



OSU Mechanical & Aerospace Engineering

MAE RESEARCH SEMINAR SERIES

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Perspectives of Future AC/R/HP Technologies

Friday, 20 April 2018, ATRC 102
1:30 PM – 2:30 PM

Abstract: Before a backdrop of challenges facing our society at large, the presentation will explore opportunities for energy efficiency in buildings in general and HVAC&R in particular. Emphasis is placed on vapor compression systems and their components, such as the future of compressors and heat exchangers with a brief discussion of implications for manufacturers. The presentation will conclude with examples of the potential contributions resulting from a systematic approach to component and system optimization.

Bio: Reinhard Radermacher holds a diploma and Ph.D. in physics from the Technical University of Munich and conducts research in heat transfer and working fluids for energy conversion systems — in particular heat pumps, air-conditioners, refrigeration systems, and integrated cooling heating and power systems.

His work has resulted in more than 400 publications, as well as numerous invention records and 12 patents. He has co-authored three books on absorption and vapor compression heat pumps. His research includes the development of software for the design and optimization of heat pumps and air-conditioners which is now in use at more than 80 companies worldwide.

Dr. Radermacher is Minta Martin professor of Mechanical Engineering and director and co-founder of the Center for Environmental Energy Engineering (CEEE). He represents the U.S. at the International Energy Agency Annexes 13, 34 and 40, is past vice president of Commission B1, and past president of Commission B2 of the International Institute of Refrigeration (IIR).

In February 2015 he was awarded the Institute of Refrigeration (IOR) J&E Hall Gold Medal for his contributions in the field of refrigeration. The International Institute of Refrigeration (IIR) awarded Radermacher with the 2015 Gustav Lorentzen Medal for his innovation and development in the field of refrigeration. He received the award at the IIR International Congress of Refrigeration (ICR2015) held in August 2015 in Yokohama, Japan.

He is an ASHRAE Fellow and also holds memberships in ASME, SAE, DKV and IIR and serves as the editor of the journal Science and Technology for the Built Environment. He is co-founder and co-owner of Optimized Thermal Systems, providing custom simulation software services and innovative solutions to energy conversion challenges.

Sources: <http://www.ceee.umd.edu/people/rademacher>

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