Acta of Bioengineering and Biomechanics
Vol. 4, No. 2, 2002

The 13th European Biomechanics Conference Wrocław 2002

The 13th European Biomechanics Conference was held on September 1–4th, 2002. The conference was organised by Wrocław University of Technology – the Faculty of Mechanics, and the Polish Biomechanics Society, the Polish Engineers and Mechanists Association (the Wrocław division). A number of other organisations co-organised the conference: the Polish Orthopaedics and Traumatology Association, the Rehabilitation and Social Adaptation Committee of the Polish Academy of Sciences, the Mechanics Committee of the Polish Academy of Sciences and the Biocybernetics and Biomedical Engineering Committee of the Polish Academy of Sciences. National and international scientific authorities were invited to contribute to the work of scientific and organisational committees of the conference.

The conference had Professor Michał Kleiber (the Minister of Science and the President of the State Committee for Scientific Research), Ryszard Nawrat (the Voivode of Dolnośląskie Province), Stanisław Huskowski (the President of Wrocław), Professor Andrzej Mulak, Professor Tadeusz Luty (the Presidents of Wrocław University of Technology); Professor Leszek Paradowski (the President of the University of Wrocław), Professor Zdzisław Zagrobelny, Professor Tadeusz Koszczyc (the Presidents of the Academy of Physical Education in Wrocław) as its patrons.

It is noteworthy that it was for the first time that the conference was held in Poland and in this part of Europe in general. The conference is a cyclical biennial event; the previous one took place in Dublin (Ireland) in 2000. Thus organizing such an international conference was an uncommon privilege for us and rendered it possible to extensively present the scientific output of the Central and Eastern Europe.

There were nearly 500 participants of the conference coming from 40 countries. As many as 438 papers were presented in various forms, including guest lectures, oral presentations, posters and discussed posters. Another essential feature was the fact that some 200 participants represented the countries of Central and Eastern Europe, which is an outstanding success in the 26-year history of this conference. It is also worth mentioning that currently Poland is treated as a representative of bioengineering in this part of Europe.

The formal opening ceremony was attended by numerous distinguished guests including the President of the European Biomechanics Society, Professor Georgas Van der Perre.

Coincidentally the formal opening of the conference was one of the actions undertaken by the new President of Wrocław University of Technology, Professor Tadeusz Luty, on his first day of office; he honoured the event with his presence and gave the official welcome to conference participants.

The conference was preceded by a pre-course *Modern Research Tools in Biomechanics*, within this course the presentation of the following 45-minute long lectures took place: *Finite element analysis as a tool for biomechanics research* (Patrick Prendergast, Trinity College, Dublin, Ireland), *Toward a clinical application of subject-specific finite element models of bone segments* (Marco Viceconti, Instituti Orthopaedici Rizzoli, Italy), *Applications of experimental methods in biomechanics investigations* (Romuald Będziński, Wrocław University of Technology, Poland), *Genetic algorithms in selected problems of biomechanics* (Tadeusz Burczyński, Silesian University of Technology, Poland), *Fractal models of tissue evolution and transportation processes* (Marek Rybaczuk, Wrocław University of Technology, Poland), *Pre-clinical testing of implants* (Michael M. Morlock, Technical University, Hamburg, Germany), *Cartilage tissue engineering: a synergistic interaction of mechanical engineers and cell biologists* (Gerjo Van Osch, Erasmus University, Rotterdam, the Netherlands), *OrthoPilot, an advanced tool in supporting knee and hip procedures* (Hanns-Peter Tümmler, Aesculap Co, Germany).

The conference concerned the problems and questions of biomechanics. Due to the interdisciplinary character of this branch of science, the issues presented at the conference encompassed a wide spectrum of scientific problems connected with: engineering biomechanics, medical biomechanics, biomaterial engineering, sport and labour biomechanics. The conference was organised in the form of the following 19 mini-symposia: spine biomechanics, challenges to computer, practical application of biomechanical solutions, rehabilitation medicine and biomechanics, hip biomechanics, upper and lower limb joints biomechanics, bone biomechanics, soft tissue mechanics and tissue engineering, biofluids, optimisation in biomechanic systems, sport biomechanics, new trends in implantology, biomaterials, signal processing in human body, bone remodelling fracture fixation, dental biomechanics, biomechanics of impact, EC supported RTD projects on biomechanics and engineering.

The sessions within mini-symposia were preceded by lectures of senior lecturers, whose speeches constituted an introduction to a given scientific discipline.

An important accomplishment of this conference was inviting the eminent scientists dealing with the problems bordering medicine, biology and mechanics, they delivered lectures such as: *Biomechanics of the hip joint* by **Georg Bergmann**; *Mechanism of mechanochemical transduction in endothelial cells* by **Shu Chien, John Shyy**; *Bones have ears* by **Stephen C. Cowin**; *Biomechanical stimuli in the regulation of bone morphology and mechanical fitness* by **Rik Huiskes**; *Clinical aspects of total hip arthroplasty* by **Andrzej Wall**; *Vibration loading sport: from biomechanical fundaments to application in sport* by **Joachim Mester**; *Simulation technology for biomechanical analysis of the muscosceletal system* by **Edmund S. Chao.**

The second day of the conference was an opportunity for its participants to meet the president of Wrocław, Stanisław Huskowski, at the town hall as well as the presidents of Wrocław universities and state organisations.

Among the members of the Conference Organisational Committee were: Professor Romuald Będziński – the President, Professor Krzysztof Kędzior – the Vice-President, Celina Pezowicz PhD – the Secretary General, Jarosław Filipiak PhD – the Secretary and Krzysztof Ścigała MSc – the Secretary.

The complete conference programme as well as other information are available on the website: www.esb2002.pwr.wroc.pl.

During the conference the election of new authorities for the European Biomechanics Society took place. Professor Patrick J. Prendergast from Ireland (Dublin) has been elected as new President; Professor Romuald Będziński has been elected as the member of the authorities from the countries of Central and Eastern Europe.

Currently we receive numerous letters rating the scientific and organisational level of the 13th European Biomechanics Conference very highly. Thus, one can assume that the conference was an outstanding success and the best way to promote Polish science and Poland itself.

We are proud to annouce that the next International Conference on Biomechanics

BIOMECHANICS 2003

will be held on September 24–26, 2003,
in Poznań, Poland

Topics:

General Biomechanics
Biomechanics of Sport
Medical Biomechanics
Engineering Biomechanics
Ergonomical Biomechanics
Biomechanical Materials Engineering

Everyone working in biomechanics and interested in participation
in the conference is invited

Organizers:

Polish Society of Biomechanics
Polish Society of Biomechanical Engineering
The Poznań University School of Physical Education

Head of Organizing and Scientific Committee:

Professor **Lechosław B. Dworak**

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