



# CRYOGENIC ENGINEERING CONFERENCE & INTERNATIONAL CRYOGENIC MATERIALS CONFERENCE

Connecticut Convention Center

Hartford, Connecticut, USA ♦ July 21 – 25, 2019

<http://www.cec-icmc.org>

## 2019 CALL FOR ABSTRACTS & PAPERS

♦ **Abstract Submission Deadline: Wednesday, February 13, 2019, 11:59 PM, EST** ♦

We invite you to participate in the 2019 Cryogenic Engineering Conference (CEC) and International Cryogenic Materials Conference (ICMC) to be jointly held from **July 21 to 25, 2019** in Hartford, Connecticut: Connecticut's capital and one of New England's oldest cities.

The Conference will be held at the Connecticut Convention Center located in the heart of downtown Hartford's Front Street District overlooking the Connecticut River. Explore Hartford history at nearby attractions including the nation's oldest public art museum, the Wadsworth Athenaeum; the oldest public park, Bushnell Park with Carousel; and the Mark Twain House, where the books *Huckleberry Finn* and *Tom Sawyer* were written by America's beloved author, Mark Twain. The new Connecticut Science Center is part of a revitalized downtown and is a premier destination for informal science learning. The Dash, a free shuttle service that you can take from the convention center, provides transportation around all the downtown attractions and restaurants.

The technical program of the conferences features the latest research and state-of-the-art developments in all cryogenics areas, including superconductivity, cryocoolers, cryogenic materials, and applications. Hartford provides an inspiring environment for lively discussions, shared experiences, and collaboration development. In addition, an extensive exhibit will showcase the most up-to-date products and technologies in the cryogenic field.

### ABSTRACT SUBMISSION

Authors are requested to submit abstracts and papers that address any aspect of cryogenic engineering and cryogenic materials research. The subject matter should be technically oriented and feature new, original developments in cryogenic engineering and materials.

Submission of abstracts for CEC-ICMC will be entirely electronic via a link from the Conference website. Complete information regarding abstract submission can be found at <http://www.cec-icmc.org>. **The deadline to submit abstracts is February 13, 2019 (11:59 PM, EST, UTC-5)**. The submission site will not accept abstracts after this deadline. Abstracts that are not submitted to the submission site by the deadline will only be considered at the discretion of the Program Chairs.

Submitted abstracts will be reviewed for content, and the majority of the technical program will be formed from the abstracts accepted for presentation. **All authors of accepted Oral and Poster abstracts are encouraged to submit their presentations via the Indico site by the first day of the Conference, July 21, 2019.** All Plenary, Oral and Poster presentations will be available to all conference attendees.

### PRESENTATIONS AND PUBLICATIONS

Abstracts accepted for the Conference will be presented in either oral or poster sessions. All presentations must be in English. Any presenting author must be a registered participant. Manuscripts based on the conference presentations will be peer reviewed for possible publication in the conference proceedings. The mode of presentation (oral or poster) will have no effect on the review of the submitted paper, however, the presentation must be given during the scheduled day/time or the paper submitted will not be considered for peer review. Acceptance of an abstract for presentation does not guarantee publication in the conference proceedings. Instructions for manuscript preparation will be made available on the Conference website.

### EXHIBITS

A technical exhibition of materials, services, instruments and literature will take place during the Conference from **July 21 through July 24**. If you or your company are interested or would like to receive additional information about the **2019 CRYO EXPO**, you may visit the Conference website or contact Centennial Conferences at Phone: (001) 303-499-2299, Fax: (001) 303-499-2599 or Email: [cecicmc@centennialconferences.com](mailto:cecicmc@centennialconferences.com).

### FINANCIAL SUPPORT

A limited amount of financial support in the form of a waived registration is available for students and attendees presenting papers. The guidelines for requesting assistance are available on the Conference website. **The deadline to apply is April 24, 2019.**

## CEC & ICMC JOINT STUDENT FEE WAIVER PROGRAM

In addition to the existing regular financial assistance program of CEC-ICMC, CEC-ICMC have jointly established an enhancing program that allows for a full early registration fee waiver for students who attend the 2019 Conference. Application requirements include: i) submission of a regular abstract by the due date (February 13), ii) submission of a one-page extended abstract by the **March 4** deadline, iii) registration by the early registration deadline (June 5), iv) present at an ICMC or CEC session at the conference, and v) agree to submit a paper based on the presentation for publication in the ICMC or CEC proceedings. Detailed application information is available on the Conference website.

