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## SIXTH INTERNATIONAL CONFERENCE ON TRIBOLOGY (BALKANTRIB'08)

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The Sixth International Conference on Tribology was held in Sozopol (Bulgaria) in the period of June 12–14, 2008. This conference was organized in honor of the 15<sup>th</sup> anniversary of Balkan Tribological Association.

The Balkan Tribological Association, Society of Bulgarian Tribologists, Technical University of Sofia, Faculty of Machine Technology, Science-Technical Unions of Mechanical Engineering – Sofia were the organizers of this meeting.

Prof. H. Peter Jost (President of International Tribological Conferences) was the President of International Scientific Committee of this conference. Prof. N. Manolov (Bulgaria), Prof. S. Ivanov (Bulgaria), Assoc. Prof. E Assenova (Bulgaria), Prof. K.-D. Bouzakis (Greece), Prof. S. Mitsi (Greece), Prof. N.N. Antonescu (Romania), Prof. A. Tudor (Romania), Prof. M.B. Karamis (Turkey), Prof. D. Odabis (Turkey), Prof. B. Ivkovic (Serbia), Prof. A. Rac (Serbia), Prof. M. Babic (Serbia) were the members of the International Scientific Committee.

For 15 years of existence the Balkan Tribological Association has drawn up the balance sheet of achievements and traces left behind its activities. The role and place of **Tribology** in the modern world has only just been revealed: based on its interdisciplinarity nature Tribology is likely to become a great actor in the building of sustainable society, staking on knowledge, industry, education, and public understanding.

The scope of this conference embraces the state of art and future trends in tribology research and application, emphasizing the necessity of facilitation of intellectual collaboration across both disciplinary and national boundaries in the Balkan region and worldwide.

Previous BALKANTRIB Conferences were held in Sofia, Bulgaria (1993), Thessaloniki, Greece (1996),

Sinaia, Romania (1999), Kayseri, Turkey (2002), Kragujevac, Serbia (2005). The chair of the Balkan Tribological Association is now in Serbia; the organizer of the Conference BALKANTRIB'08 is Bulgaria.

The program of the conference included the following main topics:

- Fundamentals of Friction and Wear
- Nano- and Microtribology
- Tribology in Manufacturing Processes
- Tribology in Machine Elements
- Tribology in Transportation Engineering
- Lubrication, Lubricants, and Bearings
- Lubricant Rheology and Chemistry
- Environmental Aspects of Tribology
- Sealing Tribology
- Tribological Properties of Solid Materials
- Coating Tribology
- Tribotesting and Tribosystem Monitoring
- Surface Engineering
- Biotribology
- Teaching Tribology
- Design and Calculation of Tribosystems
- Tribochemistry and Mechanochemistry
- Interdisciplinary Aspects of Tribology

About 200 participants from 65 research centers from 20 countries (Bulgaria, Romania, Turkey, Russia, Belorussia, Serbia, France, Austria, Greece, Germany, Montenegro, Croatia, Slovak Republik, Poland, Taiwan, USA, India, Italy, Belgium and Iraq) took part in this conference, proving its international status.

The scientific program of the conference included 8 plenary lectures and about 100 oral presentations.

The first plenary lecture was devoted to state of affairs and outlook for the future of Bulgarian tribology (N. Manolov\*, The Society of Bulgarian Tribologists, Sofia, Bulgaria). Group of contributors (Aleksander Rac,

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\* Prof. Nyagol Manolov celebrated his 75<sup>th</sup> birthday last year. His creative scientific ambitions were completely given to Tribology and he was dedicated to this science with his entire determination, perseverance, and inspiration. The main achievements of Prof. N. Manolov were in the field of Tribology science and research, educative and lecturing activities, scientific-methodological and organizational work, interdisciplinary problems of Tribology.

Miroslav Babic and Branko Ivkovic, Serbian Tribology Society, Faculty of Mech. Eng. Kragujevac, Belgrad, Serbia) presented report with title “15 Years of the Serbian Tribology Society – Origin and Activities”. Jean Frene, Olivier Bonneau, Hamid Zaidi and Mihai Arghir (Laboratoire de Mecanique des solides, Universite de Poitiers, France) spoke about wear damage in Tribology, historical aspects and present knowledge.

The topic of the next plenary lecture were bionics aspects in Tribology – tribo-bionics (Friedrich Franek, Austrian Center of Competence for Tribology, Vienna University of Technology, Institute of Sensor and Actuator Systems & Austrian Society of Tribology, Austria). New challenges in Tribology were discussed in the lecture of N.K. Myshkin, D.V. Tkachuk (Metal-Polymer Research Institute of Belarus, National Academy of Science, Gomel, Belarus). Andrei Tudor and P Lungu (Bucharest, Romania) gave presentation about low friction ecological coatings, their preparation and characterization. The lecture of Konstantinos-Dionysios Bouzakis, Nikolaos Michailidis, Stefanos Gerardis, Giorgos Katirtzoglou, Eleftheria Lili, Maria Pappa, Marta Brizuela, Alberto Garcia-Luis, Reiner Cremer (Laboratory for Machine Tools and Manufacturing Engineering, Aristoteles University of Thessaloniki, Thessaloniki, Greece; Fundaciyn Inasmet-tecnalia, San Sebastian, Spain) was devoted to impact resistance of doped PVD coatings correlated with their cutting performance in milling aerospace alloys.

There were 9 sessions in the program of the conference. The first session included 18 lectures, which were devoted to fundamental and interdisciplinary aspects of tribology. The second session had topic “Tribology in manufacturing processes” and included 8 presentations. 15 lectures have been presented in the third session. The problems of Tribology in machines and machine elements were discussed during this session.

The fourth session “Tribochemistry and mechanochemistry” included 9 lectures two of which were delivered by Prof. G.E. Zaikov (Russia) gave two presentations: “Kinetics for the chemistry, biology, medicine and agriculture” and “Polymers in polluted atmosphere. Mechanism of radical conversions on exposure to nitrogen oxides”.

The topic of the fifth session was lubrication, lubricants, and bearings (17 lectures). There were 26 presentations in the sixth session, that was devoted to coating, surface, and material tribology. Nano- and microtribology were discussed during the seventh session which included 12 lectures. 7 reports about biotribology and environmental aspects of tribology have been presented on the session 8. The last ninth session included 9 lectures, which were devoted to tribotesting and tribosystem monitoring.

This conference displayed that the problems of Tribology are still very important both for theoretical studies and practical application.