



2010 CO₂ Capture and Storage Summer School

30th October – 3rd November 2010

Wuhan, Hubei, China

Hosts: Department of Social Development, Ministry of Science and
Technology, P. R. China
The Administrative Center for China's Agenda 21
Geoscience Australia

Organizer: Institute of Rock and Soil mechanics, Chinese Academy of
Sciences



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- Hosts:** Department of Social Development, Ministry of Science and Technology, P. R. China
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- Organizer:** Institute of Rock and Soil mechanics, Chinese Academy of Sciences
- Aims:** Improving the students' understanding of the latest progresses in CCS through comprehensive and systematical teaching and discussions between experts and students, attracting more excellent young students to join the CCS community and promoting communication and cooperation among the students.
- Contents:** Climate change and CCS
CO₂ capture technology
Safety assessment and monitoring
Site exploration and characterization
Modeling and storage capability assessment
Economic problems and project implementations
- Venue:** East Lake Hotel, Wuhan, Hubei, China
- Participants:** Tertiary and Graduate students and early career professionals working in or interested in geological storage of CO₂



Program

Oct. 30	8:00-18:30	Registration	
	Location:	East Lake Hotel	
	18:30-20:00	Reception Dinner	
	Location:	Lingdian dinner Hall, East Lake Hotel	
Oct. 31	Session 1: Climate change and CCS: history, present and future		
	Time:	8:00-12:00	
	Location:	No.2 Meeting room, 7th floor	
	Chair:	Prof. Xiaochun Li	
	8:00-8:20	Opening ceremony	Mr. Rick Causebrook <i>Geoscience Australia</i> Prof. Xiaochun Li <i>IRSM-CAS</i>
	8:20-8:50	Principles of CCS – Brief Overview	Mr. Rick Causebrook <i>Geoscience Australia</i>
	8:50-9:20	Global overview of CCS projects	Ms Kathy Hill <i>Global CCS Institute</i>
	9:20-10:20	An overview of CCS in China	Prof. Qi Li <i>IRSM-CAS</i>
	10:20-10:40	Tea break	
	10:40-11:20	Group discussion Suggested topics: 1. The necessity of CCS 2. Barriers to CCS in China, Australia and the whole world and the possible resolutions	
	11:20-12:00	Questioning & Answering	
	12:00-13:00	Lunch	
	Session 2: CO₂ capture technology		
	Time:	14:30-18:00	
	Location:	No.2 Meeting room, 7th floor	
	Chair:	Mr. Rick Causebrook	
	14:30-15:20	Pre- and post-combustion capture of CO ₂	Dr Gustavo Adolfo Fimbres-Weihs <i>CO2CRC</i>
15:20-16:10	IGCC and co-production	Dr Lifeng Zhao <i>Institute of Engineering Thermophysics, CAS</i>	
16:10-16:30	Tea break		



	16:30-17:20	Group discussion Suggested topics: <div><div>1.</div><div>What is the CO₂ capture? Why is it necessary</div></div> <div><div>2.</div><div>The similarities and differences in the advancement of CO₂ capture technology between China and Australia</div></div>	
	17:20-18:00	Questioning & Answering	
	18:00-19:00	Dinner	
Nov. 1	Session 3: Safety assessment and monitoring Time: 8:00-12:00 Location: No.2 Meeting room, 7th floor Chair: Prof. Qi Li		
	8:00-9:00	Risk evaluation and monitoring	Mr. Rick Causebrook <i>Geoscience Australia</i>
	9:00-10:00	Safety monitoring technology	Prof. Bin Gong <i>Peking University</i>
	10:00-10:20	Tea break	
	10:20-11:20	Group discussion Suggested topics: <div><div>1.</div><div>What does the "safety of CCS" mean?</div></div> <div><div>2.</div><div>How to guarantee the safety and what technology should be developed to achieve it?</div></div>	
	11:20-12:00	Questioning & Answering	
	12:00-13:00	Lunch	
	Session 4: Site exploration and characterization Time: 14:30-18:00 Location: No.2 Meeting room, 7th floor Chair: Prof. Keni zhang		
	14:30-15:20	Physical exploration methods and site characterization	Dr Mark Bunch <i>CO2CRC/University of Adelaide</i>
	15:20-16:10	Well drilling, logging and testing	Prof. Bo Peng <i>China University of Petroleum</i>
	16:10-16:30	Tea break	
	16:30-17:20	Group discussions Suggested topics: <div><div>1.</div><div>What is the site exploration? Why is it important for CCS?</div></div> <div><div>2.</div><div>The differences of geological conditions between China and Australia</div></div>	
	17:20-18:00	Questioning & Answering	
	18:00-19:00	Dinner	