## AWARDS AND SCHOLARSHIPS

Participants are encouraged to submit nominations to the CEC and ICMC for the awards, most of which will be presented during the conference. Further information on submitting nominations or applying is available at <http://www.cec-icmc.org/conference-program/awards>.

### **CEC AWARDS**

- The **Samuel Collins Award** honors major contributions to cryogenic engineering. *The deadline for nominations is January 16, 2019.*
- The **Russell B. Scott Best Paper Awards** will be given to authors of selected CEC papers presented at the 2017 Conference. Please see the conference web page for more information on this award.
- The **CEC Klaus & Jean Timmerhaus Scholarship Award** will be awarded at the 2019 Conference. The scholarship is intended to "develop and foster increased interest and participation in fields of cryogenic studies and to encourage future engineers and scientists in these areas". *The deadline for applications to either scholarship is May 15, 2019.*
- **CEC Student Meritorious Paper Award** is presented to students for outstanding work. *The deadline for applications is May 15, 2019.*

### **ICMC AWARDS**

- The **ICMC Lifetime Achievement Award** is given in recognition of lifetime achievements in advancing the knowledge of cryogenic materials. *The deadline for nominations is January 16, 2019.*
- The **ICMC Cryogenic Materials Award for Excellence** is awarded annually at the ICMC Conference, subject to the nomination of an appropriate candidate and individual under 40 years of age, to "recognize excellence in advancing the knowledge of cryogenic materials over recent years". *The deadline for nominations is January 16, 2019.*
- **ICMC Student Meritorious Paper Award** will be given to an author of a selected ICMC paper presented at the 2017 Conference. Please see the Conference web page for more information on this award.
- **ICMC Best Paper Awards** will be given to authors of selected papers presented at the 2017 Conference. Please see the Conference web page for more information on this award.

## NOMINATIONS FOR THE CEC BOARD

Individuals wishing to nominate a person or themselves for the CEC Board elections are requested to contact:

Wolfgang Stautner  
GE Global Research  
One Research Circle, EP 113A | Niskayuna, NY 12309  
Phone: +1 518-387-7436 | Email: [stautner@research.ge.com](mailto:stautner@research.ge.com)

*The deadline for nominations is February 1, 2019.*

## VISA REQUIREMENTS

Citizens of countries outside the U.S. must carry a valid passport and may be required to obtain a visa to enter the U.S. As the visa process may take up to 6 months, foreign participants should contact the United States Embassy, Consulate or Office of Tourism in their home country as soon as possible to determine their individual visa requirements. CEC-ICMC 2019 CANNOT INTERVENE with either U.S. Embassies abroad or with the State Department in Washington, DC, on behalf of any participant. However, if you need a personal letter of invitation to attend the Conference, contact Centennial Conferences and provide your full name, complete mailing address, and your phone and fax numbers. Your letter will be EMAILED TO YOU. A hard copy will be faxed and mailed to you via regular airmail only if requested. Any fees for sending letters via express mail must be paid for by the requester.

## CONFERENCE INFORMATION

All Conference related information will be made available on the conference website at <http://www.cec-icmc.org>. For any additional Conference inquiries, please contact the Conference Management at:

**Centennial Conferences**  
908 Main Street, Suite 350  
Louisville, CO 80027, USA  
Phone: (001) 303-499-2299 • Fax: (001) 303-499-2599  
Email: [cecicmc@centennialconferences.com](mailto:cecicmc@centennialconferences.com)



## CEC-ICMC ABSTRACT SUBMISSION CATEGORIES

### CEC SUBMISSION CATEGORIES

CEC-01 – Large-Scale Refrigeration and Liquefaction  
CEC-02 – Large-Scale Systems, Facilities and Testing  
CEC-03 – Cryocoolers (Non-Aerospace)  
CEC-04 – Cryocoolers (Aerospace)  
CEC-05 – Components: Expanders, Pumps, Compressors, Heat Exchangers, and Heat Pipes  
CEC-06 – Components: Superconducting Magnet Systems  
CEC-07 – Components: Superconducting RF Systems, Power Cables, and Leads  
CEC-08 – Applications: Instrumentation, Visualization and Controls  
CEC-09 – Applications: Fuel, Transportation, Medical, and Food  
CEC-10 – Applications: Aerospace  
CEC-11 – Applications: Safety, Reliability, and Standards  
CEC-12 – Applications: Medicine and Biology  
CEC-13 – Thermal-Fluid Transport and Properties: Fluids Boiling Above 50 K  
CEC-14 – Thermal-Fluid Transport and Properties: Fluids Boiling Below 50 K  
CEC-15 – Thermal-Fluid Transport and Properties: Thermal Insulation Systems  
CEC-16 – Miscellaneous

