

CALL FOR PAPERS

6th US National Congress on Computational Mechanics

Dearborn, MI
August 1-4, 2001

SYMPOSIUM ON COMPUTATIONAL MULTIBODY DYNAMICS

Recent developments in computer hardware, and in particular personal computers, have motivated the development of efficient analysis and simulation tools including advanced features such as: real-time simulation capabilities, non-linear control devices, work space and path planning, active control of flexibility and multidisciplinary features. Related developments in the fields of numerical analysis, integration methods for differential-algebraic systems and flexible systems with high frequency content are also of primary importance. Current capabilities of most personal computers enable to run realtime simulations that look realistic from a graphics point of view. A growing number of multibody simulation software are enhancing the sensation of realism by adding haptic interfaces and virtual reality environments. Such improvements in our ability to interact with virtual models necessitate fast and accurate algorithms to integrate the dynamics of the simulated system.

The objective of this symposium will be to share and present recent advances in the simulation of multibody system dynamics. The topics covered in the symposium are relevant to researchers in such diverse areas as: Theoretical and computational methods; Solution algorithms and numerical issues; Flexible multibody systems; Advanced control of mechanical systems; Optimization; Real-time-simulation; Applications in vehicle design, computer gaming, animal and human locomotion, robotics or surgery simulation.

Topics of interest will include (but not restricted to):

- Theoretical and computational methods in multibody systems
- Solution algorithms and numerical issues
- Flexible multibody systems
- Controls of multibody systems
- Applications

Important dates

- Submission of a preliminary, initial abstract, by January 31, 2001
- Notification of abstract acceptance, by March 15, 2001
- Submission of final, abstract, in print ready form, by May 31, 2001

Authors of accepted abstracts are welcome to send full manuscripts to the organizers to be peer reviewed. The accepted papers will be published in Multibody Dynamics Systems (<http://www.wkap.nl/journalhome.htm/1384-5640>). The manuscripts (in triplicate) must be mailed to one of the mini-symposium organizers until July 31, 2001, or hand delivered during the Congress. More details on the conference can be found at <http://www.usnccm.org/>

More details on the abstract submissions process at: http://www.usnccm.org/abstracts_submit.html

Symposium organizers

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