers are devoted to structural mechanics and the other three to numerical methods, thermomechanics and hydrodynamics.

The paper by A. Garstecki, W. Kąkol and K. Rzeszut is devoted to the buckling analysis of cold-formed thin walled beams. J. Marcinowski proposes the reference configuration changes after a number of incremental steps, related to the large-displacements/finite-rotations analysis of elastic shells. P. Śniady, R. Sieniawski and S. Żukowski use the design sensitivity analysis for assessing the effects of uncertainties in the classical model of a geometrically undimensional problem, e. g. in a bar structure.

An interesting approach of reduction of 3D stationary dynamics problems to three 1D coupled boundary-value-problems is given by E. I. Bespalova and A. D. Kytaygorodsky. R. Korycki's paper is associated with the identification of phase location at unsteady heat conduction. The paper by M. Duras concerns a very complex problem related to the analysis of proecological urban road traffic. The problem considered is modelled by six monocriterial optimal control prob-

lems on the basis of hydrodynamical theory and the problems are solved by a discretization method.

In spite of the small number of published papers the Engineering Transaction Special Issue well represents a variety of problems discussed at the XIVth Conference PCCMM'99.

Zenon Waszczyszyn

Chairman of the Scientific Committee
of the Conference PCCM'99