

PRELIMINARY PROGRAM

The First International Conference on Building Energy and Environment (COBEE)

July 13-16, 2008
Dalian, China

Organized by
Tianjin University
Dalian University of Technology
Co-Organized by
Purdue University
University of Colorado at Boulder



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WELCOME TO COBEE 2008



Energy and environment concerns have been ranked among the top problems facing society for the next 50 years, of which buildings are a major factor. This is because buildings use a significant portion of electricity and thermal energy, and the conversion of primary energy to electricity and thermal energy accounts for a large portion of greenhouse gas emissions. Energy is used to maintain comfortable and healthy environments in buildings, although such environments are difficult to achieve. Indeed, reports of building related symptoms and health complaints have been increasing.

This conference is organized to provide a platform for discussing energy and environmental issues and for initiating collaboration among building engineers, environmental scientists, architects, facility managers, and policy makers. The objective for the conference is to provide a forum for discussion that addresses the challenges and opportunities we are facing, while enabling collaboration that encourages the participants from both developed and developing countries to work together to solve the most critical problems.

This first International Conference on Building Energy and Environment (COBEE) will be held in Dalian, which is a scenic, coastal city in Northeast China.

Welcome to charming and beautiful Dalian!

A blue ink signature of Neng Zhu, written in a stylized, cursive script.

Neng Zhu, Ph.D.
Tianjin University
Co-President

A blue ink signature of Jili Zhang, written in a stylized, cursive script.

Jili Zhang, Ph.D.
Dalian University
of Technology
Co-President

ORGANIZERS

Conference Organizing Committee

Qingyan Chen, Co-Chair (Purdue University)
Lin Duanmu, Co-Chair (Dalian University of Technology)
Junjie Liu, Co-Chair (Tianjin University)
John Zhai, Co-Chair (University of Colorado at Boulder)
Tengfei “Tim” Zhang, Secretary (Dalian University of Technology)
Michael Brandemuehl (University of Colorado at Boulder)
James Braun (Purdue University)
Guanyi Chen (Tianjin University)
Xudong Yang (Tsinghua University)
Xiaosong Zhang (Southeast University)
Jianing Zhao (Harbin Institute of Technology)

International Advisory Committee

Qingyan Chen, Purdue University, USA
Hal Levin, Building Ecology Research Group, USA
Yuguo Li, University of Hong Kong, China, China
Olli Seppänen, Helsinki University of Technology, Finland
Jan Sundell, University of Texas at Tyler, USA
Shin-ichi Tanabe, Waseda University, Japan
Branislav Todorovic, University of Belgrade, Serbia

International Scientific Committee

Francis Allard, Université de La Rochelle, France	Wan-Ki Chow, Hong Kong Polytechnic University, China
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Hazim Awbi, University of Reading, UK	Derek Clements-Croome, University of Reading, UK
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Ian Beausoleil-Morrison, Carleton University, Canada	Richard de Dear, Macquarie University, Australia
Souvik Bhattacharyya, Indian Institute of Technology at Kharagpur, India	Gao Ding, Architecture Design & Research Group, China
Marianna Brodatch, ABOK, Russia	David Etheridge, Gas Research Centre, UK

Norbert Fisch, Braunschweig University, Germany	Mingsheng Liu, University of Nebraska at Lincoln, USA
William Fisk, Lawrence Berkeley National Laboratory, USA	Vivian Loftness, Carnegie Mellon University, USA
John Girman, Environmental Protection Agency, USA	Ardeshir Mahdavi, Vienna University of Technology, Austria
Leon Glicksman, Massachusetts Institute of Technology, USA	John Mardaljevic, De Montfort University, UK
Fariborz Haghighat, Concordia University, Canada	Allan Meier, Lawrence Berkeley National Laboratory, USA
Robert Hastings, Energie & Umwelt GmbH, Switzerland	Farhad Memarzadeh, National Institutes of Health, USA
Per Heiselberg, Aalborg University, Denmark	Lidia Morawska, Queensland University of Technology, Australia
Hugo Hens, Katholieke Universiteit, Belgium	Edward Morofsky, Public works and Government Services, China
Jan Hensen, Eindhoven University, Netherlands	Shuzo Murakami, Keio University, Japan
Joe Huang, White Box Technologies, USA	William Nazaroff, University of California at Berkeley, USA
Yi Jiang, Tsinghua University, China	Peter Nielsen, Aalborg University, Denmark
Petr Kabele, Czech Technical University in Prague, Czech	Jianlei Niu, Hong Kong Polytechnic University, China
Shinsuke Kato, University of Tokyo, Japan	Peter Novak, University of Ljubljana, Slovenia
Kwang-Woo Kim, Seoul National University, Korea	Myung-Do Oh, University of Seoul, Korea
Yoon-Shin Kim, Hanyang University, Korea	Bjarne Olesen, Technical University of Denmark, Denmark
Moncef Krarti, University of Colorado at Boulder, USA	Andrew Persily, National Institute of Standards and Technology, USA
Joseph Lam, City University of Hong Kong, China	Susan Roaf, Heriot Watt University, Edinburgh, UK
Mark Levine, Lawrence Berkeley National Laboratory, USA	Claude-Alain Roulet, Swiss Federal Institute of Technology, Switzerland
Angui Li, Xi'an University of Architectural Technology, China	Mats Sandberg, KTH Research School, Sweden
Baizhan Li, Chongqing University, China	Mat Santamouris, University of Athens, Greece
Zhiwei Lian, Shanghai Jiaotong University, China	Chandra Sekhar, National University of Singapore, Singapore
Haiyan Lin, Chinese Academy of Building Science, China	Kirk Smith, University of California at Berkeley, USA
John Little, Virginia Tech, USA	

