China-Australia Centre for Sustainable Urban Development

CAC_SUD

Seed funding field campaign 2014
P.R. China
15 – 29 November 2014
The Asia-Pacific region will experience immense urbanization over the next 20 years. The China-Australia Centre for Sustainable Urban Development (CAC_SUD) is an international research centre exploring how Asia-Pacific cities can plan for and manage sustainable growth. Collaboration with governments, private-sector organizations and research institutions around the world enables CAC_SUD to develop innovative programs and policy recommendations of relevance to Australia, China and the Asia-Pacific region.

In December 2012, Australia and the People’s Republic of China celebrated the 40th anniversary of diplomatic relations. The Australian Government’s Australia in the Asian Century White Paper, released in October 2012, illustrates the potential and ongoing benefits of a long-term relationship between Australia and the world’s fastest-growing economy. The CAC_SUD partnership reflects how collaboration between researchers in Australia and China can help build better Asia-Pacific urban environments.

In order to increase the communication between the University of South Australia and some Chinese universities and to develop the international cooperation research project, Prof John Boland, Dr Conrad Philipp, Dr Tim McGinley and Mr He He visited the Tongji University (Shanghai), Harbin Institute of Technology (Harbin) and the Shanxian Normal University (Xian) from November 17 - 28 Nov 2014.

They communicated well with scholars and students by giving lectures and discussing research hotspots about Urban Development, Ecological Footprint, Remote Sensing and Timber Construction.
Our Partners

- Tongji University, Shanghai
- Shaanxi Normal University, Xian
- Jiang Architects & Engineers, Shanghai
- CRC for Low Carbon Living, Sydney
- Harbin Institute of Technology
Selected publications


Track record

PhD, University of Adelaide, Australia, 1996
M Math, University of Waterloo, Canada, 1970
B Math (Hons), University of Waterloo, Canada, 1969
Dr. Conrad Philipp
UCR Co-ordinator
Post-doctoral research fellow
University of South Australia

Profile
Conrad Philipp graduated with a diploma in geography and urban planning from the Friedrich Schiller University Jena, Germany in 2009 and has worked for the JENA-GEOS-Ingenieurbuero GmbH as a deputy team leader. In 2013, Conrad received his PhD at the Institute of Urban Planning and Urban Design of the University of Duisburg-Essen, Germany with a dissertation titled ‘The impact of a green belt on the urban development of a megacity: Interdisciplinary research on the example of Seoul (Republic of Korea)’. During his PhD, he held a scholarship from the Federal Republic of Germany and from the University of Duisburg-Essen. As a postdoctoral researcher at the sd+b centre, Conrad will coordinate the CRC (Low Carbon Living) research project ‘Urban Micro Climates: Comparative study of major contributors to the Urban Heat Island effect in three Australian cities (Sydney, Melbourne, Adelaide)’ and lead the team researching ‘Urban Micro Climates: Comparative study of Tianjin, Shenzhen and Shenyang’ at the China-Australia Centre for Sustainable Urban Development.

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Selected publications


Track record
Post-doc research fellow, University of South Australia, Australia, 2014-2017
PhD, University of Duisburg-Essen, Germany, 2013
Max Plank Institute, Jena, Germany, 2010
Diploma, Friedrich Schiller University Jena, Germany, 2009

Conferences


The Tongji University, located in Shanghai, has more than 50,000 students and 8,000 staff members. The Tongji University is one of the oldest and most prestigious universities in China. Among its various departments it is especially highly ranked in engineering, among which its architecture, urban planning, and civil engineering departments have consistently ranked first in China for decades, and its automotive engineering, oceanography, environmental science, software engineering, German language departments are also ones of the best domestically. The Tongji University is as well a partner of the CRC for Low Carbon Living.

Within the research field trip the scientists from UniSA visited the follow departments:

- SiPing Road Campus of Tongji University: Xu Peng
- College of Architecture and Urban Planning
- Shanghai Tongji Urban Planning & Design Institute
- School of Mechanical Engineering

Meeting with Prof Xu Peng (Tongji University, Shanghai)

17 November 2014

Prof Xu Peng has become a Doctor of Philosophy at University of Colorado Boulder from 1997 to 2001. After that, he worked at Lawrence Berkeley National Laboratory from 2001 to 2009. From 2010, he has got a professor at Tongji University in Shanghai. His key aspects are intelligent building, energy saving reconstruction of buildings and building energy simulation.

Dr Conrad Philipp and Mr He He met Prof Xu Peng and Manager Yue Peng on Nov 17 Nov at the SiPing Road Campus of Tongji University. They held a representation about the CRCCLCL and their projects (RP2005: Urban climates and RP2002: Integrated ETWW Demand Forecasting and Scenario Planning for Precints) to describe their research interests hoping to carry out research projects with our scholars on urban development. In addition, Prof Xu Peng expressed his interest to visit our centre and to attended conferences of CRC for Low Carbon Living.

