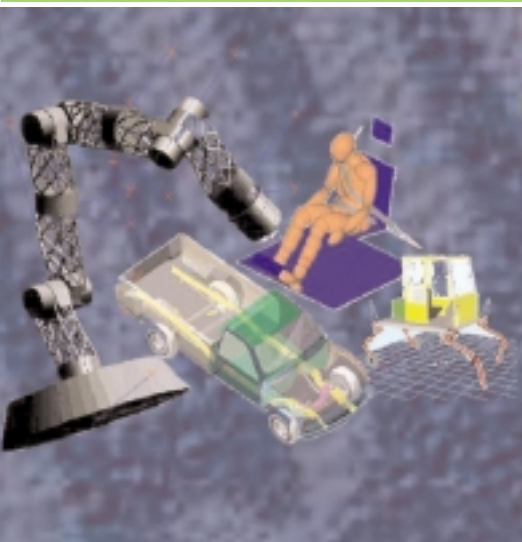




Multibody Dynamics 2003

International Conference
on Advanced in Computational
Multibody Dynamics

Lisbon, July 1-4, 2003



Objectives of the Conference

During the last few years, major scientific progress has been achieved in fields related to computer aided analysis of multibody systems. Recent developments of computer hardware and general purpose software motivated a demand for efficient analysis and simulation tools by the

industry, specially aerospace and automotive, which in turn provoked the need to include in such tools advanced features such as: real-time simulation capabilities, highly non-linear control devices, work space and path planning, active control of machine flexibility and multidisciplinary features increasing the reliability and accuracy of the analysis results. Not only these factors were responsible for the increasing activity in the area but they also set the pace for research. It is now widely recognized that the classical equations governing multibody systems dynamics must be derived and presented in a computer oriented manner using either modern symbolic manipulators or advanced assemblage and solution algorithms interfacing in a modular manner with other types of software in the areas of control, finite elements and optimization. Related developments and applications in solution methods in the fields of numerical analysis, software, hardware platforms, time integration methods applicable to differential-algebraic systems and problems related to time integration of flexible systems with high frequency content are also of primary importance for this field.

Computer graphics and parallel computing methodologies using emerging computer technologies extend the scope of applications and help to speed up and post-process the numerical solution of large and complex systems.

Topics

The aim of the conference is to address the recent developments in the field of multibody systems.

- Flexible multibody dynamics
- Contact and impact problems
- Optimization and sensitivity analysis
- Biomechanics
- Walking machines
- Vehicle dynamics
- Education of multibody dynamics
- Multidisciplinary applications
- Real-time simulation
- Methodologies
- Solution algorithms and numerical issues
- Experimental procedures
- Theoretical and computational methods in multibody systems
- Control issues in multibody systems and mechatronics
- Crashworthiness analysis
- Aerospace technology

Conference Chairman

Jorge Ambrósio

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Important Dates

Applicants that intend to submit papers must meet the following deadlines:

Abstract submission: *December 15, 2002*

Notification of acceptance: *January 31, 2003*

Paper manuscripts: *June 1, 2003*

Conference Secretariat

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