Jang-Yeul Sohn, Hangyang University, Korea	Tim Xu, Lawrence Berkeley National Laboratory, USA
John Spengler, Harvard University, USA	Wenfa Xu, China Urban Construction Design and Research Institute, China
Jelena Srebric, Pennsylvania State University, USA	Henry Xue, California State Polytechnic University, USA
John Swaffield, Heriot-Watt University, UK	Hiroshi Yoshino, Tohoku University, Japan
Kwok Wai Tham, National University of Singapore, Singapore	Guoqiang Zhang, Hunan University, China
Marija Todorovic, University of Belgrade, Serbia	Jianshun Zhang, Syracuse University, USA
Shengwei Wang, Hong Kong Polytechnic University, China	Xu Zhang, Tongji University, China
Charlie Weschler, UMDNJ, USA	Yuanhui Zhang, University of Illinois at Urbana-Champaign, USA
Peter Wouters, Belgian Building Research Institute, Belgium	Yingxin Zhu, Tsinghua University, China

Other Reviewers Invited

Rachel Becker	Asanga Gunawansa	Satoru Okamoto
Peter Boait	D.J.Harris	Marco Perino
Yanyong Boon-Long	Jiang He	William B. Rose
Valerio Lo Brano	Jiapeng He	Poppong Sakulpipatsin
Hans Cauberg	Hong Huang	Wolfgang Streicher
Jae D. Chang	Yingchun Ji	Hejiang Sun
Tse-ming Chung	Yanming Kang	Wei Sun
Stefano P. Corgnati	Kwang Woo Kim	Ali Syed
Kok Wai David Cheong	Youngil Kim	Sopitsuda Tongsopit
Qihong Deng	Byeong-Kyu Lee	V. Ismet Ugursal
Napoleon Enteria	Jihong Ling	Joseph VIRGONE
Yuesheng Fan	Owen Lewis	Qingqin Wang
Paul W Francisco	Danny H W Li	Xiaoxin Wang
Hiroatsu Fukuda	John Lin	Myoung-Souk Yeo
Roberto Fuliotto	Shilei Lv	Hiroshi Yoshino
Alan S. Fung	Leonardo Marques	Martin Zalesak
Hugo Grimmelius	Monteiro	Wim Zeiler
Lisa Guan	Nasim Mullen	Bin Zhao

SPONSORS



American Society of Heating, Refrigerating and Air-conditioning Engineers



Architectural Thermal Energy & Power of Architectural Society



China HVAC&R Association



Department of Energy, USA



Environmental Protection Agency, USA



Federation of European Heating and Air-Conditioning Associations



International Society of Indoor Air Quality and Climate

中国建设部

Ministry of Construction, China

中国教育部

Ministry of Education, China

中国科学技术部

Ministry of Science and Technology, China



National Natural Science Foundation of China



Society of Air-Conditioning and Refrigeration Engineers of Korea



The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan

LANGUAGE AND PUBLICATIONS

The official language of the conference is English. All accepted abstracts will be published in a printed version of the abstract book to be distributed at the conference. All accepted papers will be published in a CD of the conference proceedings. Selected papers from the conference will be expanded and published as special issues by the following journals:

- 1 Atmospheric Environment
- 2 Building and Environment
- 3 Building Simulation
- 4 Energy and Buildings

TECHNICAL PROGRAM

COBEE 2008 technical program consists of

Plenary sessions, each invited speaker has 30 minutes for presentation;

Parallel sessions, each presenter has 15 minutes for presentation, including discussion;

Poster sessions, each presenter has 60 minutes for presentation and discussion in front of his/her poster;

Forums, each forum has 120 minutes. The forums are to discuss challenges and opportunities in building energy and environment. There is ample time for discussion.

