

Location: Campus Sescelades. Universitat Rovira i Virgili
 Avda. Països Catalans, 26, 43007, Tarragona
Sala de Graus ETSEQ i ETSE

7th INTERNATIONAL SEMINAR ON THERMODYNAMIC ENGINEERING OF FLUIDS

Monday, July 24th 2017

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| 8:30-9:00 | Registration |
| 9:00 - 9:05 | Welcome by Prof. Alberto Coronas (Director of the Group of Research on Applied Thermal Engineering – CREVER) |
| Session I: Thermodynamic and Transport Properties of Pure Fluids and Mixtures Chairman: Daniel Salavera | |
| 9:05– 9:35 | CO ₂ based mixtures as working fluid for heat pumps: experimental approach and on-line composition measurements <i>Pascal Tobaly, Laboratoire de Chimie Moléculaire et de Génie des Procédés Chimiques et Energétiques. CNAM Paris (France)</i> |
| 9:35 – 10:05 | novel physico-chemical approach of post-combustion CO ₂ capture <i>Karine Ballerat, Université Blaise Pascale Clermont-Ferrand (France)</i> |
| 10:05– 10:35 | Basic concepts and applications of translational diffusion in liquids studied by NMR <i>Miguel Ángel Rodríguez, Universitat Rovira i Virgili, Reus (Spain)</i> |
| 10:35 – 11:55 | Thermal effects in self-diffusion coefficients and transport properties of ionic liquids. <i>Andry Cera, CREVER, Universitat Rovira i Virgili, Tarragona (Spain)</i> |
| 10:55 – 11:20 | Coffee Break |
| 11:20 – 11:40 | Estimation of NH ₃ solubility in protic ionic liquids using polarity parameters <i>M. Soledad Larrechi, Universitat Rovira i Virgili, Tarragona (Spain)</i> |
| 11:40 – 12:00 | Thermal stability of ionic liquids with TGA analysis. <i>M. Isabel Barba, CREVER, Universitat Rovira i Virgili, Tarragona (Spain)</i> |
| Session II: Thermodynamic Processes with Fluids Chairman: Joan Carles Bruno | |
| 12:00 – 12:30 | Effectiveness of a falling film absorber: application to the absorption refrigeration machines <i>Maxime Perier-Muzet, Laboratoire PROMES-CNRS UPR8521 "Procédés, Matériaux et Energie Solaire"; Perpignan (France)</i> |
| 12:30 – 12:50 | Experimental study of a thermochemical refrigeration system assisted with vapor compression <i>Jaume Fitó, CREVER Universitat Rovira i Virgili, Tarragona (Spain)</i> |
| 12:50 – 13:10 | Working fluids for an absorption heat transformer: comparing NH ₃ -H ₂ O with NH ₃ -LiNO ₃ <i>Silvia Garone, Politecnico de Milano, Milan (Italy)</i> |
| 13:10 – 14:30 | Lunch |
| 14:30– 14:50 | Theoretical study of a hybrid membrane absorber–heat exchanger for the ammonia/water absorption-resorption cycle <i>Miguel Ángel Berdasco, CREVER, Universitat Rovira i Virgili, Tarragona (Spain)</i> |
| 14:50 – 15:10 | Experimental study of a horizontal direct current refrigerator, with phase change materials as thermal storage, for small-scale cheese processing <i>Adriana Coca, CREVER, Universitat Rovira i Virgili, Tarragona (Spain)</i> |
| 15:10 – 15:30 | Experimental study of resorption process based on compression resorption heat pumps performance simulations <i>Maycon Cesar Figueira, CREVER, Universitat Rovira i Virgili, Tarragona (Spain)</i> |
| 15:30 – 15:50 | Thermodynamic analysis of absorption systems for waste heat recovering and transport in district heating and cooling networks <i>Antonio Atienza, CREVER, Universitat Rovira i Virgili, Tarragona (Spain)</i> |
| 15:50 – 16:10 | A small capacity absorption power cycle using a scroll expander and CO ₂ -acetone working fluid. <i>James Muye, CREVER, Universitat Rovira i Virgili, Tarragona (Spain)</i> |
| 16:15 | Closing the session |

