

IIR Conference Ohrid 2019 – Preliminary list of authors and papers

17 Jan 2019

Keynote speakers:

1. Andy Pearson, UK, Former President of IoR of UK
"The road ahead for ammonia and carbon dioxide refrigerants"
2. Predrag Hrnjak, USA, University of Illinois
"Packaged ammonia refrigeration units continuously improve"
3. Trevor Hegg, USA, Evapco, Inc.
"Ammonia packaged system and the impact of low recirculation rate evaporators"
4. Kenneth Madsen, Denmark, Advansor A/S
"Transcritical CO₂ application in food retail applications worldwide. Challenges and solutions."
5. David Schalenbourg, Belgium, "Delhaize"
"End-user perspective on transitioning away from HFCs towards natural refrigerants"

6. Viren Bhanot, P. Petagna, A. Cioncolini, H. Iacovides, Switzerland, CERN/University of Manchester
"Simulation and validation of a CO₂-based pumped loop cooling system"
7. Zhaohua Li, Kun Liang, Hanying Jiang, Mike Dadd, UK, University of Sussex/ University of Oxford
"Modeling of a novel oil-free linear compressor for small ammonia refrigerator"
8. Edward Johnson, USA, Dean Foods (IIAR)
"Personal protective equipment for safety when working with NH₃ and CO₂"
9. Oliver Javerschek, Julian Pfaffl, Julian Karbner, Germany, "Bitzer"
"Analysis of energy consumption by applying a new generation of CO₂ compressors"
10. Christian Doerffel, Thomas Tannert, Ullrich Hesse, Germany, TU Dresden
"Effect of the operating conditions on a transcritical CO₂ refrigeration systems efficiency"
11. Bas Pijnenburg, John Ritmann, Denmark, Bitzer / Lodam
"Parallel operation of ammonia screw compressors – the practical way"
12. Kristina Widell, Tom Nordtvedt, Norway, SINTEF
"Increasing energy efficiency in salmon processing"
13. Kristina Widell, Tom Nordtvedt, Norway, SINTEF
"Freezing of mackerel filets in two step freezing process"
14. Juraj Svingal, Slovakia, ABC Food Machinery
"Using low charge ammonia heat pump as main cooling/heating energy source for ice hockey stadiums"
15. Juraj Svingal, Slovakia, ABC Food Machinery
"Extreme low charge units with ammonia blend R723 applications in practice"
16. Silje Marie Smitt, Armin Hafner and Erik Hoksørd, Norway, NTNU
"Presentation of the first combined CO₂ heat pump, air conditioning and hot tap water system for a hotel in Scandinavia"
17. Peter Schrank, Alexander Rauch, Andreas Presetschnik and René Rieberer, Austria, Virtual Vehicle Research Center / Liebherr-Transportation Systems / TU Graz
"Eco-friendly, energy- and cost-efficient AC system with heat pump functionality using R744 for rail applications"
18. Martin Ryhl Kaern, Wiebke Brix Markussen, Jóhannes Kristófersson, Denmark, Technical University of Denmark / DTI
"Multi-objective optimization of low charge overfed ammonia evaporators for industrial refrigeration"

