



**Workshop Title: Low GWP Refrigerants: Joint International Research Opportunities**

**Abstract:**

**Objective**

- To establish the international collaboration for the research of thermophysical property measurements and heat transfer
- To represent the recent achievement in this worldwide field

**Background**

It is needless to say that the global warming problem becomes very serious issue all over the world. As for the working fluids of refrigerators and heat pumps as well as the working fluids of ORCS, it is necessary to develop the new generated low GWP refrigerants and their mixtures. However, the basic information on thermodynamic and transport properties are very scarce. In addition, these properties have to be proposed after the peer reviewing with the experts. From 2013, we are making the worldwide collaboration in this field. In order to collaborate the works of reviewing the thermodynamic and transport properties of low GWP refrigerants, the kick-off meeting between Japan and US was held in October 2013 at NIST, Colorado, USA. And in December 2014, the first Joint International Workshop was held in Padova, Italy with about twenty persons. This workshop was very fruitful and the worldwide collaboration has just started.

In ICR 2015, Yokohama, Japan, we are going to organize the next Joint International Workshop for low GWP refrigerants. At this time, the timely and reliable information of thermodynamic and transport properties of new refrigerants will be presented.

**Program:**

**“Low GWP Refrigerants: Joint International Research Opportunities”**

Date: August 19, Wednesday, 2015 13:30 - 17:10

Place: Pacifico Yokohama, Room 301

Chairman: Prof. Ryo Akasaka (Kyushu Sangyo University)

13:30 – 13:40 Introductory Remarks

--- Prof. Shigeru Koyama (Kyushu University, President of JSRAE)

13:40 – 14:10 “Simulation Models for Well-Described and Not-So-Well-Described Working Fluids “

--- Prof. J. Steven Brown (The Catholic University of America, USA)

**CONTACT: [Secretariat of the 24th IIR International Congress of Refrigeration \(ICR2015\)](#)**

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- 14:10 – 14:40 “Research Activity on Thermodynamic Properties for Low GWP Refrigerants in Italian Laboratories “  
 --- Dr. Sergio Bobbo (National Research Council, Italy)
- 14:40 – 15:10 “Thermodynamic Property Measurements for New Refrigerants and Their Mixtures”  
 --- Prof. Yukihiro Higashi (Iwaki Meisei University, Japan)
- 15:10 - 15:30 Coffee break
- 15:30 – 16:00 “Thermodynamic Properties of Low-GWP Refrigerants: What Do We Know? What Do We Need to Know? “  
 --- Dr. Mark O. McLinden (National Institute of Standard and Technology, USA)
- 16:00 – 16:30 “Experimental Assessment of Two-Phase Heat Transfer with Low GWP Refrigerants “  
 --- Prof. Claudio Zilio (University of Padova, Italy)
- 16:30 – 17:00 “Transport Properties and Heat Transfer of Low GWP Refrigerants”  
 --- Prof. Akio Miyara (Saga University, Japan)
- 17:00 – 17:10 Concluding Remarks  
 --- Prof. Ryo Akasaka (Kyushu Sangyo University, Japan)

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