

# The 17th International Conference on Micro and Nanotechnology for Power Generation and Energy Conversion Applications



PowerMEMS welcomes abstracts addressing innovations related to miniaturization for power generation and energy conversion. Its topics of interest range from basic principles, to materials and fabrication, to devices and systems, to applications. All energy domains are of interest, including, but not limited to: electrical, mechanical, chemical, thermal, magnetic, electrostatic, ferroelectric, optical, nuclear and fluidic energy domains.

We invite authors to submit abstracts in the categories listed below.

## Focused Session

Microscale combustion and combustion-based power source  
Piezoelectric materials and piezomems  
Tailored thermoelectric nanomaterials & devices

## Engineering Science

- Energy conversion physics
- Nano materials for energy conversion and storage
- Fabrication technology for energy systems
- Catalysis and combustion physics
- Heat and mass transfer in energy systems
- Power electronics
- Electron, ion and photon sources
- Nanotribology

## Applications

- Energy systems for IoT/wearable applications
- Energy harvesting devices/systems
- Energy management and system integration
- Biological inspired systems
- Fuel cells, reactors, combustors and heat engines

- Coolers, heaters and thermal management
- Motors, pumps and generators
- Photovoltaic and thermal photovoltaic cells
- RF and acoustic power transfer
- Thrusters and propulsion systems

## Power MEMS in Action

- Applications
- Devices and systems
- Novel concepts and approaches

## Important Dates

**2-page Abstract Due:  
July 7, 2017**

**Final Paper Due:  
September 30, 2017**

## Venue

**Kanazawa Bunka Hall**  
Kanazawa, Japan  
(<http://www.kanazawa-tourism.com/>)



## Sponsored by



Micro-Nano Science and Technology Division of The Japan Society of Mechanical Engineers (JSME)

<http://www.PowerMEMS2017.org>

## Invited Speakers

**Dr. Takao Mori**

National Institute of Material Science,  
JAPAN

"Bottom-up Nanostructuring and Novel Materials and Concepts to Develop Viable Thermoelectrics"

**Prof. Kenji Uchino**

The Pennsylvania State University, USA  
"Piezoelectric Energy Harvesting Systems"

**Prof. Daisuke Shimokuri**

Hiroshima University, JAPAN  
"Autonomous Power System Using Small Scale Vortex Combustor"

**Prof. Einar Halvorsen**

University College Southeast Norway,  
NORWAY

"Electrostatic energy harvesters and fundamental limits to power"

## Conference Officials

Conference Chair:

**Yuji Suzuki, The University of Tokyo**

Technical Program Chair:

**Isaku Kanno, Kobe University**

PowerMEMS in Action Chairs:

**Luc Fréchet, Univ. of Sherbrooke**  
**Takayuki Fujita, Hyogo University**