

Program 9th International Conference on Solar Air Conditioning

Tuesday, November 05, 2019 – Room: El Canelo

APPLICATIONS AND SIMULATION

Chairs: Ursula Eicker (Concordia University) & Wolfgang Streicher (University of Innsbruck)

- 08:30 Development of a Photovoltaic Ice-Making Machine
Carlos Boabaid Neto, Federal Institute of Santa Catarina
- 08:47 Field Test Results of a PV-HVAC System with PCM-Storage for Improved Grid Connection
Christian Schweigler, Munich University of Applied Sciences
- 09:04 Third Generation of FREESCOO, a Compact Dec Thermally Driven Air-Conditioning System for Apartments
Marco Beccali, Università degli Studi di Palermo
- 09:21 H₂O-LiBr Single-Stage Solar Absorption Air Conditioner with an Innovative Bi-Adiabatic Configuration: Dynamic Model, Nominal Conditions and Typical Day Operation
Amín Altamirano, LOCIE Laboratory
- 09:38 Development of an Adsorption Chiller Model for Residential Applications in Canada
Jordan McNally, Carleton University
- 09:55 Simulation in TRNSYS of a Solar Thermal Cooling System of Sweet Cherry in the City of Chillán
Carolina Andrea Sepúlveda Sepúlveda, Universidad de Concepción
- 10:12 Numerical Studies of a Hybrid Cycle for Power Production and Cooling
Hai Trieu Phan, Univ. Grenoble Alpes, CEA, LITEN, DTBH

10:30 Coffee Break

APPLICATIONS AND COMPONENTS & SYSTEMS

Chairs: Ursula Eicker (Concordia University) & Christian Schweigler (University of Applied Sciences Munich)

- 11:00 Solar Heating and Cooling in Hot and Humid Climates - sol.e.h² Project Introduction
Daniel Neyer, Neyer Brainworks GmbH
- 11:20 An Open Sorption System for Solar Air Cooling in Buildings
Elsabet Nielsen, Department of Civil Engineering, Technical University of Denmark
- 11:40 Solar Desiccant Prototype Supplying Water and Cooling to a Controlled Agriculture Environment
Vincenzo Gentile, Politecnico di Torino
- 12:00 Design of a Coupled BIPV/T – Solid Desiccant Cooling System for a Warm and Humid Climate
Aditya Nibandhe, Concordia University
- 12:20 Use of Parabolic Trough Collector as Direct Vapor Generator for an Absorption Machine: Experimental Study
Antonio Famiglietti, Universidad Carlos III de Madrid, Departamento de Ingeniería Térmica y de Fluidos
- 12:40 Absorption Cooling COP Improvements by Heat Recovery Using Sequential and Reciprocating Action of a Set of Packed Beds
Jose Ignacio Ajona Maeztu, Seenso Renoval

13:00 Lunch

14:00 POSTER SESSION

Chair: Marco Beccali (Università degli Studi di Palermo)

Each SAC poster author will give a short two-minute oral presentation in the room El Canelo on his or her topic.

14:00 Urban Cooling and Energy Saving Potential. Determination of Roof Albedo Rehabilitation Benefit in Urban Areas Using Satellite Images

Noelia Alchapar, CONICET

14:02 Analysis of Heat Gain Decrease Achieved by Ventilation Heat Recovery in Solar Cooling Building: Case Study

Bartosz Gil, Wrocław University of Science and Technology

14:04 An Investigation on a Ground Coupled Photovoltaic Thermal (PV/T) Desiccant Cooling and Heating System

Jin Yi Guo, UNSW SYDNEY

14:06 Optimization Measures for the Utilization of Solar Chimneys in Regions with Temperate Climate

Lukas Schwan, University of Applied Sciences Munich

14:08 Research on Direct-Expansion Solar Assisted Heat Pump and Enhanced Vapor Injection System

Yao Zhao, Shanghai Jiao Tong University

➔ **Afterwards the posters will be presented in the poster area.**

15:30 Coffee Break

KEYNOTE SPEECH

16:30 Recent Development of Solar PV and Thermal Heating and Cooling Technologies in China

Yanjun Dai, Shanghai Jiao Tong University

INDUSTRY SESSION

Chair: Daniel Mugnier (TECSOL)

17:00 The SolabCool®, Cooling of Dwellings and Small Offices by Using Waste or Solar Heat

Aart de Geus, artenergy

17:20 Analysis of a Solar Hybrid Cooling System for Industrial Applications

Uli Jakob, Dr. Jakob energy research GmbH & Co. KG

18:00 **Extended Talk:** Evaluation of the Application Potential of Solar Cooling in Chile for Small-Scale Industries

Andrés Villarruel, Pontificia Universidad Católica de Chile