

Preface

The solar updraft tower (also: Solar Chimney) power technology (SUTPT) is simple, robust, sustainable, and long lasting technology, producing electric power from solar radiation with low maintenance cost and no cooling water. A SUTPT plant will provide electric power over many decades, up to 100 years. The feasibility of the SUTPT has been demonstrated successfully by the famous Manzanares Prototype and more recently by a number of project studies.

International Conference on Solar Updraft Tower Power Technology, previously called International Conference on Solar Chimney Power Technology, is a series of International Conference being held as an effort to bring together engineers and scientists from academia and industry and to provide a platform for exchange of ideas.

There have been two conferences on Solar Chimney Power Technology successfully held previously: 1st conference was held in Ratingen in February 2009, and 2nd conference was held in Bochum in September 2010. As an effort to bring SUTPT conference international, Huazhong University of Science and Technology (HUST) has been assigned the duty of organizing the 3rd SUTPT conference to be held at HUST, Wuhan from 26-28 October 2012.

The main theme of the 3rd SUTPT conference is to provide directed focus on the state of the art in thermodynamics, fluid-mechanics, structural engineering, as well as comparison of hybrid or alternative energy concepts and it. The associated discussions will facilitate exchanges of ideas and provide guide for research directions in the SUTPT area.

On behalf of the organizing committee of the 3rd SUTPT conference, we would like to extend our sincere appreciation to all the participants and authors; all the members of international scientific advisory; and many colleagues and students of HUST. We hope the conference will encourage joint research in the SUTPT area among researchers, engineers, and students from all over the world in the future.

Organized by

Huazhong University of Science and Technology, China

Xi'an Jiaotong University, China

Zhejiang University, China

Inner Mongolia University of Science and Technology, China

Sponsered by

National Natural Science Foundation of China, China

Hubei Association for Science and Technology, China

Huazhong University of Science and Technology, China

Mechanics Society of Hubei Province, China

Honorary Chairman:	Jörg Schlaich Schlaich Bergermann Partner, and Universität Stuttgart	Germany
General Chairman:	Wilfried. B. Krätsig Ruhr-Universität Bochum	Germany
Co-Chairman:	Yuan Pan Huazhong University of Science and Technology	China
Co-Chairman:	Hongping Zhu Huazhong University of Science and Technology	China
Co-Chairman:	Xinping Zhou Huazhong University of Science and Technology	China
Secretariat:	Wen Jiang, and Peng Qin Huazhong University of Science and Technology	China

Organizing Committee:

Chairman:	Xinping Zhou Huazhong University of Science and Technology	China
Co-Chairman:	Liang Zhao Xi'an Jiaotong University	China
Co-Chairman:	Yuming He Huazhong University of Science and Technology	China
Xingfei Yuan	Zhejiang University	China
Li Li	Huazhong University of Science and Technology	China
Jianqiao Chen	Huazhong University of Science and Technology	China
Qin Qian	Huazhong University of Science and Technology	China
Xinhua Yang	Huazhong University of Science and Technology	China
Guoliang Xu	Huazhong University of Science and Technology	China
Tingzhen Ming	Huazhong University of Science and Technology	China
Han Chen	Huazhong University of Science and Technology	China
Bo Chen	Huazhong University of Science and Technology	China
Yisheng Chen	Inner Mongolia University of Science and Technology	China
Yili Wei	Inner Mongolia University of Science and Technology	China
Yaxiong Wang	Inner Mongolia University of Science and Technology	China

International Scientific Advisory Board:

Chairman:	Wei Liu	
	Huazhong University of Science and Technology	China
Jörg Schlaich	Schlaich Bergermann Partner, and Universität Stuttgart	Germany
Xiaojing Zheng	Lanzhou University	China
Huancheng Jiang		China
Hermann Bottenbruch	Gelsenkirchen	Germany
Theo W. von Backström	University of Stellenbosch	South Africa
Peter Mark	Ruhr-Universität Bochum	Germany
Rüdiger Höffer	Ruhr-Universität Bochum	Germany
Reinhard Harte	Bergische Universität Wuppertal	Germany
Hans-Jürgen Niemann	Ruhr-Universität Bochum	Germany
Hermann F. Fasel	University of Arizona	USA
Gideon P.A.G. Van Zijl	University of Stellenbosch	South Africa
Marco Aurélio dos Santos Bernardes	Centro Universitário UNA	Brasil
Suyi Huang	Huazhong University of Science and Technology	China
Liejin Guo	Xi'an Jiaotong University	China
Zhifeng Wang	Chinese Academy of Sciences	China
Yanjun Dai	Shanghai Jiao Tong University	China
Shuguo Liang	Wuhan University	China
Zhengnong Li	Hunan University	China
Zhengliang Li	Chongqing University	China
Yukio Tamura	Tokyo Polytechnic University	Japan
Christos D. Papageorgiou	National Technical University of Athens	Greece
Manyala Reccab Ochieng	Maseno University	Kenya
Johannes P. Pretorius	Eskom Enterprises Park	South Africa
Atit Koonsrisuk	Suranaree University of Technology	Thailand