2020 Annoucement and Call for Papers

Short Courses & Intelligent Building Operations (IBO) Workshop • July 12, 2020
Purdue Conferences • July 13-16

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Purdue University, West Lafayette, Indiana, USA • Engineering.Purdue.EDU/HerrickConf
INTELLIGENT BUILDING OPERATION (IBO) WORKSHOP

Coordinated by: Jim Braun (Purdue University), Gregor Henze (University of Colorado), Panagiota Karava (Purdue University), Neera Jain (Purdue University)

The IBO Workshop is an annual event that alternates between the University of Colorado Boulder and Purdue University. It began in 2011 and has been held 6 times since. In 2020, it will be presented at Purdue in combination with the conferences. The IBO-Purdue Workshop will cover the state-of-the-art in intelligent building operation technologies and applications that can enable scalable and cost-effective solutions. The workshop will be held on the Sunday before the conferences and will feature invited presentations. In addition, IBO-Purdue will feature several technical sessions that will be held during the subsequent Purdue International High-Performance Buildings (HPB) and Refrigeration & A/C Conferences. The technical session presentations will be supplemented with papers that are part of the proceedings of these two conferences. IBO-Purdue Workshop participants will be able attend any of the technical sessions associated with all three of the parallel Purdue Conferences.

2020 SHORT COURSES

Compressor 104 – Numerical and Experimental Techniques Applied to Noise and Vibration in Positive Displacement Compressors

Coordinated by: Eckhard A. Groll (Purdue University), Orkan Kurtulus (Purdue University), Davide Ziviani (Purdue University)

In this fourth edition of the Compressor Short Course, the fundamentals and the practical aspects of noise and vibration phenomena in positive displacement compressors will be covered. It is well known that compressor performance heavily relies on each single component and its unique interaction inside the compressor housing, and subsequently requires a thorough understanding of the composite system to resolve issues arising from noise and vibration. Each positive displacement compressor type is characterized by different compression mechanisms and fluid-structure interactions. During the course, lectures will focus on the main noise and vibration sources of each compressor type and provide numerical and experimental methodologies to identify and mitigate such effects. The short-course consists of eight 45-minute lectures and will provide ample time for hands-on experience and discussion.

Refrigeration Short Course 1 – Ejector Design for Vapor Compression Systems (morning session)

Coordinated by: Prof. William Murphy (retired University of Kentucky) and the U.S. National Committee of the IIR in collaboration with Herrick Laboratories Faculty

Ejectors are being developed as a way to improve vapor compression cycle efficiency by replacing the isenthalpic expansion process. Ejectors have no moving parts, like expander work recovery devices, so they have the potential to produce simpler and lower cost designs with improved system reliability.

Refrigeration Short Course 2 – Update on Flammable Refrigerants (afternoon session)

Coordinated by: Prof. William Murphy (retired University of Kentucky) and the U.S. National Committee of the IIR in collaboration with Herrick Laboratories Faculty

The demand for refrigerants with lower GWP has led to a class of refrigerants that are considered mildly flammable. The use of flammable refrigerants will require changes in various safety codes and guidelines related to building design, installation and service requirements, and system design.
**ABSTRACT & PAPER SUBMISSIONS**

Visit [www.conftool.com/Purdue2020](http://www.conftool.com/Purdue2020) to submit online. Choose most closely related topic area. Submit your 500 word abstract and after acceptance, an 8 page paper. Please note that presenting authors must be registered by the May 25, 2020 manuscript deadline. Abstracts and papers must be submitted in English.