Plenary Sessions

Four internationally renowned scholars have been invited as the plenary session speakers of COBEE 2008. Their topics of presentation are:



Prof. William Nazaroff
University of California at Berkeley, USA

P-1 Understanding Human Exposure to Air Pollutants in the Built Environment (Su-P1)



Prof. Xudong Yang
Tsinghua University, China

P-2 Energy and Environment in Chinese Rural Housing: Road to Sustainability (Su-P2)



Prof. Koen Steemers
Cambridge University, UK

P-3 Sustainable Building Design (We-P3)



Prof. Yuguo Li
University of Hong Kong, China

P-4 Ventilation and Health in Built Environment (We-P4)

Parallel and Poster Sessions

T-1 Building energy demand and energy performance of buildings, systems, and components (Mo-T1.1, Mo-T1.2, Mo-T1.3, Tu-T1.4, Tu-T1.5, Tu-T1.6)

T-2 Passive heating, passive cooling, and renewable energy for buildings (Mo-T2.1, Mo-T2.2, Tu-T2.3, We-T2.4)

T-3 Indoor and outdoor air quality, thermal comfort and health impact related to built

environments (Mo-T3.1, Mo-T3.2, Mo-T3.3, Tu-T3.4, Tu-T3.5, We-T3.6, We-T3.7)

T-4 Indoor and outdoor acoustic comfort and noise control (We-T4)

T-5 Indoor and outdoor lighting, lighting control, and visual comfort (Mo-T5)

T-6 Ventilation, infiltration, and air distributions (Tu-T6.1, Tu-T6.2, We-T6.3)

T-7 Sustainable and advanced built environments (Mo-T7.1, Tu-T7.2)

T-8 Advanced or innovative HVAC&R systems and system components (Mo-T8.1, Mo-T8.2, Mo-T8.3, We-T8.4, We-T8.5)

T-9 Advanced or innovative building envelopes and materials for energy conservation and indoor environment improvement (Tu-T9.1, Tu-T9.2)

T-10 Intelligent buildings and advanced control techniques (Mo-T10)

T-11 Computer tools and experimental techniques for assessment of building energy and built environments (Tu-T11.1, We-T11.2)

T-12 Integration of technologies and tools for building design and operation (Mo-T12)

T-13 Public policies related to building energy and environment (Mo-T13.1, Mo-T13.2)

T-14 Retrofit and optimal operation of the building energy system (Tu-T14)

Forums

The forum topics are:

F-1 Sustainable and advanced built environment—a Singapore experience (Tu-F1)

Chair: Tan Eng Khiam, National University of Singapore, Singapore

F-2 Multifunctional facades and building structures-performance prediction and validation (Mo-F2)

Chair: Marija Todorovic, University of Belgrade, Serbia

F-3 Inverse tracking of indoor pollutants (Mo-F3)

Chair: Qingyan Chen, Purdue University, USA

F-4 HVAC design for high-rise residential buildings (We-F4)

Chair: Jianlei Niu, Hong Kong Polytechnic University, China

F-5 Balance between Energy Use and Indoor Environmental Quality (We-F5)

Co-chair: Yuanhui Zhang, University of Illinois at Urbana-Champaign, USA

Co-chair: Jamie Bennett, National institute for Occupational Safety and Health, USA

F-6 IAQ Problems in China: Current Status and Future Perspective (Mo-F6)

Co-chair: Qingyan Chen, Purdue University, USA

Co-chair: Guoqiang Zhang, Hunan University, China

Co-chair: Qihong Deng, Central South University, China

F-7 Recent progress in IAQ and Health Research in China (Tu-F7)

Co-chair: Yuguo Li, Hongkong University, China

Co-chair: Xu Yang, Huazhong Normal University, China

Co-chair: Jinliang Zhang, Peking University, China

F-8 Advances in EnergyPlus Development and Application (Tu-F8)

Chair: John Zhai, University of Colorado at Boulder, USA

Session Codes

All the sessions have been assigned a code, such as “Mo-T1.2”.

The first two letters stand for:

Su = Sunday

Mo = Monday

Tu = Tuesday

We = Wednesday

The third letter stands for:

P = Plenary sessions

T = Technical sessions

F = Forums

The number before the period stands for the sequence number of topics

The number after the period is the sequential number of the sessions for the topic.

For example: “Mo-T1.2” means the second part of topic one to be presented on Monday.

