

8th INTERNATIONAL SEMINAR ON THERMODYNAMIC ENGINEERING OF FLUIDS

Tarragona (Spain), July 25-26, 2018



Organized by
Universitat Rovira i Virgili

In collaboration with
Universidad de Valladolid and Universidad de Santiago de Compostela

PROGRAM

Wednesday, July 25th 2018

9:00	Welcome and Opening Josep Ribalta, Director of the Postgraduate Doctorate School- Universitat Rovira i Virgili (Spain) Alberto Coronas, Responsible of the Group of Research on Applied Thermal Engineering- CREVER, Universitat Rovira i Virgili (Spain)
9:10	Postgrade activities at the CREVER-URV research group in 2017-18. <i>Daniel Salavera, Universitat Rovira i Virgili (Spain)</i>
9:20	Keynote Lecture A thermodynamic approach of the cardio-pulmonary system in the frame of quantum biological thermodynamics with finite speed <i>Monica Costea, University Politehnica of Bucharest (Romania)</i>
SESSION 1: Processes and Products with Non-conventional Fluids Chairperson: Dra Josefa Fernández	
10:00	Estima de la absorción de NH ₃ en Líquidos Iónicos mediante espectroscopia de infrarrojo cercano y resolución de curvas multivariante. <i>M^a Soledad Larrechi, Universitat Rovira i Virgili (Spain)</i>
10:20	Highly exfoliated reduced graphene oxide based nanolubricants <i>Jose Manuel Liñera, University of Santiago de Compostela (Spain)</i>
10:40	Quantitative determination of the free water concentration in aqueous mixtures of ionic liquids <i>M^a Isabel Barba, Universitat Rovira i Virgili (Spain)</i>
11:00	Impregnation of Açai Residue Extracts in Silica-aerogel <i>Rafaella Buratto, University of Valladolid (Spain)</i>
SESSION 2: Poster and Coffee break Chairperson: Dr. Juan Prieto	
11:20/12:00	P01. Techno-economic assessment of integrating stand-alone hybrid photovoltaic/thermal with reversible heat pump using a split heat flow configuration. Khaled M. Ramadan, Universitat Rovira i Virgili (Spain) P02. Development of an experimental test facility to study the resorption process in a plate heat exchanger. Maycon C. Magalhães, Universitat Rovira i Virgili (Spain) P03. Thermodynamic cycle analysis of compression/resorption heat pump using CO ₂ /acetone fluid mixture. Paul Dávila, Universitat Rovira i Virgili (Spain) P04. Obtención de bio-combustibles por pirólisis térmica a partir de plásticos reciclados de polipropileno y su aplicación en poligeneración. Paul Palmay, Universitat Rovira i Virgili (Spain) P05. Experimental Performance of Evaporator Surface in Water Bath Cold Thermal Storage for Solar Milk Cooling. Muaz Bedru, Addis Ababa University (Ethiopia). P06 Sistemas de refrigeración y actual desarrollo en tecnologías de bombas de calor; Jimmy Barco Burgos, Universidad ECCI, Bogotá, Colombia
SESSION 3: Thermodynamic and Transport Properties of Fluids of Industrial Interest Chairperson: Daniel Salavera	
12:00	On the thermodynamic properties of compressed liquids using scaling based EOS; <i>Enriqueta López, University of Santiago de Compostela (Spain)</i>
12:20	Propiedades termodinámicas y solubilidades de mezclas con CO ₂ de aminas acuosas e hidrocarburos <i>Jorge Rubio, University of Valladolid (Spain)</i>
12:40	Determinación experimental y modelado de propiedades físicas y equilibrio de fases en mezclas de líquidos iónicos disolventes de celulosa con cosolventes seleccionados <i>Laura de Pablo, University of Valladolid (Spain)</i>
13:00	Computational analysis of transport phenomena with phase field models <i>Laylet Rojas Terrazas, University of Valladolid (Spain)</i>

13:20	Experimental method for measuring diffusion coefficients in liquids using a Mach-Zehnder interferometer <i>Ronny Rives, Universitat Rovira i Virgili (Spain)</i>
13:40	Lunch
SESSION 4: Absorption Systems for Refrigeration, Power and Heat Pumps Energy Efficiency and Integration of Energy Systems in Buildings and Processes Chairperson: Dr. Joan Carles Bruno	
15:00	Nanofluids for the renewable energy production and the efficient use of the energy <i>Josefa Fernández, University of Santiago de Compostela (Spain)</i>
15:20	Energy management of renewable energy technologies for power and heating in a rural hotel. <i>Teodor Pulido, Universitat Rovira i Virgili (Spain)</i>
15:40	Integration of High-Temperature Vapor Compression Heat Pumps in Trigeneration Systems <i>Luca Urbanucci, University of Pisa (Italy)</i>
16:00	Thermoacoustic systems as emerging technology for LNG exergy recovery <i>Antonio Aienza, Universitat Rovira i Virgili (Spain)</i>
16:20	Study of electrical storage size in a solar-powered refrigerator, with phase change materials in the internal walls, for a dairy application <i>Adriana Coca, Universitat Rovira i Virgili (Spain)</i>
16:40	Seminar Picture and visit to the laboratories of the CREVER group
17:30	Meeting of the Doctorate Programme Academic Commission
20:30	Seminar Dinner

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

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Thursday, July 26th 2018

SESSION 5: Defense of the Master's Thesis of Master degree in Engineering Thermodynamic of Fluids

Master Thesis Commission: Alberto Coronas, José Juan Segovia, Joan Carles Bruno, Mahmoud Bourouis, Daniel Salavera, Juan Prieto, M.S. Larrechi

8:00	Determinación Experimental de las Propiedades Termodinámicas de la Mezcla CO ₂ /acetona para Bombas de Calor de Compresión/Resorción. <i>Gisselle E. Ramírez</i>
8:30	Modelling of CO ₂ /acetone properties and cycle simulation. <i>Raul J. Moreira</i>
9:00	Determination of diffusion coefficients of ammonia/ionic liquids mixtures by pulsed field gradient-nuclear magnetic resonance spectroscopy. <i>Alejandro Rojas Gómez</i>
9:30	Current situation and perspectives of the absorption heat pumps and applications. <i>Yaima Lazcano</i>
10:00	Energy Management Optimization of a PV system Connected to a Local Grid in an Office Building. <i>Federico Cascavilla</i>
10:30	Coffee Break
11:00	Industrial high temperature compression/resorption heat pump: modelling and performance study using waste heat and renewable energy integration. <i>Boniface Dominick Mselle</i>
11:30	Evaluation of air tightness and energy savings of a high performance building using air handling units and air ducts. <i>Rohit Raman</i>
12:00	Estudio comparativo de los sistemas de calefacción urbana basados en intercambiadores de calor de absorción con diferentes fuentes de calor primaria. <i>Eduardo O. Ramos Rodríguez</i>
12:30	Ensayos de un sistema de climatización por compresión de vapor para el fortalecimiento de los procesos de aprendizaje en ciencias e ingeniería. <i>Cesar López</i>
13:00	Caracterización de la microturbina a gas CAPSTONE C30 trabajando a diferentes velocidades de rotación. <i>Yurisley Cervantes Ramírez</i>
13:30	Closing and Picture
13:45-14:30	Lunch

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