



CALL FOR PAPERS

SYMPOSIUM ON MODELING, ANALYSIS, AND CHARACTERIZATION OF THE DYNAMICS OF MEMS and NEMS

21st Biennial Conference on
Mechanical Vibration and Noise
(VIB) Conference

An Integral Part of the
2007 ASME International Design
Engineering Technical Conferences
(2007 IDETC)

September 4-7, 2007
Rio All-Suite Hotel and Casino
Las Vegas, Nevada

<http://www.asmeconferences.org/IDETC07>

Deadlines

Abstract/Full-length Paper: Feb. 19, 2007
Acceptance Notification: April 20, 2007
Final Paper Submission: May 28, 2007

Description

The Technical Committee on Vibration and Sound, an integral part of the ASME Design Engineering Division, is organizing a symposium on the Modeling, Analysis, and Characterization of the Dynamics of MEMS and NEMS. This symposium will provide a forum for the discussion of the dynamics and vibration aspects relevant to devices and structures in the Micro and Nano scale. Papers are solicited for experimental, computational, and theoretical studies in the general area of linear and nonlinear dynamics and vibrations of MEMS and NEMS. Examples of topics of interest are listed below.

Technical Areas and Topics

- Methods to enhance the sensitivity and performance of MEMS and NEMS devices.
- Utilizing nonlinearities and nonlinear phenomena, such as parametric excitation and nonlinear interaction, for improved MEMS/NEMS device design and performance.
- New concepts for MEMS and NEMS devices.
- Analyzing the behavior of microbeams and microplates under the effect of Micro and Nano-scale phenomena and forces.
- Modeling and characterizations of coupled-field phenomena, such as squeeze film and thermo-elastic phenomena.
- Reduced-order and lumped modeling.
- Experimental studies of MEMS and NEMS.
- Finite-element modeling and simulations.

- Response of MEMS under mechanical shock.
- Linear/nonlinear system identification.
- Application areas include but are not limited to: Carbon nanotubes, Atomic Force Microscopes, MEMS/NEMS Sensors and Actuators, such as MEMS Resonators, Filters, Switches, Gyroscopes, Accelerometers, Micromirrors, Microphones, and Micropumps

Symposium Organizers

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Abstracts and Papers Submission

Send your abstracts and full-length papers
via the 2007 IDETC/CIE Webtool at:

<http://www.asmeconferences.org/IDETC07>

(Select 21st Biennial Conference on
Mechanical Vibration and Noise (VIB)
Conference, **VIB-21**)