Exhibition

An exhibition will be held concurrently at the same venue with the COBEE 2008 conference. The exhibition is to show products, software, and information related to building energy and environment to the conference participants. Exhibition spaces in the conference venue are available at a reasonable price. Exhibitors are encouraged to submit requests for more information to cobee2008@gmail.com.

SOCIAL PROGRAM

Technical Tour

Seawater Source Heat Pump Project

The seawater source heat pump project was initiated in 2005 in Dalian for building heating and cooling in the Xinghai bay area and then was selected as one of the demonstration projects for building utilization of renewable energy by the Chinese Ministry of Construction. The seawater heat pump project is designed to heat up or cool down buildings with a total area of 1.3 million square meters in the business region near Xinghai Square of Dalian. The project is still under construction and will be completed soon.

Social Tour

Bin Hai Road

Bin Hai Road stretches along Dalian's famous coastline and is a sightseeing must for visitors to the area. The 35-kilometer-long road borders Xing Hai Square in the west and Dong Hai Park in the east. One side of the road features mountainous areas



covered with forests while the opposite side reveals the panoramic coastline and sea. Due to the clear, fresh air and the sea, locals have nicknamed the road the “natural oxygen bar”.

GENERAL TIMETABLE

TIME	JULY 13,SUN	JULY 14,MON	JULY 15,TUE	JULY 16,WED
8:00-9:00		Parallel Sessions (T-1.1,T-3.1, T-8.1,T-10,F-3)	Parallel Sessions (T-1.4,T-3.4, T-9.1,T-11.1,F-1)	Plenary Session 2 (P-3,P-4)
9:00-10:00	Registration			Poster Session 2
10:00-10:30		Coffee/Tea	Coffee/Tea	Coffee/Tea
10:30-12:30		Parallel Sessions (T-5,T-1.2, T-8.2,T-12,F-6)	Parallel Sessions (T-14,T-1.5, T-7.2, T-6.1,F-7)	Parallel Sessions (T-1.6,T-3.6, T-8.4, T-6.3,F-4)
12:30-13:30		Lunch break	Lunch break	Lunch break
13:30-15:30	Technical Tour	Parallel Sessions (T-1.3,T-2.1, T-3.2,T-13.1,F-2)	Parallel Sessions (T-2.3,T-3.5, T-9.2,T-6.2,F-8)	Parallel Sessions (T-2.4,T-3.7,T-4T-8. 5,T-11.2,F-5)
15:30-16:00		Coffee/Tea	Coffee/Tea	Coffee/Tea
16:00-17:00	Opening Ceremony	Parallel Sessions (T-3.3,T-2.2, T-8.3,T-13.2,T-7.1)	Social Tour	Closing Ceremony
17:00-18:00	Plenary Session 1 (P-1,P-2)	Poster Session 1		
18:00	Welcome Reception		Party and Performance	

TECHNICAL AND SOCIAL PROGRAMS BY DAY

Sunday, July 13 2008

9:00—21:00 Registration

13:00—15:00 Technical Tour

16:00—17:00 Opening Ceremony

Room A Opening Ceremony

17:00—18:00 Plenary Session 1

17:00-17:30

P-1 Understanding Human Exposure to Air Pollutants in the Built Environment,
Prof. William Nazaroff, University of California at Berkeley, USA

Room A

17:30-18:00

P-2 Energy and Environment in Chinese Rural Housing: Road to Sustainability,
Prof. Xudong Yang, Tsinghua University, China

