37th UIT Heat Transfer Conference

Symposium
Refrigerants: heat transfer and applications

University of Padova, Italy
Wednesday, 26 June 2019

Centro Linguistico di Ateneo
Via Venezia, 16 - Padova

PROGRAM

8:15-9:00  Registration
9:00-9:15  Opening
9:15-10:00  Keynote lecture
            State-of-the-art on Refrigerants
            Alberto Cavallini - Università degli Studi di Padova, Italy

10:00-10:35  Invited lecture
            Refrigeration - the Road to the future, somewhat rocky, somewhat promising
            Srinivas Garimella - Georgia Institute of Technology, USA

10:35-10:55  Coffee break

10:55-11:30  Invited lecture
            Low charge ammonia systems
            Pega Hrnjak - University of Illinois at Urbana-Champaign, USA

11:30-12:05  Invited lecture
            Hydrocarbon systems designed for low charge
            Bjorn Palm - KTH Royal Institute of Technology, Sweden

12:05-12:40  Invited lecture
            Milestones on the path of CO2 becoming the natural refrigerant choice
            Petter Neksa - Norwegian University of Science and Technology, Norway

12:40-13:15  Invited lecture
            Refrigerant maldistribution in BPHE evaporators
            Jose Miguel Corberan - Universidad Politecnica de Valencia, Spain

13:15-14:20  Lunch
14:20-16:40 REFRIGERANTS: HEAT TRANSFER

Experimental investigation of R513A flow boiling inside smooth tube and microfin tube
A. DIANI, E. SAVIO, L. ROSSETTO

Condensation and vaporization heat transfer of low-GWP mixtures
S. BORTOLIN, M. AZZOLIN, A. BERTO, C. GUZZARDI, D. DEL COL

Effect of refrigerant properties estimation on the prediction capabilities of well established two phase heat transfer and pressure drop models for new refrigerants

Flow boiling of azeotropic and non-azeotropic mixtures. Effect of the glide temperature difference on the nucleate boiling contribution: assessment of methods
R. MASTRULLO, A.W. MAURO, G. NAPOLI, F. PELELLA, L. VISCITO

Characteristics of propane evaporation in a microfinned tube with internal diameter of 4.47 mm
E. ALLYMHR, T.M. EIKEVIK, A. HAFNER

A new experimental correlation for the design of a H2O/LiBr falling film absorber with a horizontal tube bundle
F. LONARDI, M. OLBRICH, A. LUKE

Study of an evaporator with integrated latent heat storage for a compressed air dryer
A. BERTO, M. AZZOLIN, F. SIMIONATO, E. STEVANIN, A. VILLA, D. DEL COL

14:20-16:40 REFRIGERANTS: APPLICATIONS

Analysis of risk assessment for the use of A2L refrigerants
S. BORTOLIN, F. MANCINI, L. MARTIN, D. DEL COL

First experimental results of the use of R1234yf and R1234ze(E) as drop-in substitutes of R134a in a water-to-water heat pump
L. MOLINAROLI, A. LUCCHINI, L.P.M. COLOMBO, F. BOCCHINFUSO

Experimental and numerical activity on a prototype ejector chiller
J. MAHMUDIAN, F. MAZZELLI, A. MILAZZO, A. ROCCHETTI

Impact of PWM Valve Unsteadiness on the performance of a Commercial Display Cabinet Evaporator
P. ARTUSO, A. ROSSETTI, S. MINETTO, S. MARINETTI, F. FERRARI

An integrated CO2 unit for heating, cooling and DHW installed in a hotel. Data from the field
G. TOSATO, S. GIROTTO, S. MINETTO, A. ROSSETTI, S. MARINETTI

Energy analysis of transcritical CO2 booster systems for commercial refrigeration
S. DUGARIA, M. AZZOLIN, L. CALABRESE, S. MINETTO, D. DEL COL

Increased efficiency of combined heat and power plants by utilizing waste heat for resorption chillers and their combination with hydrocarbon chillers
O. ZIEGLER, U. HESSE, C. THOMAS

16:40-17:00 Coffee break
17:00-17:50 Panel discussion
17:50 Closing ceremony

This program is preliminary and may undergo variation