

Meeting Program

Ruhr-University Bochum, September-October, 28th-01th, 2010

Thuesday, 28th September

11:00	Get Together	
12:00	Opening Session	
12:30	Introductory lectures <i>Chair: Prof. Krätzig / Co-Chair: Prof. Niemann</i>	
	Concept and motivation of solar updraft power technology <i>Prof. Dr.-Ing. Dr. h.c. mult. J. Schlaich, SBP Berlin</i>	
	Global energy perspectives: challenges, chances and the role of renewable energy <i>Prof. Dr. M. Fishedick, Wuppertal Institut für Klima, Umwelt, Energie, Wuppertal</i>	
13:30	Coffee Break	
14:00	Structural Aspects and Alternative Energy Concepts <i>Chair: Dr. Bergermann / Co-Chair: Dr. Lehnen</i>	Wind Exposure <i>Chair: Prof. Tamura / Co-Chair: Prof. Borri</i>
	Progress in the structural design of solar chimneys <i>Prof. Dr.-Ing. R. Harte, Bergische Universität Wuppertal</i> <i>Dipl.-Ing. M. Graffmann, Dr.-Ing. R. Wörmann, Krätzig & Partner, Bochum</i>	Aerodynamic basics of wind loading patterns at the collector glass roof <i>Prof. Dr.-Ing. R. Höffer, Ruhr-Universität Bochum</i> <i>Prof. Dr.-Ing. H.-J. Niemann, Dr.-Ing. N. Hölscher, Dipl.-Ing. M. Tschersich, Niemann & Partner, Bochum</i>
	Concrete concepts for solar chimneys <i>Prof. Dr.-Ing. L. Lohaus, Leibniz Universität Hannover</i>	Pressure distribution on solar thermal power plant chimneys in thunderstorms <i>Prof. Dr. X. Zhou, F. Wang, Huazhong, University Wuhan</i>
	Earthquake behaviour of large hyperbolic shells - from natural draft cooling towers to solar power plant chimneys <i>Dr.-Ing. Ch. Lang, Dr.-Ing. F. Altmeier, Dipl.-Ing. J. Weigl, LAW Engineers, Frankenthal</i>	Vortex excitation at very high Reynolds numbers <i>Prof. Dr.-Ir. H. van Koten, TU Delft, Dipl.-Ing. J. Sahlmen, Ruhr-Universität Bochum, Dipl.-Ing. W. Hubert, Nieman & Partner, Bochum</i>
	The Andasol parabolic trough power plants <i>Dr.-Ing. H. Gladen, Dipl.-Ing. L. Schnatbaum-Laumann, Solar Millennium AG, Erlangen</i>	Transport and deposition of dust on the collector surface <i>Prof. Dr.-Ing. R. Höffer, Dipl.-Phys. V. Görnandt, Dipl.-Ing. C. Wevers, Ruhr-Universität Bochum</i>
15:30	Coffee Break	
16:00	Structural Aspects and Alternative Energy Concepts <i>Chair: Prof. Harte / Co-Chair: Prof. Lohaus</i>	Thermodynamics and Machinery <i>Chair: Prof. Martelli / Co-Chair: Prof. Höffer</i>

	<p>Optimum shell design of solar updraft towers <i>Prof. Dr h.c. C. Borri, Dipl.-Ing. F. Lupi, Dipl.-Ing. E. Marino, University Firenze, Italy</i></p>	<p>Thermo-fluid aspect analysis in solar chimney power plants <i>Prof. Dr. S. Larbi, Prof. A. Bouhdjar, Dr. T. Chergui, National Polytec, Algier, Algeria</i></p>
	<p>Solar Chimneys in Southern Africa – Materials and Methods <i>Prof. Dr.-Ing. M. Helmus, Dipl.-Ing. N. Warkus, Bergische Universität Wuppertal, Dipl.-Ing. M. Lorek, BICON, Windhoek, Namibia</i></p>	<p>Solar chimney turbine layout and design considerations <i>Dr. T. P. Fluri, Prof. Dr. T.W. von Backström, University Stellenbosch, South Africa</i></p>
	<p>Life-cycle-management and design of large shell structures <i>Dr.-Ing. D. Lehnen, Dr.-Ing. T. Pfister, Zerna Engineers, Bochum Prof. Dr.-Ing. P. Mark, Dipl.-Ing. A. Ahrens, Ruhr-Universität Bochum</i></p>	<p>The effect of collector temperatures on power output of solar updraft plants <i>Dr. R. O. Manyala, Maseno University, Kenya</i></p>
	<p>The light steel tower in the SCPP <i>Dipl.-Volksw. O. Petersen, Phönix Sonnenwärme AG, Berlin</i></p>	<p>Optimization of the structural capacity and thermal behavior of a SCPP glass roof <i>Prof. Dr.-Ing. J. Schneider, TU Darmstadt</i></p>
17:30	<p>Key note lectures I <i>Chair: Prof. Schuëller / Co-Chair: Dr. Bergermann</i></p>	
	<p>Basic theory and numerical simulation of large-scale solar updraft power plants <i>Dr. J. P. Pretorius, Eskom Turbine Engineering, South Africa Prof. D. G. Kröger, University of Stellenbosch, South Africa</i></p>	
	<p>Electricity generation using the hot dry rock concept <i>Prof. Dr.-Ing. P. D. Moncarz, Stanford University, USA</i></p>	
	<p>Optimum design concept for solar power plants <i>Dr. H. Bottenbruch, Former CICIND President Prof. Dr.-Ing. Dr.-Ing. E. h. W. B. Krätzig, Krätzig & Partner, Bochum</i></p>	
19:00	<p>Welcome Reception</p>	
<p>Wednesday, 29th September 2010</p>		
09:30	<p>Key note lectures II <i>Chair: Prof. Hirschfeld / Co-Chair: Prof. Harte</i></p>	
	<p>Thermal semiconductors as a power control strategy for Solar Chimney Power Plants <i>Prof. Dr.-Ing. M. A. dos Santos Bernardes, CEFET/MG, Belo Horizonte, Brasil</i></p>	
	<p>Static, quasi static and resonant wind effects on Solar Towers <i>Prof. Dr.-Ing. H.-J. Niemann, Dr.-Ing. N. Hölscher, Dipl.-Ing. W. Hubert, Niemann & Partner, Bochum</i></p>	
	<p>Optimized erection technology of giga towers <i>Dr.-Ing. J. Strauss, Heitkamp, Herne, Dipl.-Ing. A. Kreiner, Gleitbau Salzburg, Austria</i></p>	
10:30	<p>Coffee Break</p>	
11:00	<p>Structural Aspects <i>Chair: Dr. Lehnen / Co-Chair: Prof. Lohaus</i></p>	<p>Equipment, Glass Collector, Updraft Technology <i>Chair: Prof. Höffer / Co-Chair: Prof. Hirschfeld</i></p>
	<p>Soil-structure-interaction of large concrete shells <i>Prof. Dr.-Ing. R. Harte, Bergische Universität</i></p>	<p>High-transparent glass panes with multi-functional coatings <i>Dr.rer.nat. V. Wittwer, Fraunhofer-Institut</i></p>