18:00—21:00 Welcome Reception

Banquet Hall

Monday, July 14 2008

8:00—10:00 Parallel Sessions

**Room B T-1.1 Building energy demand and energy performance of buildings, systems,
and components**

**Room C T-3.1 Indoor and outdoor air quality, thermal comfort and health impact related
to built environments**

Room D T-8.1 Advanced or innovative HVAC&R systems and system components

Room E T-10 Intelligent buildings and advanced control techniques

**Room F F-3 Inverse tracking of indoor pollutant
Chair: Qingyan Chen, Purdue University, USA**

10:00—10:30 Coffee/Tea

10:30—12:30 Parallel Sessions

Room B T-5 Indoor and outdoor lighting, lighting control, and visual comfort

**Room C T-1.2 Building energy demand and energy performance of buildings, systems,
and components**

Room D	T-8.2 Advanced or innovative HVAC&R systems and system components
Room E	T-12 Integration of technologies and tools for building design and operation
	F-6 IAQ Problems in China: Current Status and Future Perspective
Room F	Co-chair: Qingyan Chen, Purdue University, USA Co-chair: Guoqiang Zhang, Hunan University, China Co-chair: Qihong Deng, Central South University, China
12:30—13:30	Lunch Break
13:30—15:30	Parallel Sessions
Room B	T-1.3 Building energy demand and energy performance of buildings, systems, and components
Room C	T-2.1 Passive heating, passive cooling, and renewable energy for buildings
Room D	T-3.2 Indoor and outdoor air quality, thermal comfort and health impact related to built environments
Room E	T-13.1 Public policies related to building energy and environment
	F-2 Multifunctional facades and building structures-performance prediction and validation.
Room F	Chair: Marija Todorovic, University of Belgrade, Serbia
15:30—16:00	Coffee/Tea
16:00—17:00	Parallel Sessions
Room B	T-3.3 Indoor and outdoor air quality, thermal comfort and health impact related to built environments
Room C	T-2.2 Passive heating, passive cooling, and renewable energy for buildings
Room D	T-8.3 Advanced or innovative HVAC&R systems and system components
Room E	T-13.2 Public policies related to building energy and environment
Room F	T-7.1 Sustainable and advanced built environments
17:00—18:00	Poster Session 1

Tuesday, July 15 2008

8:00—10:00	Parallel Session
Room B	T-1.4 Building energy demand and energy performance of buildings, systems, and components
Room C	T-3.4 Indoor and outdoor air quality, thermal comfort and health impact related to built environments
Room D	T-9.1 Advanced or innovative building envelopes and materials for energy conservation and indoor environment improvement

Room E	T-11.1 Computer tools and experimental techniques for assessment of building energy and built environments
Room F	F-1 Sustainable and Advance Built Environment—A Singapore Experience Chair: Tan Eng Khiam, National University of Singapore, Singapore
10:00—10:30	Coffee/Tea
10:30—12:30	Parallel Sessions
Room B	T-14 Retrofit and optimal operation of the building energy system
Room C	T-1.5 Building energy demand and energy performance of buildings, systems, and components
Room D	T-7.2 Sustainable and advanced built environments
Room E	T-6.1 Ventilation, infiltration, and air distributions
Room F	F-7 Recent progress in IAQ and Health Research in China Co-chair: Yuguo Li, Hongkong University, China Co-chair: Xu Yang, Huazhong Normal University, China Co-chair: Jinliang Zhang, Peking University, China
12:30—13:30	Lunch break
13:30—15:30	Parallel Sessions
Room B	T-2.3 Passive heating, passive cooling, and renewable energy for buildings
Room C	T-3.5 Indoor and outdoor air quality, thermal comfort and health impact related to built environments
Room D	T-9.2 Advanced or innovative building envelopes and materials for energy conservation and indoor environment improvement
Room E	T-6.2 Ventilation, infiltration, and air distributions
Room F	F-8 Advances in EnergyPlus Development and Application Chair: John Zhai, University of Colorado at Boulder, USA
15:30—16:00	Coffee/Tea
16:00—18:00	Social Tour
18:00—21:00	Party and Performance

Wednesday, July 16 2008

8:00—9:00	Plenary Session 2
	8:00-8:30
Room A	P-3 Sustainable Building Design, Prof. Koen Steemers, Cambridge University, UK
	8:30-9:00

P-4 Ventilation and health in built environment, Prof.Yuguo Li, University of Hong Kong, China

9:00—10:00 Poster Session 2

10:00—10:30 Coffee/Tea

10:30—12:30 Parallel Sessions

Room B T-1.6 Building energy demand and energy performance of buildings, systems, and components

Room C T-3.6 Indoor and outdoor air quality, thermal comfort and health impact related to built environments

Room D T-8.4 Advanced or innovative HVAC&R systems and system components

Room E T-6.3 Ventilation, infiltration, and air distributions

Room F F-4 HVAC design for high-rise residential buildings
Chair: Jianlei Niu, Hong Kong Polytechnic University, China

12:30—13:30 Lunch Break

13:30—15:30 Parallel Sessions

Room B T-2.4 Passive heating, passive cooling, and renewable energy for buildings

13:30—15:00

Room C T-3.7 Indoor and outdoor air quality, thermal comfort and health impact related to built environments

15:00—15:30

T-4 Indoor and outdoor acoustic comfort and noise control

Room D T-8.5 Advanced or innovative HVAC&R systems and system components

Room E T-11.2 Computer tools and experimental techniques for assessment of building energy and built environments

Room F F-5 Balance between Energy Use and Indoor Environmental Quality
Co-chair: Yuanhui Zhang, University of Illinois at Urbana-Champaign, USA
Co-chair: Jamie Bennett, National institute for Occupational Safety and Health, USA

15:30—16:00 Coffee/Tea

16:00—18:00 Closing Ceremony

Room A Closing Ceremony

CONFERENCE VENUE

COBEE 2008 is to be held in Furama Hotel Dalian, a five-star hotel located in 60 Renmin Road, downtown of Dalian. The conference venue is 14 km from the airport, 1 km from the railway station, and 5 km from the scenic Tiger Beach.