19. Michael Elstrøm, Denmark, HB Products
"New sensor technology optimizes evaporator performance especially during part load on both DX, flooded and pump circulation systems"
20. Ahmet Kitap and John Gibson, Germany, KIMO RHVAC Controls
"Using good rack design and electrical step-up autotransformers to improve the stable operation and energy saving of multiple-compressor racks"
21. Giovanni Rossanese, Luca Mattiello, Willy Muvegi, Luigi Nalini, Italy, Carel Industries S.p.A.
"Improved oil level detection and equalization system for CO₂ high pressure shell hermetic rotary compressor"
22. Francesco Botticella, Zishen Liu, Stefan Elbel, USA, University of Illinois
"Trade-offs between design complexity and performance impacts for transcritical R744 ejectors"
23. Mihail-Dan Staicovici, Romania, S.C. Varia Energia
"Analysis of several electrical thermal cascades boosted by the absorption working cycle technology"
24. Philipp Wagner, Thomas Kitzinger, René Rieberer, Austria, Graz University of Technology
"Analysis of a gas-fired absorption heat pump with different cycle configurations and superheated refrigerant at the absorber inlet"
25. Hakon Selvnes, Yosr Allouche and Armin Hafner, Norway, NTNU
"A CFD analysis for the performance assessment of a novel design of plates-in-tank storage unit for freezing applications"
26. Simone Dugaria, Marco Azzolin, Livio Calabrese, Silvia Minetto, Davide Del Col, Italy, UNIPD
"Energy analysis of integrated CO₂ commercial refrigeration systems under different climate conditions"
27. Knut Emil Ringstad, Armin Hafner, Norway, NTNU
"Investigation of CFD models for ammonia ejector applications"
28. Abdulkerim Okbaz, Mehmet Harun Sökücü, Hüseyin Onbaşıoğlu, Ali Bahadır Olcay, Turkey, Friterm
"Experimental investigation of evaporators with smooth and inner grooved tubes using CO₂ as a refrigerant"
29. L.J.M. Kuijpers, N. Kochova, A.L. Vonsild, NL/MK/DK,
"Climate considerations for R/AC equipment operation: is the answer in energy efficiency?"
30. Niels Vestergaard, Morten Skovrup, Jóhannes Kristófersson, Denmark, Danfoss / DTI
"Charge reduction in re-circulating ammonia systems"
31. Morten Skovrup, Niels P. Vestergaard, Joris Kortstee, Denmark, Danfoss
"Energy consumption of hot gas, electrical and brine defrost"
32. Valentin Salgado Fuentes, Brian Elmegaard, Wiebke Markussen, Erasmus Damgaard Rothuizen, Claus Madsen, Denmark, DTU /DTI
"Medium capacity low charge ammonia chiller and heat pump"
33. Jarosław Karwacki, Adam Tomaszewski, Andrzej Szcześniak, Piotr Pochwatka, Roman Kwidziński, Poland, Polish Academy of Sciences
"Experimental stands for testing separation efficiency of unconventional separators for ammonia cooling units"
34. Ali Ozyurt, Deniz Yilmaz, Ebru Mancuhan, Baris Yilmaz, Kemal Sevindir, Turkey, FrigoBlock Refrig.
"Improving performance of transcritical CO₂ booster systems, using phase change materials (PCM) in a cold storage application"
35. Pernille Hartmund Jorgensen, Torben Ommen, Wiebke Markussen, Brian Elmegaard, Denmark, DTU
"Performance Mapping of a Large-Scale Ammonia Heat Pump in Off-Design Conditions"
36. Antonio Rossetti, Paolo Artuso, Silvia Minetto, Sergio Marinetti, Davide Del Col, Italy, CNR-CTI / Univ.Pa
"Dynamic simulation of a refrigerated vehicle equipped with a CO₂ cooling unit"

37. Klara Skacanova, , Alvaro de Ona, Belgium, Shecco
"Market & technology trends for CO₂ and ammonia in commercial and industrial refrigeration"
38. Armin Hafner, Norway, NTNU
"CO₂ refrigeration technology: Possible innovations"
39. Armin Hafner, Francisco Javier Taguas Garzón, Norway, NTNU
"Heat pumps for energy efficient breweries"
40. Marcel Ahrens, Armin Hafner and Trygve Eikevik, Norway, NTNU
"Compressors for ammonia/water hybrid absorption/compression heat pumps"
41. Yosr Allouche, Raluca Iolanda Manescu, Armin Hafner, Norway, NTNU
"Experimental evaluation of ice storage inside a concentric helically coiled tubes heat exchanger integrated into a R744 refrigeration system"
42. Anil Gulanikar, India, Dag-Tech Services
"Revamping and expansion of milk chilling centre"
43. Tobias Nitschke and Stefan Jensen, Germany/Australia, University of Applied Sciences Karlsruhe
"Thermodynamic modeling of liquid overfeed and dry expansion feed central NH₃ refrigeration plants to determine differences in energy performance"
44. Kundan Kumar and Pramod Kumar, India, Indian Institute of Science - Bangalore
"Analysis of Propane + CO₂ mixture as a working fluid in a vapor compression refrigeration system"
45. Giacomo Tosato, Silvia Minetto, Sergio Giroto, Antonio Rossetti, Sergio Marinetti, Italy, CNR-CTI/Enex
"CO₂-based water chiller for wineries: a case study"
46. V.V. Shishov and M. S. Talyzin, Russia, Moscow State Technical University
"Entropic and statistical analysis of CO₂ refrigeration plants for retail application"
47. Klaas Visser, KAV Consulting, Australia
"CO₂ evaporative condensers and gas coolers"
48. Alexander Pachai, Denmark, Sabroe-JCI
"Ammonia Refrigeration - what can we expect in the future?"
49. Frank Rinne, Thomas Tomski, Germany, Emerson Climate Technologies GmbH
"CO₂ or R290 for supermarket applications – Pros and Cons"
50. Stefano Trabucchi, Maurizio Orlandi, Italy, Epta SpA
"Optimization of two-stages CO₂ transcritical cycles for low temperature water-cooled cabinets application",
51. Steffen Feja, C. Hanzelmann, S. Zuber, Germany, ILK Dresden / Klueber Lubrication
"Thermodynamic properties of ammonia-oil-mixtures that influence the efficiency of an evaporator"
52. Trevor Hegg, Rob Vandenboer, USA/Belgium, , Evapco Inc.
"Adiabatic fluid coolers & refrigerant condensers: impact of pad system design on saturation efficiency and unit operation"
53. Kazuhiro Hattori, Ryohei Arimoto, Iwao Terashima, Japan, Mayekawa
"Development of a high efficient NH₃/CO₂ refrigeration system"