

## PRELIMINARY PROGRAMME

### April 13, 2011 (Wednesday)

17:00 Registration  
20:00 Welcome drink

### April 14, 2011 (Thursday)

Time	Authors	Paper
10:00	Opening ceremony	
Plenary lectures, Chairman: Andy Pearson		
10:30	Andy Pearson Star Refrigeration Ltd (UK)	Opportunities for combined heating and cooling
11:00	Gary Webster Kraft Foods Global, Inc. (USA)	Designing ammonia systems for maintenance and safety
11:30	Coffee break	
Heat exchangers innovations, Chairman:		
12:00	Stefano Filippini LU-VE Group (Italy)	Dry and spray technology: liquid coolers, condensers, gas coolers with low energy and water consumption
12:20	Josef Riha, Heinz Jackmann Guentner (Germany)	Air-cooled condensers in NH <sub>3</sub> refrigeration plants as an alternative to evaporative condensers
12:40	Rolf Christensen and Bjorn Sollie Alfa Laval Lund AB (Sweden)	Compact, energy efficient, low charge ammonia evaporator with separator vessel
13:00	M. Rifaldi, K. Choi, J. T. Oh, K. Saito, J. S. Jeong Chonnam National University (South Korea)	Two-phase flow heat transfer during NH <sub>3</sub> vaporization in horizontal smooth minichannels
13:20	Lunch break	
Thermodynamics and heat transfer, Chairman:		
14:20	A. Mønsted, C. Madsen, L. Reinholdt, P. Schneider Danish Technological Institute (Denmark)	Elimination of wet return lines in ammonia systems
14:40	J. Vrabec, G. Guevara-Carrión, C. Engin, et al. University of Paderborn (Germany)	Thermodynamic properties of ammonia by molecular simulation
15:00	Mihail-Dan Staicovici S.C. Varia Energia s.r.l. (Romania)	A thermodynamic approach of mechanical vapor compression refrigeration COP increase. Part I: Methods and ideal limits
15:15	Mihail-Dan Staicovici S.C. Varia Energia s.r.l. (Romania)	A thermodynamic approach of mechanical vapor compression refrigeration COP increase. Part II: Thermal to work recovery method applications
15:30	Coffee break	
Absorption technology, Chairman:		
16:00	S. Haep, K. Helle, M. Morschel, S. Peil, T. Weimer Institut für Energie- und Umwelttechnik (Germany)	Experimental investigation of a new resorption cycle using ammonia as refrigerant
16:20	M. Zamora, M. Bourouis, M. Vallès, A. Coronas CREVER-Universitat Rovira i Virgili (Spain)	A new Ammonia/Lithium Nitrate absorption chiller for solar cooling applications
16:40	H. Moser, G. Zotter, O. Kotenko, R. Rieberer Graz University of Technology (Austria)	The formation of non-condensable gases in ammonia/water absorption heat pumps made of stainless steel - experimental investigation
17:00	Y. Cuenca, A. Vernet, M. Vallès University Rovira Virgili (Spain)	Thermal conductivity of ammonia-water

**April 15, 2011 (Friday)**

Time	Authors	Paper
Plenary lectures, Chairman:		
9:00	Predrag Hrnjak University of Illinois at Urbana-Ch. (USA)	Low charged hermetic ammonia chillers are excellent opportunity for air conditioning and indirect refrigeration
9:30	John Thome, Ricardo Lima École Polytechnique Féd. de Lausanne (Switzerland)	Two-Phase Flow and Boiling of Ammonia in Horizontal Tubes
10:00	Zahid Ayub Isotherm Inc. (USA)	Recent developments in plate exchangers – Ammonia/Carbon Dioxide cascade condenser
10:30	Coffee break	
Heat pumps, Chairman:		
11:00	Shuji Fukano, Takanori Kudo, Noriyuki Arata Mayekawa (Japan)	Ammonia heat pump package using waste heat as source
11:20	Alexander Pachai JCI - Sabroe (Denmark)	Industrial ammonia heat pumps and their challenges
11:40	Peter Brondum, Lars Reinholdt Danish Technological Institute (Denmark)	Utilization of industrial low-grade waste heat by means of new emerging high-temperature heat pumps
12:00	Bjorn Palm, Behzad A. Monfared Royal Institute of Technology, KTH (Sweden)	Design and test of a small ammonia heat pump
12:20	Lunch break	
Refrigeration and climate change, Chairman:		
13:20	Lambert Kuijpers Technical University of Eindhoven (Netherlands)	The use of the GWP indicator in refrigerant selection
13:40	Janos Maté and David Kanter Greenpeace International (Canada)	The climate imperative of a 20 year GWP index for refrigerants
14:00	Rene van Gerwen Unilever (Netherlands)	Energy and CO <sub>2</sub> -emission reduction in industrial ammonia refrigeration: an end-user perspective
Poster session		
14:20	V. Popa, C.L. Popa, A. Serban University of Galati; Transilvania Univ. (Romania)	Using ammonia-water absorption cooling subsystem in BCCHP
	Ramesh Paranjpey ARTI (India)	Energy saving technologies in ammonia refrigeration applications using pump circulation systems

**15:00 Excursion in the complex "Sv. Naum" (18 km far from Hotel Metropol), or ...**

**20:00 Gala dinner**

**April 16, 2011 (Saturday)**

Safe and efficient use of ammonia systems,		
9:00	Hans Haukas "Hans Haukas AS" (Norway)	Safe use of ammonia as a refrigerant in urban areas
9:20	Gratiela Tarlea Technical University of Bucharest (Romania)	Romania - Ammonia traditional user - Barriers & opportunities EU refrigeration and air conditioning legislation implementation
9:40	Klaas Visser KAV Consulting (Australia)	A conceptual study of an inverse NH <sub>3</sub> to CO <sub>2</sub> cascade for simultaneous cooling and heating
10:00	Jakub Pietrzak ZC Frost (Poland)	Economic optimisation of refrigeration systems at the design phase
10:20	<b>Closing ceremony - Resume</b>	
10:45	Informal coffee	

**Accompanying Persons Programme**

Presence at all social events of the conference: welcome drink, conference gala dinner, Excursion in ...

April 14, 13:30: Excursion in the Monastery complex of Kalishta near Struga, along the lake

April 15, 10:00: Visit at the Ohrid old bazaar with special jewels, filigree and Ohrid pearls