

THE 3rd INTERNATIONAL CONFERENCE COMPUTATIONAL MECHANICS AND VIRTUAL ENGINEERING, COMEC 2009

A. CHIRU¹ S. VLASE¹ Y. NIITSU²

1. Introduction

The 3rd International Conference “Computational Mechanics and Virtual Engineering and Applications in Automotive Engineering”, “COMEC 2009” has been organized between 29th and 30th October 2009 at the *Transilvania* University of Braşov, Romania, under the patronage of FISITA (International Federation of Automotive Engineering Societies), Romanian Academy of Technical Sciences and the Romanian Automotive Society of Engineers (SIAR). The organizers were Mr. Anghel Chiru, Prof. dr. eng., Dean of the Mechanical Engineering Faculty and Mr. Sorin Vlase, Prof. dr. eng. math., Head of the Department of Mechanics, within *Transilvania* University of Braşov, Romania. This conference is organized every two years and continues the tradition of an outstanding co-operation between academia, the research institutions and the industrial environment.

2. The Scientific Committee

Chairman of the 3rd International Conference “Computational Mechanics and Virtual Engineering and Applications in Automotive Engineering” “COMEC 2009” was Yasushi Niitsu, Prof. dr. eng. at School of Information Environment, Tokyo

Denki University, Inzai-city, Chiba, Japan. The Scientific Committee has been formed by twenty six members from which twelve were from abroad.

The institutions, from which the foreign participants belong, are:

- Technical University of Moldavia, Moldavia;
- University of Orleans, France;
- DHC Zwickau, Germany;
- Universita di Roma Tor Vergata, Italy;
- INSA Lyon, France;
- Technical University of Budapest, Hungary;
- University of Miskolc, Hungary;
- Automation and CAD Technology, Espoo-Vantaa Institute of Technology, Finland;
- ENGINEERING LIGHTWEIGHT COMPOSITES Consaro GmbH, Germany;
- DERC Incorporated, USA.

The Romanian members were from the following institutions:

- *Transilvania* University of Braşov;
- ICECON Research Institute Bucharest;
- Romanian Academy of Technical Sciences;
- Politehnica University of Bucharest;
- Technical University of Cluj-Napoca;
- University of Piteşti;
- IFIN-HH Research Institute Bucharest;
- Research Institute for Mechanical Engineering SC ICTCM SA Bucharest;

¹ Dept. of Automotive, Engines and Mechanics, *Transilvania* University of Braşov.

² School of Information Environment, Tokyo Denki University Inzai-City, Chiba, 270-1382, Japan.

- Politehnica of Timișoara;
- INMA Bucharest;
- AGRI-EXPERT TRAINING CENTER Ltd., Bucharest.

3. The Plenary Session and Sections

Five presentations have been held at the plenary session, namely: Automotive Engineering Research in America, by Michael M. Dedi; On the Dynamics of Sonic Composites, by Petre P. Teodorescu, Ligia Munteanu, Veturia Chiroiu and Valeria Mosnegutu; Development of Method for Evaluation of Bone Stability by X-Ray Photographs, by Kenji Gomi, Akihumi Ogawara, Shota Mori, Saiko Yamaki, Ryuji Mori, Takahumi Kajitani, Yasushi Niitsu and Kensuke Ichinose; A General Method to Study the Motion in a Non-Inertial Reference Frame, by Daniel Condurache and Vladimir Martinusi; Noise Mapping for Urban Road Traffic and Its Effects on the Local Community, by Anghel Chiru, Dinu Covaciu, Daniela Florea, Janos Timar and Sorin Vlase.

One hundred seventy three authors' contributions have been presented in the following sections:

- Section 1: Computational Methods;
- Section 2: Computational Solid Mechanics and Composite Materials;
- Section 3: Applications of Computational Methods in Automotive Engineering;
- Section 4: Biomechanics;
- Section 5: Industrial Applications and Applications in Agricultural Machines.

In section 1 has been presented thirty eight papers in the field of the computational

methods in engineering with many outstanding theoretical approaches.

Section 2 gathered thirty three papers in the field of computational solid mechanics as well as theoretical and experimental approaches in the field of composite materials with applications in the automotive and aerospace industries.

In section 3, a number of thirty eight papers have been sustained, all of them being applications of computational methods in the automotive engineering.

The section 4 gathered twenty nine papers in the field of biomechanics with applications in medical engineering.

The section 5 has been covered by the field of industrial applications in the agriculture and agricultural machines in which thirty five papers have been presented.

The volume with the proceedings has been published by *Transilvania* University of Braşov Publishing House with ISBN 978-973-598-572-1 in A4 standard format.

All the proceedings have been indexed in the international data base FISITA (BDI international quotation).

4. Acknowledgement

The organizers want to thank the International Federation of Automotive Engineering Societies FISITA, the Romanian Academy of Technical Sciences, the Romanian Automotive Society of Engineers SIAR as well as all the authors, for their outstanding contributions to the success of this conference.