ACCOMMODATION

The following hotels at or near to the conference venue have been booked for COBEE 2008. Hotel reservation can be made together with the conference registration.

Hotel	Room Type	Single	Twin	Deposit
Furama Hotel (★★★★★)	Standard	US\$150	US\$150	US\$150
Delight Hotel (★★★★★)	Standard	US\$90	US\$90	US\$182
Lee Wan Business (★★★★★)	Standard	US\$67	US\$67	US\$140
Friendship (★★★)	Deluxe	US\$65	US\$65	US\$130

* Due to the change of exchange rate between the US dollar and Chinese currency (currently 1 USD = 7.00 RMB) since the second announcement (1 USD = 7.50 RMB at that time), hotel rates have to be adjusted for reservation later than April 30, 2008.



Map of Conference Venue and Accommodation

TOURS FOR ACCOMPANYING PERSONS

Golden Pebble Beach



The Golden Pebble Beach is a national tourist resort located 50 km away from downtown Dalian. It is surrounded by sea on three sides and people can enjoy pleasant weather of warm winter and cool summer year around. Sinian rocks from 600 million years ago have formed into a magnificent landscape of grotesque stones in these areas. The Golden Pebble Beach is known as “The



Solidified Animal World”, “The Natural Geological Museum” and “The Magic Sculpture Park”. Scenic spots include the Golden Pebble Waxworks Hall, Stone Collection Hall, Golden Pebble Park, Ten-Thousand Fortune Pot, Chinese Martial Arts Hall, Golden Pebble Discovery Kingdom Theme Park, etc.

Tiger Beach Park



The Tiger Beach is one massive vortex of fun. Built in 1990, this amusement area caters to both kids and adults by offering a diverse scope of options including shopping and swimming. But it is the animal exhibits that really elevate it into “Must See” status. China's largest birdcage (18,000 square meters) and largest tiger sculpture reside here. It also harbors an aquarium that features an entertaining dolphin show.

Ice Valley Scenic Area (Xianrendong National Natural Reserve)

Located near the Qian Shan Mountains, this massive reserve sits almost 600 meters above sea level and encompasses three sections: Dragon Hill, Small River Valley and Yingna River Valley. Despite its height, it enjoys a temperate climate, allowing plant and animal life to flourish. The reserve harbors 810 plant species and 196 different forms of wildlife, many of which are endangered. It also features Xianren Cave and its famous karsts rock formations dating back to the Pre-Sinian Period.



TRAVEL INFORMATION

Dalian is with convenient air, rail, water, and land transportation.

Air

Dalian has many direct flights from/to a dozen of Asian countries and regions, such as Tokyo, Osaka, Seoul, and Hong Kong. Dalian has over 20 daily flights to Beijing, 14 daily flights to Pudong, Shanghai, 5 daily flights to Guangzhou, and hundreds of flights to over 40 other



domestic destinations. For flight schedule, please access the website at <http://www.dlairport.com/English/home.aspx>. Dalian Zhoushuizi International Airport is around 14 kilometers from downtown. It is a twenty-minute ride by taxi to the conference venue and the cost is about RMB 36.00 (USD 5.20). Passengers shall pay 30% additional fare for service between 10:00PM to 5:00AM for night driving. One should pay the taxi fare according to the fare meter reading that could be slightly different from the above price. Buses 516, 532, 610, 701, and 710 run between the airport and downtown at fare of RMB 1.00 (USD fifteen cents). The airport has also special shuttles to downtown with fare of RMB 5.00 (USD seventy cents).

Ticketing office: 0411-3642136

Domestic airline: 0411-3621493

International airline: 0411-3637090

Taxi stand: The taxi stand is at the exit of the airport terminal.

Trains

Dalian railway is connected with the railway network of Northeast China. Everyday more than 50 trains leave Dalian for Beijing, Shenyang, Harbin and many other cities. Dalian railway station, the terminal of Hada railway, is located in Qingniwa Bridge of downtown Dalian, which is only one kilometer from the conference venue.



Sea

Dalian is a very busy seaport with ferries serving to Yantai, Weihai, Penglai, Qinhuangdao, Tianjin, and Changhai County. High-speed tourist ferries are available for Yantai, Qinhuangdao, and Changhai County. There is ferry service between Dalian and Incheon, Korea. Dalian seaport terminal is located in North Wuwu Road in east Dalian. Buses 801 and 13 operate between the seaport and downtown.