Nov. 2	Session 5: Modeling and storage capacity assessment		
	Time: 8:00-12:00		
	Location: No.2 Meeting room, 7th floor		
	Chair: Dr Mark Alexander Bunch		
	8:00-8:45	Numerical simulation For CO ₂ storage in saline aquifer	Prof. Keni Zhang <i>Beijing Normal University</i>
	8:45-9:15	Numerical simulation of fluid flow and geomechanics	Mr Liuqi Wang <i>Geoscience Australia</i> Mr. Hamid Roshan <i>University of New South Wales</i>
	9:15-10:00	Storage capacity assessment	Mr. Rick Causebrook <i>Geoscience Australia</i>
	10:00-10:20	Tea break	
	10:20-11:20	Group discussion Suggested topics: <div><div>1.</div><div>Is modeling (simulation) important for CCS? If important why?</div></div> <div><div>2.</div><div>What is capability assessment? What methods are there for capacity assessment</div></div>	
	11:20-12:00	Questioning & Answering Chair: Prof. Keni Zhang	
	12:00-13:00	Lunch	
	13:00-18:00	Wuhan visiting (Hubei Province Museum and Moshan, East lake)	
	18:00-19:00	Dinner	
	Session 6: Economic demonstration projects and closing remarks		
	Time: 8:00-12:00		
Location: No.2 Meeting room, 7th floor			
Chair: Prof. Bo Peng			
8:00-9:00	Economic assessment of CCS	Dr.Gustavo Fimbres-Weihs <i>CO2CRC/UNSW</i>	
9:00-9:30	Shenhua project	Mr. Dianwen Sun <i>Shenhua Group</i>	
9:30-10:10	Otway project	Dr Mark Bunch <i>CO2CRC/University of Adelaide</i>	



	10:10-10:30	Tea break	
	10:30-11:10	Group discussion Suggested topics: <ol style="list-style-type: none"> 1. What are the social obstacles for CCS implementation 2. Whether is the social obstacle greater than technical difficulty? 	
	11:10-11:40	Questioning & Answering	
	11:40-12:00	Closing remarks	Mr. Rick Causebrook <i>Geoscience Australia</i> Prof. Xiaochun Li <i>IRSM-CAS</i>
	12:00-13:00	Lunch & Departure	

Note: All the participants, including both students and teachers, are encouraged to present any questions about CCS.



Speaker and facilitator list

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Student list

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51	Wanwan hou	CO2CRC/University of New South Wales	



Useful Information

Conference venue: East Lake Hotel, Wuhan, Hubei, China

Address: Yaojialing 231, Wuchang, Wuhan.

Website: <http://www.eastlakehotel.com/>

Reception phone: 86-027-67813999

Meals : Xingyin'ge Cafeteria East Lake Hotel (1st floor)

Breakfast: 7:00-9:00

Lunch: 11:40-13:30

Supper: 17:50-19:30

Note : Please use the proper dinner coupons for dining, Do not lost coupons or transfer them.

Internet: You can use internet connection freely.

Emergency call: 119 (fire), 110 (police), 120 (ambulance).

Weather:

Oct. 30	Sunny to Cloudy 10□-19□
Oct. 31	Cloudy 10□-23□
Nov.1	Cloudy 11□-23□
Nov. 2	Cloudy 12□-122□
Nov.3	Cloudy 22□

Tour: Hubei Province Museum and Moshan, East lake.



Hotel map

