ASME 2017 IMECE®

International Mechanical Engineering Congress & Exposition®

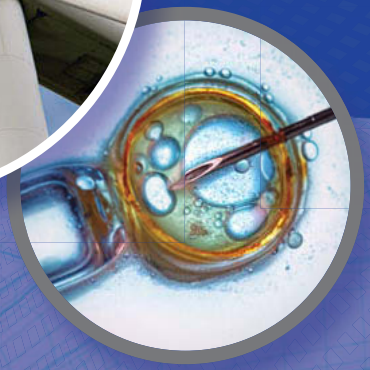
CONFERENCE
November 3–9, 2017

EXHIBITION
November 5–8, 2017

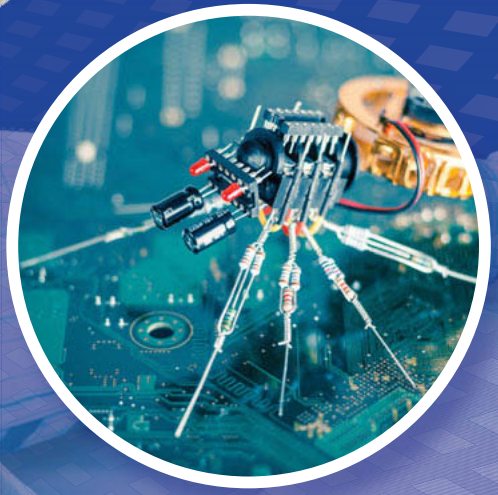
Tampa Convention Center, Tampa, Florida

Program









www.asme.org/events/imece

The American Society of Mechanical Engineers®
ASME®

ASME
SETTING THE STANDARD

TRACK 1
ACOUSTICS, VIBRATION, AND PHONONICS

Wednesday, November 8

1-1 Phononic Crystals and Metamaterials

1-1-1 Track 1 Plenary and NCAD Tutorial

First Floor, Tampa Convention Center, Room 1
8:00am–9:45am

Session Organizer: Mahmoud Hussein, *University of Colorado, Boulder, CO, United States*

8:00am – Symmetry and Reciprocity Breaking in Electromechanical Metamaterials and Structural Lattices
Plenary Presentation. IMECE2017-70756
Massimo Ruzzene, *Georgia Institute of Technology, Atlanta, GA, United States*

1-1 Phononic Crystals and Metamaterials

1-1-2 Nonlinear Phononics

First Floor, Tampa Convention Center, Room 1
10:30am–12:15pm

Session Organizer: Ankit Srivastava, *Illinois Institute of Technology, Chicago, IL, United States*

10:30am – Elastic Wave Control in Nonlinear Periodic Structures
Technical Presentation. IMECE2017-70696
Yi-Ze Wang, Yue-Sheng Wang, *Beijing Jiaotong University, Beijing, China*

10:48am – Nonlinear Localized Waves in Repulsive Lattices
Technical Presentation. IMECE2017-71641
Victor Sanchez-Morcillo, *Universitat Politecnica de Valencia, Gandia, Spain*

11:06am – Nonlinear Dispersive Wave Motion in Homogeneous and Periodic Solids: Theory and Simulation
Technical Presentation. IMECE2017-71851
Romik Khajehtourian, *University of Colorado Boulder, Boulder, CO, United States,* **Mahmoud Hussein,** *University of Colorado, Boulder, CO, United States*

11:24am – Design of Nonlinear Periodic Waveguides with Maximum Functional Complementarity
Technical Presentation. IMECE2017-71888
Weijian Jiao, Stefano Gonella, *University of Minnesota, Minneapolis, MN, United States*

11:42am – Nonlinear Waves in LEGOs Structures
Technical Presentation. IMECE2017-71824
Bolei Deng, Vincent Tournat, Katia Bertoldi, Harvard University, Cambridge, MA, United States

1-1-3 Tunable and Active Phononics

First Floor, Tampa Convention Center, Room 2
10:30am–12:15pm

Session Organizer: Jinkyu Yang, *University of Washington, Seattle, WA, United States*

10:30am – Generating Acoustic Orbital Angular Momentum Multiplexing with Active Metasurface
Technical Presentation. IMECE2017-70421
Chengzhi Shi, Marc Dubois, Yuan Wang, *University of California, Berkeley, Berkeley, CA, United States,* **Xiang Zhang,** *University of California, Berkeley, CA, United States*

10:48am – Electrostatically Tunable Band Gaps in Compressible Dielectric Elastomer Laminated Materials
Technical Presentation. IMECE2017-70723
Bin Wu, *Zhejiang University, Hangzhou, Zhejiang, China,* **Weiqiu Chen,** *Zhejiang University, Hangzhou, Zhejiang, China*

11:06am – Steering an Elastodynamic Wave by the Use of Active Metamaterial-Structure
Technical Presentation. IMECE2017-73102
Sathya Hanagud, Pavitra Maqnghaipathy, *Georgia Institute of Technology, Atlanta, GA, United States*

11:24am – Controllable Surface Waves on the Phononic Crystals with Resonant Cavities
Technical Presentation. IMECE2017-73303
Yingjie Chen, Yang Huang, *Zhejiang University, Hangzhou, Zhejiang, China,* **Weiqiu Chen,** *Zhejiang University, Hangzhou, Zhejiang, China*

1-2 Numerical Methods in Vibroacoustic Interactions

1-2-1 Numerical Methods in Vibroacoustic Interactions

First Floor, Tampa Convention Center, Room 3
10:30am–12:15pm

Session Organizer: Shung H.(Sue) Sung, *Independent Consulting, Retired from GM Reserach, Troy, MI, United States*

10:30am – Structural Acoustic Physics Based Modeling of Curved Composite Shells
Technical Paper Publication. IMECE2017-71733
Rachel Hesse, Andrew Hulton, *Naval Undersea Warfare Center, Newport, RI, United States*

10:48am – Multiscale Modeling and Simulation of Elastic Wave Propagation in Heterogeneous Media
Technical Presentation. IMECE2017-71769
Chen Wang, Xiaodong Wang, *University of Alberta, Edmonton, AB, Canada*

11:06am – Bio-Inspired Design of Directional Microphones through Fluid-Structural Coupling
Technical Presentation. IMECE2017-72133
Qian Dong, Amanda L. Kauffeld, Haijun Liu, *Temple University, Philadelphia, PA, United States*