Highways

Liaoda expressway connects Dalian with Shenyang, Liaoyang, Anshan, and Yingkou. Huanghai expressway runs from Dalian to Dandong, bordered with North Korea. Heda highway (highway 201) to Hehang and Heida highway (highway 202) to Heihe start from Dalian (Lushun).

INFORMATION ON DALIAN

Dalian is a charming city with a blue sea, a lot of sunshine, beautiful landscaping, gourmet seafood, and friendly people. The city is known to many as “Home of Track

and Field” and “City of Fashion”. Dalian has many beautiful parks and contains attractive buildings demonstrating various unique and interesting architectural styles. For those who enjoy ocean, the city's beaches are ideal places to escape the summer heat. Other local attractions in Dalian include: Xinghai Park, Tiger Beach Park, Golden



Pebble Beach Scenic Area, Fujia Village Tourist Center, and the Museum of Natural Science, and many others. Dalian is also famous for its shell carving pictures and glassware. Exploring scenic spots and places of historic interests will help you to recharge following a busy day at the conference. At night, you can soak

in the city while observing the unique, urban lighting, strolling along the seaside to assess thermal comfort, and taking in the air quality from the sea breezes. A diverse selection of local restaurants offers delicious food and wine from various regions of China. Studying the impact of the local cuisine on your health is perfect practice for evaluating energy and environment.

Dalian, located on a peninsula, is a flourishing and beautiful coastal, port city. The weather in Dalian is very pleasant, with summers that are not extremely hot and winters that are not too cold. The average temperature in Dalian is about 10°C. The temperature in mid July ranges from 19°C to 30°C with relative humidity from 62% to 66%. The fair weather ensures that Dalian can receive a high rank for outdoor thermal comfort. Due to the moderate summer temperatures, late May to middle September is the peak travel season in Dalian.



CONFERENCE SECRETARIAT

Tengfei “Tim” Zhang; Ph.D.

Dalian University of Technology

2 Linggong Road, Dalian

China, 116023

Cell Phone: +86-139 4288 5761

Email: cobee2008@gmail.com

URL: <http://bechtelrh.colorado.edu/ceae/cobee/>

Please access our website to download the registration form or find it in the appendix of this preliminary program

The First International Conference on Building Energy and Environment (COBEE 2008)

Jul. 13-16, 2008 Dalian, China

Registration Form

Please complete this form and return it via email, fax, or mail to:

Dr. Tengfei (Tim) Zhang, COBEE 2008

Dalian University of Technology

School of Civil and Hydraulic Engineering

2 Lingong Rd, Dalian 116023, China

Fax: +86-411- 8470-6713 E-mail: cobee2008@gmail.com

Staff use only

Registration No.: _____

Note: Registrations later than April 30 should use this form, previous version of forms will NOT be accepted.

For participants with paper publication, the forms shall be submitted before May 29, 2008.

For participants without paper publication or presentation, the registration persists until the end of the conference.

Please type or write clearly in block letter.

PERSONAL INFORMATION

Family Name _____ First Name _____

Contact Address: (☐ Office ☐ Home)

Position and Affiliation _____

Street, City and Zip or Post Code _____

Country _____

Phone _____ Fax _____

E-mail _____

PASSPORT INFORMATION FOR VISA ASSISTANCE (Participant and Accompanying persons)

Participant:	Family Name	First Name	Nationality	Occupation	Passport No.
	_____	_____	_____	_____	_____

Sex(Male/Female)	Birthday (mm/dd/year)	Date to enter China (mm/dd/year)	Date to leave China (mm/dd/year)
_____	_____	_____	_____

Accompany person:	Family Name	First Name	Nationality	Occupation	Passport No.
	_____	_____	_____	_____	_____

Sex(Male/Female)	Birthday (mm/dd/year)	Date to enter China (mm/dd/year)	Date to leave China (mm/dd/year)
_____	_____	_____	_____

PAPER(S)/ABSTRACT(S) TO BE PRESENTED BY YOU

Paper/Abstract Number _____
Preferred presentation format (oral/poster) _____

REGISTRATION FEES

Participant (standard) ☐ US\$450
Participant (package) ☐ US\$550
Student (standard) ☐ US\$300
Student (package) ☐ US\$400
More than two papers/abstracts ☐ US\$100 X ____ papers/abstracts
Accompanying Person(s) (standard) ☐ US\$70 X ____ person(s)
Accompanying Person(s) (package) ☐ US\$170 X ____ person(s)