### ICMC SUBMISSION CATEGORIES

ICMC-01 – NbTi/Nb<sub>3</sub>Sn/A15  
ICMC-02 – MgB<sub>2</sub> Wires and Tapes  
ICMC-03 – BSCCO Wires and Tapes  
ICMC-04 – REBCO Coated Conductors  
ICMC-05 – Fe-based and New Superconducting Materials  
ICMC-06 – Flux Pinning and Critical Current  
ICMC-07 – HTS and MgB<sub>2</sub> Bulks  
ICMC-08 – LTS and HTS Cables  
ICMC-09 – Superconductor Measurements: Mechanical, Electrical, AC Loss, Stability  
ICMC-10 – Thin Films, Multilayers, Artificial Structures  
ICMC-11 – Metallic, Ceramic, Composite, Polymeric Materials  
ICMC-12 – Insulation/Conduction, Resins and Impregnation, Dielectric Properties  
ICMC-13 – Thermal, Electrical, and Magnetic Properties, Radiation, Degradation  
ICMC-14 – Cryogenic Materials Testing and Methods  
ICMC-15 – Applications: Microelectronics, Photonics, Sensors, Detectors, Computation  
ICMC-16 – Applications: Power Electronics, Electric Propulsion, Transportation  
ICMC-17 – Special Sessions  
ICMC-18 – Special Session on NbTi/Nb<sub>3</sub>Sn/A15 in Memory of Professor Kyoji Tachikawa

### PROGRAM SUGGESTIONS

Suggestions concerning the technical program, particularly topical workshops and special sessions, should be directed to the appropriate Conference or Program Chair.

#### CEC:

##### **Conference Chair**

Jennifer Marquardt  
Ball Aerospace  
Email: [jsmarquardt@ball.com](mailto:jsmarquardt@ball.com)

##### **Program Chair**

Luisa Chiesa  
Tufts University  
Email: [Luisa.Chiesa@tufts.edu](mailto:Luisa.Chiesa@tufts.edu)

##### **Program Co-Chair**

Jacob Leachman  
Washington State University  
Email: [Jacob.Leachman@wsu.edu](mailto:Jacob.Leachman@wsu.edu)

#### ICMC:

##### **Conference Chair**

Timothy Haugan  
USAF AFMC AFRL/RQQM  
Email: [Timothy.Haugan@us.af.mil](mailto:Timothy.Haugan@us.af.mil)

##### **Program Chair**

Charles Rong  
U.S. Army Research Laboratory  
Email: [Charles.C.Rong.civ@mail.mil](mailto:Charles.C.Rong.civ@mail.mil)

### DATES TO REMEMBER

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|---------------------------|--|
| January 16, 2019          | CEC Samuel C. Collins Award Nomination Deadline                                |
| January 16, 2019          | ICMC Lifetime Achievement Award Nomination Deadline                            |
| January 16, 2019          | ICMC Cryogenic Materials Award for Excellence                                  |
| February 1, 2019          | CEC Board Nomination Deadline  |
| February 13, 2019         | Abstract Submission Deadline   |
| March 4, 2019             | ICMC & CEC Student Fee Waiver Program Application Deadline                     |
| April 1, 2019             | Hotel Reservation Opens  |
| April 15, 2019            | Conference Registration Opens  |
| April 16, 2019            | Emailed Notification of Abstract Acceptance                                    |
| April 24, 2019            | Financial Support Application Deadline   |
| April 29, 2019            | Exhibit Contracts Due  |
| May 6, 2019               | Announcement of Exhibit Booth Assignments                                      |
| May 15, 2019              | CEC Student Meritorious Paper Award Application Deadline                       |
| May 15, 2019              | CEC Klaus & Jean Timmerhaus Scholarship Awards Application Deadline            |
| June 5, 2019              | Early Conference Registration Fee Deadline                                     |
| June 24, 2019             | Hotel Reservation Deadline   |
| July 8, 2019              | Manuscript Submission Site Opens   |
| July 10, 2019             | Pre-Conference Registration Deadline   |
| <b>July 21 – 25, 2019</b> | <b>CONFERENCE</b>  |
| July 22, 2019             | Manuscript Submission Deadline Including ICMC Student Meritorious Award Papers |