**Student Paper Competition**
The conference organizing committee is pleased to invite students to submit abstracts for the 2020 Student Best Paper Award Competition. Please note the following:

- Students at the undergraduate level and graduate level at the time of the paper submission are eligible to compete.
- Students must be the first author on the submitted papers and must present their work at the conferences to compete.
- Every student paper submission to the 2020 Student Best Paper Award Competition must be accompanied by a separate nomination statement by the advising professor.
- Every advising professor may nominate a maximum of two student paper submissions to the 2020 Student Best Paper Award Competition.
- Cash prizes for each conference will be presented to the top three papers in the amounts of $1000, $500 & $250

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<tr>
<th>Abstract Submission</th>
<th>Conference Only Registration</th>
<th>Conference and IBO Workshop</th>
<th>Deadlines</th>
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<tr>
<td>Abstract acceptance notification and instructions to authors for manuscript preparation</td>
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<td>January 27, 2020</td>
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<td>Manuscripts submission deadline</td>
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<td>April 6, 2020</td>
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<td>Notification to presenting authors of acceptance or rejection of manuscripts</td>
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<td>May 4, 2020</td>
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<td>Pre-registration for the conference ends. Final version of the papers must be uploaded at this time</td>
<td>Presenting Author Registration (2 Presented Papers Maximum)</td>
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<td>May 25, 2020</td>
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<td>Student Author Registration (2 Presented Papers Maximum)</td>
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<td>Compressor Short Course Registration</td>
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<td>Refrigerant Short Course 2 Registration</td>
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<td>Both Refrigerant Short Courses Registration</td>
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<td>Student Short Course Registration</td>
<td>$250</td>
<td>May 25, 2020</td>
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All registration rates will increase by $150 after the deadline date. Groups of 6 attendees from the same employer receive 1 complimentary registration for every 5 paid registrations. Group registration fees are $3,500 before May 25, 2020 and $4,000 after May 26, 2020.

**IMPORTANT FACTS**

- Conference registration will be available online starting March of 2020 at [www.conf.purdue.edu/Herrick2020](http://www.conf.purdue.edu/Herrick2020)
- Companies wishing to register using a wire transfer will need to contact Ethan Kingery at ekingery@purdue.edu or (765) 494-3667.
  - Note that additional wire transfer fees are included.
- All fees must be paid in U.S. funds and drawn on a U.S. bank. Fees paid in advance but not used will be refunded upon written request by June 26, 2020.
  - We are not responsible for costs incurred due to cancellation.
- Letters of invitation to obtain your travel visa can be found in ConfTool. Please contact Brian Barrett at hlconf20@purdue.edu if you require additional documentation for travel.
- For additional registration information, daily schedule, etc. — please visit engineering.purdue.edu/HerrickConf.
- Continuing Education Units (CEUs) may be available.

**CONTACT INFORMATION**

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**Organizing Committee**

General Chair ................................................................. Eckhard A. Groll  
International Compressor Engineering Conference Chair ..................... W. Travis Horton  
International Compressor Engineering Conference Co-Chair .................. Davide Ziviani  
International Refrigeration and Air Conditioning Conference Chair ........... James E. Braun  
International Refrigeration and Air Conditioning Conference Co-Chair .......... Neera Jain  
International High Performance Buildings Conference Chair .................. Thanos Tzempelikos  
International High Performance Buildings Conference Co-Chair ............... Brandon Boor
FOR OVER 40 YEARS
Purdue University has played host to the International Compressor Engineering Conference (beginning in 1972), the International Refrigeration and Air Conditioning Conference (added in 1986) and the International High Performance Buildings Conference (added in 2010). These conferences provide a perfect venue to present research and development work, as well as network with top experts in the field.

The conferences technical sessions run simultaneously enabling attendees to attend sessions of interest from any conference. Conference registration includes online access to the conference schedule, presented papers and all social networking events. The conferences will be conducted in English.

IMPORTANT DATES AND DEADLINES

Friday, December 20, 2019 .................................................. Abstract Submission Deadline
Monday, January 27, 2020 ...................................................... Abstract Acceptance Deadline
Monday, April 6, 2020 ......................................................... Manuscript Submission Deadline
Monday, May 4th, 2020 .......................................................... Manuscript Acceptance Deadline
Monday, May 25, 2020 ....................................................... Final Papers must be uploaded
Monday, July 6, 2020 ............................................................ Final Presentations must be uploaded