Subtotal(1) US\$ _____

- (1) The standard registration for participants and students includes: opening ceremony; welcome reception on July 13; all plenary, parallel, and poster sessions; a CD of conference proceedings; a copy book containing all the paper abstracts; coffee and tea breaks; technical visit to the seawater source heat pump project; and closing ceremony.
- (2) The registration package for participants and students includes all the items in the standard registration plus excursion to Bin Hai Road, lunches on July 14-16, dinner on July 14, and dinner and party on July 15.
- (3) The standard registration for accompanying persons includes: opening ceremony, welcome reception on July 13, coffee and tea breaks, technical visit to the seawater source heat pump project, and closing ceremony.
- (4) The registration package for accompanying persons includes all the items in the standard registration plus excursion to Bin Hai Road, lunches on July 14-16, dinner on July 14, and dinner and party on July 15.

TECHNICAL VISIT

Please make your reservation, if you are going to attend

☐ Technical Visit to the Seawater Source Heat Pump Project Jul. 13 ____ person(s)

HOTEL RESERVATION

Arrival Date _____ Time _____ Flight No. _____

Check-in Date _____ Check-out Date _____ Total Nights _____

Please indicate your choice

Hotels	Room Level	Single	Twin	Deposit
Furama Hotel Dalian (★★★★★)	Standard	<input type="checkbox"/> US\$150	<input type="checkbox"/> US\$150	<input type="checkbox"/> US\$150
Delight Hotel (★★★★★)	Standard	<input type="checkbox"/> US\$90	<input type="checkbox"/> US\$90	<input type="checkbox"/> US\$182
Lee Wan Business (★★★★★)	Standard	<input type="checkbox"/> US\$67	<input type="checkbox"/> US\$67	<input type="checkbox"/> US\$140
Friendship (★★★★)	Deluxe	<input type="checkbox"/> US\$65	<input type="checkbox"/> US\$65	<input type="checkbox"/> US\$130

* Due to the change of exchange rate between the US and Chinese currency (currently 1 USD = 7.00 RMB) since the second announcement (1 USD = 7.50 RMB at that time), hotel rates have to be adjusted for reservation later than Apr. 30, 2008.

☐ Pay deposit only US\$ _____ × _____ Room(s) = US\$ _____

☐ Pay all the accommodation costs US\$ _____ × _____ night(s) × _____ Room(s) = US\$ _____

Subtotal(2) US\$ _____

☐ I will share a double room with another person, his(her) name is _____.

☐ I do not need any hotel reservation.

LOCAL TOURS

Please browse <http://bechtelrh.colorado.edu/ceae/cobee/index.htm> for detailed information of the local tours

LT1: Golden Pebble Beach (Start: 7:00 AM, End: 5:00 PM)

☐ Jul. 13 ☐ Jul. 14 ☐ Jul. 15 ☐ Jul. 16 ☐ Jul. 17

US\$20x _____ person(s) = US\$ _____

LT2: Tiger Beach Park (Start: 7:00 AM, End: 5:00 PM)

☐ Jul. 13 ☐ Jul. 14 ☐ Jul. 15 ☐ Jul. 16 ☐ Jul. 17

US\$30 x _____ person(s) = US\$ _____

LT3: Ice Valley Scenic Area (Start: 7:00 AM, End: 7:00 PM)

☐ Jul. 13 ☐ Jul. 14 ☐ Jul. 15 ☐ Jul. 16 ☐ Jul. 17

US\$40 x _____ person(s) = US\$ _____

Subtotal (3) US\$ _____

Each tour package includes most of entry tickets, transportation, insurance, and service fee from tour guides. Lunches will be provided at the participants' expense during the tour. The organizing committee reserves the right to cancel a tour if less than ten persons have ordered that tour package each day. If a tour is canceled, one will get the tour deposit refund.

Grand Total: (1)+(2)+(3) = US\$ _____

METHODS OF PAYMENT:

☐ I have paid via the online payment system on the conference website. (COBEE 2008 strongly recommends this payment method.)

Total Amount Paid: US\$ _____

Payment Date: _____

Holder Name of Credit/Debit Card or Bank/PayPal Account Used for Payment: _____

☐ I have enclosed a bank draft for the above grand total payable to Tengfei Zhang.

☐ I would like to pay cash on site (Only registration without paper publication or presentation can pay on site).

Signature _____ Date _____

CANCELLATION POLICY:

Cancelled before May 31, 2008	Refund by 90% of the total amount received
Cancelled between June 1 and June 30, 2008	Refund by 50% of the total amount received
Cancelled after July 1, 2008	No refund, but the registered participant will receive a copy of conference material by mail after the conference is over

Note: The registration is transferable with a \$50 handling fee.

Please complete this form and return it via email, fax, or mail to:

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