

THE ELEVENTH WORLD CONGRESS IN MECHANISM AND MACHINE SCIENCE

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p. 979-1521; Vol. 4, p. 1523-2084; Vol. 5, p. 2085-2374.

The Eleventh World Congress in Mechanism and Machine Science to be held in Tianjin, China was scheduled on August 18-21, 2003, and later, because of SARS, was postponed to April 1-4, 2004. This is the second time in the last 20 years for the congress to be held in Asia again and the first congress in the 21st century. Special thanks should go to Prof. Kenneth J. Waldron, the President of IFToMM, who visited Tianjin in July, 2003 and gives to organizer many valuable suggestions for preparing a successful congress.

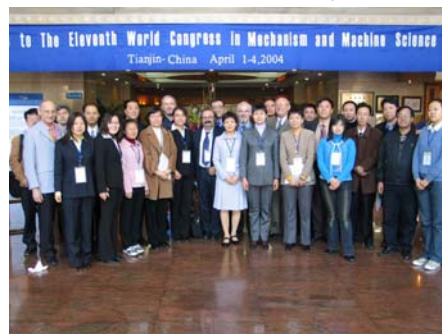
602 abstracts were submitted to the congress from 40 member committees and 9 individuals. All the manuscripts were reviewed by the IFToMM Technical Committees, Permanent Commissions and invited experts. The proceedings include 491 papers. Among them 7 keynote papers were delivered at the congress; 465 papers were orally presented at the 17 scientific sessions. Topics of the papers cover almost all the areas in mechanism and machine science.

China Machine Press was publisher of this five volume proceedings.

Chairman of the Eleventh World Congress in Mechanism and Machine Science was Tian Huang.

Proceedings contain the following **KEYNOTE PAPERS:**

- * **Human Scale Intelligent Mechanical Systems** by D. Tesar.
- * **Evolution of TMM (Theory of Machines and Mechanisms) to MMS (Machine and Mechanism Science): All Illustration Survey** by Marco Ceccarelli.
- * **Modeling and Design of Complex Robot Architectures** by Philippe Bidaud, Jean-Claude Guinot.
- * **Vibrating and Resonant MEMS Sensors** by J. S. Burdess, A. J. Harris, B. J. Gallacher, J. Hedley.
- * **The High Cost of Failure of Rotating Equipment** by Neville F. Rieger.
- * **A Review of Crucial Developments in the Design of High Speed Machinery for Manufacturing Applications Over the Last Half Century** by J. Rees Jones.
- * **The Kinematics and Type Synthesis of Lower-Mobility Parallel Robot Manipulators** by Zhen Huang.



Proceedings contain contributed papers classified in the following chapters with respect to the congress sessions:

- * BIOMECHANICS
- * COMPUTATIONAL KINEMATICS: *SIMULATION AND KINEMATICS, ANALYSIS.*
- * DESIGN METHODOLOGY: *DESIGN METHODOLOGY I CONCEPTUAL DESIGN*

- * DYNAMICS OF MACHINERY: *ELASTIC LINKAGES, DIAGNOSIS AND IDENTIFICATION, VIBRATION CONTROL, ANALYSIS, MECHANISM DYNAMICS, MULTI-BODY DYNAMICS.*
- * EDUCATION
- * GEARING AND TRANSMISSIONS
- * HISTORY OF MMS
- * HUMAN-MACHINE SYSTEMS
- * LINKAGES AND CAMS: *STRUCTURE, MOBILITY AND TYPE SYNTHESIS, SPATIAL MECHANISMS, DESIGN AND OPTIMIZATION, HYBRID-DRIVEN MECHANISM, PARALLEL MECHANISMS, PATH AND FUNCTION GENERATING.*
- * MECHATRONICS
- * MICROMACHINES
- * NONLINEAR OSCILLATIONS
- * ROBOTICS: *ROBOTICS 1 WALKING ROBOTS, WALKING AND CLIMBING ROBOTS, PARALLEL MANIPULATORS, DESIGN OF PARALLEL MANIPULATORS, KINEMATICS OF PARALLEL MANIPULATORS, DYNAMICS, CONTROL, DESIGN, PLANNING, STIFFNESS ANALYSIS, CALIBRATION, ANALYSIS, SINGULARITY, JOINTS AND HANDS, BIOROBOTICS, WORKSPACE AND OTHERS.*
- * ROTOR DYNAMICS
- * RELIABILITY OF MACHINES AND MECHANISMS
- * TRANSPORTATION MACHINERY
- * TRIBOLOGY

From Serbia and Montenegro the following papers were presented at Congress and published in proceedings:

* **On Rheonomic Systems with Equivalent Holonomic Conservative Systems Applied to the Nonlinear Dynamics of the Watt's Regulator** by Katica (Stevanović) Hedrih.

* **Phase Portraits and Homoclinic Orbits Visualization of Nonlinear Dynamics of Multiple Step Reductor/Multiplier** by Katica (Stevanović) Hedrih. in session *Nonlinear Oscillations*.

* **Analysis of Mechanical Error in Function Generating Mechanism** by Nenad D. Pavlović in session *Linkages and Cams, Path and Function Generating*.

* **A Contribution to the Development of Gear Trains with High Transmission Ratios** by Tomislav Petrovic and Ivan Ivanov in session *Gearing and Transmissions*.



<http://www.iftomm2003.com>

<http://www.iftomm2003.com/welcome.htm>

For concluding remarks we can write that the Congress and Proceedings were covered the general areas of theory and practice of machines and mechanisms

The scientific and technical program was included:

* General lectures by internationally noted scientists and engineers on topics of mechanism and machine science;

* Informal forums on topics of important relevance for mechanical theoreticians and designers to maximize the extensive exchange of ideas among Congress attendees.

Topics were in the field of health, technology transfer, robotics, design, economics, computers, space, quality of life, environment, communications, transportation, etc.