7th INTERNATIONAL SEMINAR ON THERMODYNAMIC ENGINEERING OF FLUIDS

Tuesday July 25th 2017

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| 8:45 | Welcome |
| Session III: Master's Thesis Defense Chairman: Alberto Coronas, University Rovira i Virgili, Tarragona (Spain) | |
| 9:00 – 9:30 | Thermodynamic Modeling of the Properties of CO ₂ /acetone mixture and Simulation of Resorption/Compression Heat Pumps <i>Pablo Espitia, Universitat Rovira I Virgili, Tarragona (Spain)</i> |
| 9:30 – 10:00 | Supercritical Absorption heat pump with CO ₂ /Methanol mixture <i>Antonio Fieno, Universitat Rovira i Virgili, Tarragona (Spain)</i> |
| 10:00 – 10:30 | Experimental Study of the absorption process in falling film on horizontal tubes with LiBr/water solutions <i>Qusay Mansour, Universitat Rovira I Virgili, Tarragona (Spain)</i> |
| 10:30 – 11:00 | Sizing of Tri-generation Systems for Hotel <i>Khalid Rabie, Universitat Rovira I Virgili, Tarragona (Spain)</i> |
| 11:00 – 11:30 | Coffee Break |
| 11:30 – 12:00 | Experimental Study of the Absorption Process of NH ₃ in absorbent liquids <i>Ronny Rives, Universitat Rovira I Virgili, Tarragona (Spain)</i> |
| 12:00 – 12:30 | Experimental study of the thermochemical process of a refrigeration system using NH ₃ /BaCl ₂ <i>Esteban Urrestra, Universitat Rovira I Virgili, Tarragona (Spain)</i> |
| 12:30 – 13:00 | Thermodynamic Analysis Of The Cogeneration System In Isparta Textile Factory <i>Emre Harmankaya, Universitat Rovira I Virgili, Tarragona (Spain)</i> |
| 13:00 – 13:30 | Efficient use of Geothermal Energy Resources with absorption systems for power , heating and cooling <i>Tevfik Çağlar Yücel, Universitat Rovira I Virgili, Tarragona (Spain)</i> |
| 13:30 – 14:30 | Lunch |
| Session IV: Thermodynamic Processes with Fluids Chairman: Juan Prieto | |
| 14:30 – 14:50 | Thermodynamic approach of CO ₂ -methanol mixtures for frigorific cycles: energetic and volumetric considerations <i>Thomas Raynaud, Université Blaise Pascale Clermont-Ferrand (France)</i> |
| 14:50 – 15:10 | Estudio bibliográfico de fluidos absorbentes en combinación con CO ₂ para sistemas de bomba de calor por resorción/compresión <i>Paul Davila, CREVER, Universitat Rovira i Virgili, Tarragona(Spain)</i> |
| 15:10 – 15:30 | Numerical analysis of a packed bed latent heat thermal energy storage unit <i>Gouasmi Belkacem, Mechanical Engineering Dep., Faculty of Technology, University of BLIDA, Blida (Algeria)</i> |
| 15:30 – 15:50 | Simulation Study of absorption refrigeration systems working with R134a/ Ethylene Glycol Dimethyl Ethers working mixtures using geothermal energy. <i>Khelifa Salhi, Centre of Renewable Energy Development Bouzareah, Algiers (Algeria)</i> |
| 15:50 – 16:10 | Recent advancements in solar thermal absorbers and their integration methods for a low-cost hybrid photovoltaic/thermal collector: A review <i>Khaled Ramadan, CREVER, Universitat Rovira i Virgili, Tarragona(Spain)</i> |
| 16:30 | Closing the session |