



Conference program

**EUROTHERM Seminar No. 98
Concentrating Solar Energy Systems**

4-5th July 2013

Vienna University of Technology,
Main-Building, Festival Hall Stairway 1, 1st Floor,
Karlsplatz 13, 1040 Vienna, Austria



Organized by Eurotherm Committee and Vienna University of Technology

Day 1 4th July 2013			
8:00 AM	Start Registration at the conference office		
8:40 AM	Conference Opening	Markus HAIDER	TU, Vienna, Austria
9:00 AM	Thermodynamics of Solar Radiation	Stephan KABELAC	Leibniz Universität, Hannover, Germany
9:30 AM	<i>Modelling and optimization of a solar receiver with absorbing and anisotropically scattering spherical particles</i>	<i>Freddy ORDÓNEZ</i>	<i>Promes, France</i>
9:50 AM	<i>Quality Check procedures and results from the Indian SRRR solar radiation measurement network</i>	<i>Kaushal Subhash CHHATBAR</i>	<i>Suntrace GmbH, Solar Resource Assessment, Germany</i>
10:10 AM	<i>Liquid metals: efficient heat transfer fluids for advanced CSP systems</i>	<i>Julio Cesar PACIO</i>	<i>Karlsruhe Institute of Technology (KIT), Germany</i>
10:30 AM	Coffee Break		
11:00 AM	New Components and Technology for Solar Tower Plants	Philipp SCHRAMEK	Solar Tower Systems GmbH, Germany
11:30 AM	<i>Experimental measurement of the performance of a small scale heliostat plant</i>	<i>Massimiliano RENZI</i>	<i>Libera Università di Bolzano, Italy</i>
11:50 AM	<i>Numerical investigation of a new central receiver design</i>	<i>Oliver GARBRECHT</i>	<i>WSA RWTH Aachen, Germany</i>
12:10 PM	Lunch Break		
1:00 PM	The Australian Solar Thermal Research Initiative	Manuel BLANCO	CSIRO. Australian Solar Thermal Research Initiative (ASTRI), Australia
1:30 PM	<i>Pneumatic Pre-stressed Solar Concentrator towards Cost-competitive CSP</i>	<i>Michael LAUERMANN</i>	<i>TU, Vienna, Austria</i>

1:50 PM	<i>Performance evaluation of a PV concentrator for electricity and heat production</i>	<i>Davide DEL COL</i>	<i>University of Padova, Italy</i>
2:10 PM	<i>Numerical Investigation of Heat Transfer within a High Concentration Photovoltaic (HCPV) System</i>	<i>Marios THERISTIS</i>	<i>Heriot-Watt University, United Kingdom</i>
2:30 PM	<i>Pressure drops assessment in pipe flow for DSG systems</i>	<i>Giuseppe PETRONE</i>	<i>University of Catania, Italy</i>
2:50 PM	Coffee Break		
3:20 PM	<i>Thermochemical Reactions for Solar Energy Storage and Fuel Production</i>	<i>Martin ROEB</i>	<i>DLR, Cologne, Germany</i>
3:50 PM	<i>Numerical modelling of volumetric absorption of a concentrated solar beam in a binary molten nitrate salt filled cavity</i>	<i>Ityona AMBER</i>	<i>Heriot Watt University, United Kingdom</i>
4:10 PM	<i>Applications of sandTES – Active Fluidization Storage in CSP</i>	<i>Karl SCHWAIGER</i>	<i>TU, Vienna, Austria</i>
4:30 PM	<i>Numerical simulations and experimental test for assessing heat losses in a concentrating solar collector for DGS Fresnel plants</i>	<i>Giuseppe PETRONE</i>	<i>University of Catania, Italy</i>
4:50 PM	<i>Thermal assisted photo-electrical energy conversion using mixed metal oxides in the archetype of perovskite (ABO₃)</i>	<i>Georg BRUNAUER</i>	<i>TU, Vienna, Austria</i>
8:00 PM	Start Evening Event		

Day 2 5th July 2013			
9:00 AM	Optical and thermal performance of parabolic trough collectors	Robert PITZ-PAAL	DLR, Cologne, Germany
9:30 AM	<i>Introduction to an optimized CSP mirror system: Sophisticated design approach to achieve both low-cost and highly resistant light-weight design</i>	Carsten HOLZE	toughTrough GmbH, Germany
9:50 AM	<i>Design, Development and Testing of the Ultimate Trough® - The World's Largest Parabolic Trough Collector</i>	Gerhard WEINREBE	schlaich bergemann und partner, Germany
10:10 AM	Coffee Break		
10:40 AM	Solar Thermal Power Plants, Developing technologies for dispatchable solar electricity	Manuel ROMERO	IMEDEA ENERGY, Mostoles, Spain
11:10 AM	<i>Feasibility Study for CSP on Offshore Solar Power Plants</i>	Christian DIENDOFRER	TU, Vienna, Austria
11:30 AM	<i>Simulation of the dynamic behavior of a Small Scale CSP System in ColSim</i>	Anton NEUHÄUSER	Fraunhofer ISE, Solarthermal and Optics, Germany
11:50 PM	Lunch Break		
12:50 PM	Thermal and Thermo-chemical Storage Solutions for Concentrating Solar Energy Systems	Markus HAIDER	TU, Vienna, Austria
1:20 PM	<i>Development of a Thermochemical Heat Storage Based on CaO/Ca(OH)₂</i>	Marc LINDER	German Aerospace Center, Germany
1:40 PM	<i>Numerical Analysis of Sensible Thermal Energy Storages in High Temperature Solar Energy Systems</i>	Oronzio MANCA	Seconda Universita' degli Studi di Napoli, Italy



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2:00 PM	<i>Testing of a latent heat storage based on a screw heat exchanger</i>	<i>Anton NEUHÄUSER</i>	<i>Fraunhofer ISE, Solarthermal and Optics, Germany</i>
2:20 PM	<i>ThomaThermochemical Energy Storage: Materials, concepts for reactors and process integration under economic boundary conditions.</i>	<i>Johannes WIDHALM</i>	<i>TU, Vienna, Austria</i>
2:40 PM	Coffee Break		
3:10 PM	<i>Technical and Economical Feasibility of Brayton Cycle based CSP</i>	<i>Born LAUMERT</i>	<i>KTH, Stockholm, Sweden</i>
3:40 PM	<i>Dynamic study of a steam drum as a mid-sized latent heat storage for DSG solar plants</i>	<i>Raphael ALLIOTE</i>	<i>TU, Vienna, Austria</i>
4:00 PM	<i>Cooling Strategies for CPV Receivers in Linear Concentrators</i>	<i>Matthew John CLARKE</i>	<i>TU, Vienna, Austria</i>
4:20 PM	<i>Equilibrium Operating Condition of Heat Exchangers</i>	<i>Cristina RADULESCU</i>	<i>University College Cork, Ireland</i>
4:40 PM	Conference Close		