



INTERNATIONAL INSTITUTE FOR CARBON-NEUTRAL ENERGY RESEARCH

**2018 I²CNER ANNUAL SYMPOSIUM:
CHALLENGES IN THERMAL SCIENCE AND ENGINEERING
TOWARDS A SUSTAINABLE SOCIETY**

*I²CNER Hall
Ito Campus
Kyushu University*

WEDNESDAY, JANUARY 31, 2018

- 9:30 AM **Opening Remarks**
Prof. Masato Wakayama, *Executive Vice President, Kyushu University* (5 min)
Dr. Akira Ukawa, *WPI Program Director, Japan Society for the Promotion of Science* (5 min)
Mr. Ross Matzkin-Bridger, *Energy Attaché, U.S. Embassy Tokyo, and Director, U.S. Department of Energy's Japan Office* (5 min)
Prof. Petros Sofronis, *Director, International Institute for Carbon-Neutral Energy Research (I²CNER)* (5 min)
Prof. Bidyut Baran Saha, *I²CNER, Kyushu University* (10 min)
- 10:00 AM **Keynote Lecture**
Thermal Waste Heat Utilization for Achieving Super Smart Community
Prof. Takao Kashiwagi
International Research Center of Advanced Energy Systems for Sustainability, Tokyo Institute of Technology
- 10:50 AM **COFFEE BREAK**
- 11:10 AM *Invited Lecture*
Water Adsorption on Various MOFs for Next Generation Cooling Applications
Prof. Anutosh Chakraborty
School of Mechanical and Aerospace Engineering, Nanyang Technological University

- 11:40 AM *Invited Lecture*
Using Carbon Dioxide in Efficient Energy Conversion Systems as the Way to Carbon-Neutral Society
Prof. Pega Hrnjak
Air Conditioning and Refrigeration Center/Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign
- 12:10 PM **GROUP PHOTO SESSION**
- 12:20 PM **LUNCH & POSTER SESSION**
- 1:10 PM **Keynote Lecture**
Different Regimes of Pool Boiling
Prof. Gautam Biswas
Indian Institute of Technology Guwahati
- 2:00 PM Renewable Energy and the Minerals Industry: Focus on Thermal Energy Applications
Prof. Benjamin McLellan
Graduate School of Energy Science, Kyoto University
- 2:30 PM Thermophysical Measurement Methods for Individual Nanomaterials and Control of Nanoscale Thermal Transport
Prof. Koji Takahashi
I²CNER, Kyushu University
- 3:00 PM Potential of an Ambient Air for Energy Saving Technologies through the Maisotsenko Cycle
Prof. Takahiko Miyazaki
I²CNER, Kyushu University
- 3:30 PM *Invited Lecture*
Efficient Electricity Generation Cycles Driven by Low Grade Heat
Prof. Liwei Wang
Institute of Refrigeration and Cryogenics, Shanghai Jiao Tong University
- 4:00 PM **COFFEE BREAK**
- 4:20 PM *Invited Lecture*
Low Global Warming Potential Working Fluids
Prof. J. Steven Brown
School of Engineering, The Catholic University of America
- 4:50 PM Thermodynamic Property Measurements of Low-GWP Refrigerant Mixtures
Prof. Yukihiro Higashi

I²CNER, Kyushu University

5:20 PM Thermophysical Property Measurements of High-Pressure Hydrogen up to 100 MPa and Applications of the Database to Design for Hydrogen Infrastructure

Prof. Naoya Sakoda

I²CNER, Kyushu University

5:50 PM Effects of Condensate Flow and Thickness on Heat Transfer of Film-wise Condensation

Prof. Akio Miyara

Department of Mechanical Engineering, Saga University/ I²CNER, Kyushu University

6:20 PM Closing Remarks

Prof. Yasuyuki Takata, Associate Director, I²CNER, Kyushu University

6:30 PM

RECEPTION

Venue: I²CNER Lounge