

# CALL FOR ABSTRACTS



July 31 - Aug 3  
International Conference on Thermoelectrics

# 2017 ICT

**PASADENA**  
★ CALIFORNIA ★





# Please Join US

We invite you to participate in the 2017 Annual International Conference on Thermolectrics (ICT), July 31st, 2017 through August 3rd, 2017, at the Pasadena Convention Center in Pasadena, CA. This Conference is the 36th in the series of international conferences on thermolectrics that provides a global forum for presentations and information exchange on the latest emerging thermolectric technology. We hope you will consider attending and engaging in the event in a variety of ways. Consider arriving early in Pasadena to take advantage of tourist attractions and on-site registration on Sunday, the 30th, where you may pick up your badge and beat the crowd.

## Present

Present your research or program findings to your colleagues. Submit an abstract for consideration for an oral or poster presentation that addresses one or more of the session topics listed on the following pages.

## Exhibit

The 2017 event will feature an exhibit show, co-located with the poster session. This is an excellent way to showcase your organization or technology. Space will be sold on a first-come-first-served basis. For more information, visit: <http://www.usasymposium.com/ict/exhibitor.php>.

## Sponsor

Join the leaders in this industry as a sponsor of the 2017 ICT. Participating as a sponsor:

- Highlights your commitment to furthering excellence in engineering and technology education in the thermolectric arena;
- Creates brand awareness and increases brand loyalty among your potential customers and partners;
- Differentiates your organization from others around the world.

A variety of sponsorship packages are available for all budgets. For more information, contact Michelle Williams at [mkw@blue52productions.com](mailto:mkw@blue52productions.com).

## Network

Networking and continuing education are key to advancing your career. It helps you stay current, promotes your research, facilitates collaboration, and helps build a successful organization. Meet with peers on the leading edge of this technology area to forge new connections and partnerships and expand your knowledge base. Register at [www.usasymposium.com/ict/registration.php](http://www.usasymposium.com/ict/registration.php).



## ABSTRACT SUBMISSION

**Abstract Due Date: March 6th, 2017**

We look forward to receiving your abstracts for the 2017 ICT via on-line submission at <https://www.usasymposium.com/ict/cfa.php>. All abstracts should fall into one or more of the topics described below and should be 300 words in length or less.

You will be contacted by the end of March regarding the status of your acceptance. Please note that acceptance of an abstract does not waive any applicable registration fees. Final presentations are due July 7th, 2017.

For questions concerning submission of your abstract, please contact Sherry Johnson at [sjohnson@blue52productions.com](mailto:sjohnson@blue52productions.com).

**Submit your abstract at:**

**<https://www.usasymposium.com/ict/cfa.php>**

# 2017 TOPICS

## Topic 1: Thermoelectric Materials & Modeling

This topic includes existing and emerging thermoelectric (TE) materials across a wide temperature range from 2K-1500K. We are seeking abstracts with a focus on:

- Classic Thermoelectric Materials (TMM1)
- New Thermoelectric Materials (TMM2)
  - Silicides (TMM2A)
  - Chalcogenides (TMM2B)
  - Pnictides (TMM2C)
  - Oxides (TMM2D)
  - Others (TMM2E)
- Novel Processing (TMM3)
- New TE Phenomena (TMM4)
- Nanoscale TE Materials (TMM5)
- TE Transport (Microscale and Nanoscale) Modeling (TMM6)
- First Principles Modeling (TMM7)
- Low Dimensional TE (TMM8)
- TE Characterization Methods (TMM9)
- Thermomechanical Properties of TE Materials (TMM10)
- Other Related Materials & Modeling Sub-Topics (TMM11)



## 2017 TOPICS

### **Topic 2: Thermoelectric Device Development & Testing**

This topic area addresses the evaluation and subsequent fabrication of thermoelectric devices across a wide temperature range, for both power generation and cooling applications. Topics that will be considered include:

- Materials Selection Criteria (TDT1)
- Device Architecture (TDT2)
- Metallization Approaches and Characterization (TDT3)
- Thermomechanical Stress Calculations using Finite Element Analysis (TDT4)
- Device Performance Modeling (TDT5)
- Experimental Performance Validation (TDT6)
- Thermionic and Thermophotovoltaics (TDT7)
- Other Related Device Development and Testing Sub-Topics (TDT8)

### **Topic 3: Thermoelectric Systems Design and Applications**

This topic addresses the design of thermoelectric systems for both power generation and cooling. Topics that will be considered include:

- Scalability of Fabrication Methods (e.g. Additive Manufacturing, Bulk Processing, etc.) (TDA1)
- Module Packaging (TDA2)
- Heat-Exchanger Design and Integration (TDA3)
- Thermal Modeling (TDA4)
- System Level Performance Optimization (TDA5)
- System Integration and Cost Analysis (TDA6)
- Feasibility of Large Scale Thermoelectric Systems Across a Wide Temperature Range (TDA7)
- Feasibility of Small Scale Thermoelectric Systems Across a Wide Temperature Range (TDA8)
- Feasibility of Hybrid Systems Across a Wide Temperature Range (TDA9)
- Other Related Systems Design and Applications Sub-Topics (TDA10)

### **U.S Government Agency & Industry Panel**

In addition to the technical sessions, the 2017 ICT will feature a panel of key industry partners and government agencies such as NASA, Defense Advanced Research Projects Agency, U.S. Army, Department of Energy, and the National Science Foundation to discuss the future of thermoelectric technology. Don't miss it!