

For all inclusions
under CEACM
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The idea for the **Central European Association of Computational Mechanics (CEACM)** emerged in 1990s through the initiative of prominent individuals such as M. Okrouhlik and I. Babuška. After some discussions with scientists in the field of Computational Mechanics in Central European countries, H.A. Mang initiated the foundation of CEACM, which was established at the University of Leipzig in 1992. In the beginning, members of CEACM were scientists from Austria, Czechoslovakia (after 1993 Czech Republic & Slovakia), Hungary, and Poland, were joined by individuals from Slovenia and Croatia in 1993. The first board members, elected unanimously, were H.A. Mang as Chairman of CEACM, L. Demkowicz as Vice-Chairman, F.G. Rammerstorfer as Cashier and G. Meschke as a Secretary of CEACM.

From the creation, CEACM established itself as a leading entity in the field of Computational Mechanics in the respective countries and has been directly involved in the activities of IACM and ECCOMAS. Today, CEACM represents the interests of the mentioned Central European countries within IACM, and via CEACM, the members can join IACM. A considerable number of scientific activities have been sponsored by this association, one of the most important being the permanent education through seminars and lectures, the first of which were held in Budapest. The publication activities of CEACM started with the first "CEACM

Newsletter" which appeared in January 1994 and, due to the efforts of M. Kleiber and H.A. Mang, the official scientific publication of CEACM, the "Central European Journal of Computer Assisted Mechanics and Engineering Sciences (CAMES)" was established in the same year.

In the meantime, CEACM has become a recognized factor in the Computational Mechanics Community and a number of scientific activities would not have been run with the same success without establishing this scientific association. Today, CEACM gathers members of the 7 Central European countries. Currently, the board members are: J. Sorić (Croatia) as President, J. Korelc (Slovenia) as Vice-President and I. Smojver (Croatia) as Secretary. National Representatives in the board are F.G. Rammerstorfer (Austria), P. Polach (Czech Republic), Z. Gaspar (Hungary), T. Lodygowski (Poland) and J. Murin (Slovakia). Previous presidents were H.A. Mang (Austria), M. Kleiber (Poland) and V. Kompiš (Slovakia).

Some activities of National Branches

Nearly all Professors working in the field of Computational Mechanics at Austrian Universities are personal members of CEACM. Many of them have substantially contributed - as members of scientific and organizing committees, as chairpersons, as invited lecturers, and by sending young researchers to Conferences - organized under the auspices of CEACM, or having been closely related to CEACM. The Austrian members of CEACM have organized a large number of scientific events, such as several ECCOMAS Thematic Conferences and EUROMECH Colloquiums. In addition, the ECCOMAS Multidisciplinary Jubilee Symposium - New Computational Challenges in Materials, Structures, and Fluids (EMJS08) is planned to take place in February, 2008 at Vienna University of Technology. A number of direct research cooperation activities and exchanges between Austrian researchers and those of other CEACM countries have intensified the scientific contacts within this scientific association. Thus, Austrian

Figure 1:
Press Conference at WCCM V, Vienna, Austria, July 2002



establishments such as the Institute of Mechanics, Montanuniversität Leoben; Institute of Lightweight Design and Structural Biomechanics, Vienna University of Technology, and the Institute for Mechanics of Materials and Structures of Vienna University of Technology have excellent relations with Institute of Fundamental



Figure 2:
Opening ceremony of the IX International Conference on the Theory of Machines and Mechanisms in Association with the II CEACM Conference on Computational Mechanics, Liberec (Czech Republic)

Technological Research, Polish Academy of Science; Institute of Physics of Materials, Academy of Sciences of the Czech Republic; Department of Aeronautical Engineering, Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb and the Department of Mechanics, Czech Technical University, Prague. The Czech Republic CEACM members

Figure 3:
Conference excursion to Rajecské Teplice (Slovakia)



participate in the Computational Mechanics development by contributing to the national and international projects, grant projects supported especially by the GAČR (Grant Agency of the Czech Republic). In addition, they participate in teaching subjects in the field of theoretical, applied and computational mechanics and mechatronics as well as in solving the tasks of technical practice at technical universities in the Czech Republic (e.g. CTU in Prague, VUT in Brno, VŠB-TU of Ostrava, etc.), in the institutes of the Academy of Science of the Czech Republic and other research institutes. The following most important activities have been performed under the auspices of the Czech members of CEACM: organization of the IX International Conference on the Theory of Machines and Mechanisms in Association with the II CEACM Conference on Computational Mechanics, Liberec, 2004; dissemination of information concerning scientific conferences, especially those organized or co-organized by IACM and ECCOMAS.

The scientific activities of the Slovak branch of CEACM cover a wide area of theoretical and applied mechanics such as developing methods leading to efficient solution of multi-body contact problems and modeling of composite materials reinforced with particles and short fibers using Trefftz methods with polynomial and radial functions. Besides, recent research includes meshless BEM formulations with many applications in static and dynamic thermomechanical problems as well as development of new LINK/BEAM composite (FGM's) finite elements for multi-physical analysis (eg. electric-thermal structural). This scientific research is performed at the Academy of the Armed Forces in Liptovský Mikuláš, Slovak Academy of Science in Bratislava and Slovak University of Technology in Bratislava. The most important events organized by Slovakian CEACM members are the 9th International Conference on Numerical Methods in Continuum Mechanics (NMCM), 2003, Žilina; the 10th Conference on NMCM and IVth Workshop on Trefftz Methods, 2005, Žilina;

Composites with Micro- and Nano-Structure (CMNS) – Computational Modeling and Experiments, 2007, Liptovský Mikuláš and two ICES Symposiums on Meshless Methods (2005 and 2006) in Stara Lesna.

Slovenian CEACM members operate within the framework of the Slovenian Society of Mechanics which is the main society in the field of mechanics in Slovenia. It links researchers from all major fields of mechanics – theoretical, numerical and applied. Members are professors, students and researches from technical and mathematical departments from all universities in Slovenia, research institutes, and industry. The members of the Slovenian branch of CEACM took part in organizing traditional annual conference called “Kuhljevi dnevi” (Kuhelj’s days) in memory of Prof. A. Kuhelj (1902-1980). In the last three years these events took place in Početrtek; Lipica and Snovik.

The Croatian CEACM branch brings together researchers with common interest in Computational Mechanics. The Croatian branch operates within the activities of the Croatian Society of Mechanics and CEACM members are very active in the promotion of numerical methods. Their greatest contribution is strengthening of the role of Computational Mechanics in their own country as well as in Central Europe and world-wide. Some of them have very fruitful collaboration with the members of other European computational mechanics associations.

A number of scientific events organized in Croatia were supported by CEACM. Among others, the 5th International Congress of Croatian Society of Mechanics was held under auspices of CEACM in year 2006. The CEACM, together with the German Association for Computational Mechanics (GACM), supported the Special Workshop Advanced Numerical Analysis of Shell-like Structures (ANASS 2007) which was held in September this year. The aim of all scientific gatherings is to bring together prominent researchers and junior scientists who will exchange new ideas and recent developments in the field of Computational Mechanics which may have a great impact on the technological progress in their countries. ●

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Acknowledgment -

The contribution of the following individuals is highly appreciated: Prof. V. Kompiš, Prof. J. Korelc, Prof. H.A. Mang, Prof. J. Murin, Dr. P. Polach and Prof. F.G. Rammerstorfer (particularly on the history of CEACM)



Figure 4:
Conference excursion to Plitvice Lakes (Croatia)

Figure 5:
ANASS 2007 participants, Zagreb, Croatia, September 2007