	<p>Wuppertal, K. Stopp, Dr.-Ing. M. Andres, Krätzig & Partner, Bochum</p>	<p>für Solare Energiesysteme ISE, Freiburg Dr.rer.nat. L. Herlitze, Interpane, Lauenförde</p>
	<p>Safety, reliability and durability concepts for the design of structural solar updraft power components Prof. Dr.-Ing. W.B. Krätzig, Krätzig & Partner, Bochum, Prof. Dr. G. I. Schuëller, Universität Innsbruck, Austria</p>	<p>Methodical approach to design the solar collector of a solar chimney power plant Dr.-Ing. J. Kuck, Dr.-Ing. C. Ziller, F&W, Aachen, Dipl.-Ing. L. Schnatbaum-Laumann, Dr.-Ing. H. Gladen, SM AG, Erlangen</p>
	<p>Solar chimney technology without solar collectors Prof. Dr. Ch. D. Papageorgiou, NTU Athens, Greece</p>	<p>Can airflow and radiation under the collector glass contribute to SUPPs' profitability? Dr. R. de Richter, Tour Solaire, Montpellier, France</p>
	<p>The influence of tip clearance on the performance of solar chimney turbines <i> cand. ing. M. Kuhn, Prof. Dr. T. W. von Backström, University Stellenbosch, South Africa</i></p>	<p>Solar updraft technology and its potential derived from global energy scenarios Dr. P. Viebahn, Wuppertal Institut für Klima, Umwelt, Energie, Wuppertal</p>
12:30	Lunch	
13:30	<p>Green Tower Chair: Dr. Viebahn / Co-Chair: Prof. Harte</p>	<p>Financial Aspects Alternative Energy Concepts Chair: Prof. Mark / Co-Chair: Prof. Noakowski</p>
	<p>Humus as the backbone of GreenTower revenues – Green revolution in agriculture, soil rehabilitation, forestry, desert cultivation and CO2 sequestration <i> M. Sc. W.-W. Stinnes, GreenTower Ltd., Haiger</i></p>	<p>An economically realistic growth path towards kilometric chimneys <i>Dr. D. Bonnelle, ENS, Lyon, France</i></p>
	<p>GreenTower with energy storage – Optimum base and peak load power station <i>Dipl.-Ing. W. Ademes, Entwicklungs-Consult, Mülheim</i></p>	<p>How cost-effective are solarthermal power plants? <i>Dr. Gerd Dibowski, DLR, Köln</i></p>
	<p>Can power from updraft and GreenTowers already compete against Conventional technologies? A profitability and risk analysis <i>MBA & Eng. M. Hummel, GreenTower Ltd., München</i></p>	<p>Prosperity for all in 100 years through the Solar Chimney Power Plant <i>Dr. Hermann Bottenbruch, Former CICIND President</i></p>
14:45	Coffee Break	
15:15	<p>Key note lectures III Chair: Prof. Borri / Co-Chair: Prof. Mark</p>	
	<p>Is nuclear power a bridging technology for Europe? <i>Dipl.-Ing. F. Henseler, Corporate Engineering, Essen</i></p>	
	<p>Realization and costs of solar updraft power plants <i>Dr.-Ing. R. Bergemann, SBP, Stuttgart</i></p>	
	<p>Solar chimney power technology - An economist's Point of View <i>Prof. Dr. W. Breuer, RWTH Aachen</i></p>	

16:45	Forum Discussion <i>Chair: Prof. Niemann / Co-Chair: Prof. Krätzig</i> Social Consequences of Solar Chimneys + World Energy Concepts
18:00	End
20:00	Conference Dinner "Stadtparkrestaurant Bochum" Klinikstraße 41, 44791 Bochum www.stadtpark-gastronomie.de
Thursday, 30th September 2010	
09:30	Excursion Neurath Power Plant, Grevenbroich
16:30	Meeting of the Steering- and the Lecture Committee
18:30	Dinner at "Haus Oeckey", Bochum
Friday, 01th October 2010	
09:30	Reimbursement of travel expenses
10:00	Meeting of the Preparation Group SEEFORM 2011
13:00	Reimbursement of travel expenses
13:30	Lunch at the Bistro of the RUB
14:30	Meeting of the Preparation Group SEEFORM 2011
19:00	Dinner at the Taverna Avli Bochum