Presentation of Prof Xu Peng (Tongji University) for Yue Peng (Tongji University) and Dr Conrad H. Philipp (UniSA)
**Meeting with Dr Zhi Zhuang (Tongji University)**

19 November 2014

The Green Building and New Energy Research Centre was established in 2003 and belongs to the Tongji University. It is a research platform including Architecture, Construction building, Urban Development, Environment Engineer and Heating and Ventilation. Its purpose is to develop new energy technologies for building, building energy and low carbon assessment for building.

Dr Zhi Zhuang and Dr Chun-Ming Hsieh are focused on Data mining for Building Energy Consumption, Energy plan of Smart City, the assessment for Green Building. Dr Zhuang is responsible for more than 20 research projects, including Clean Energy for building in China and America and key projects in the National Science & Technology Pillar Program.

We discussed how to collect data and analyze them with respect to building energy. Dr Zhuang has built a database for the energy consumption of high-rise buildings. He hopes to get support about mathematical analysis to acquire more information for the future building energy saving.
Meeting with Prof Yang Guiqing (Tongji University)
20-21 November 2014

Prof Guiqing Yang is the director of the College of Architecture and Urban Planning of the Tongji University. He got a master degree at Harvard University and visited England and Germany as a scholar. He takes part on research on the health effects of rules and evaluation of residential construction, rural residential planning and design, and construction standards research.

Dr Conrad H. Philipp hold at the 21 November a presentation with the title “Urban heat investigations in the Asia Pacific region” at the College of Architecture and Urban Planning. We mutually hope to build a long term connection to carry out some international research projects on urban planning.
Jiang Architects & Engineers, Shanghai

Jiang Architects & Engineers (JAE) is Chinese Grade A qualified architectural design firm. The firm is established by and named after professor Jiang Huan Cheng, a member of Chinese Academy of Engineering. It was set up in 1998 as a subsidiary of Shanghai Xian Dai Architectural Design Group. In 2005, it was privatized and became an independent company. JAE is a multi-discipline office that has architectural, structural and MEP engineers. The company has more than 70 staff. It is a well structured and technically strong design company. The company portfolio covers many technically demanding public buildings such as office, hotel, retail, civic building, and high rise tower.

Meeting with Academician Jiang Huan Cheng and his team from the Jiang Architects & Engineers, Shanghai

18 November 2014

Academician Jiang Huan Cheng graduated at the Tsinghua University in 1963 and has been an Academician since 1995. He designed the Oriental Pearl Tower in 1987, which laid the foundation of his position in the field of Architecture Design in China. Jakarta TV Tower is also designed by him and his team, which is the highest television tower in the world.

Dr Conrad Philipp and Mr He He met Academician Jiang Huan Cheng and his team at his office of the Jiang Architects & Engineers. Mr Cheng introduced their future project ‘Space Building’, which is a smart precinct to achieve energy and water saving as well as waste reduction. Dr Conrad H. Philipp held a representation about the CRCCLCL and their projects to describe their research interests hoping to carry out research projects with our scholars on urban development. Jiang Architects & Engineers and the researcher from UniSA were hoping to get more knowledge about the energy saving technology and the experience to deal with municipal waste.
Meetings

Shaanxi Normal University, Xian

The Shaanxi Normal University is a key institution of higher education in the People's Republic of China authorized to grant degrees in almost all kinds of subject.

Directly administered by the Ministry of Education of China, Shaanxi Normal University, a key university under the construction plan of China's national “211 Project” and a university under China’s Innovation Platform Construction Plan of the “985” Superior Discipline of Teacher Education, is a major base for training teachers and administrators of higher learning institutes and secondary schools as well as other high-level professionals in China, and is known as the “Cradle of Teachers” in Northwest China. During its 70-year history in education, the University, while rooted in China's West, has embraced the whole country, developed a school spirit of “Morality, Learning, Aspiration and Action” and has seen itself become firmly established in Western China as an influential top-tier comprehensive teachers training university, as it strives to achieve the goal of building itself to be a major comprehensive research university distinguished by its teacher education. In 2014, the university rank 71 in China, and it rank 8 in all Chinese normal universities.

Workshop with Prof Jing Li (Shaanxi Normal University)

24-26 November 2014

Prof Jing Li got her PhD in Geography in 2006. Her research is mainly focused on the interface between land-use cover and change in remote sensing and GIS, landscape-level spatial simulation modeling; analysis of energy and material flows through economic and ecological systems; evaluation of ecosystem services, carrying capacity, and natural capital.

Prof John Boland and Dr Conrad H. Philipp hold two presentations in the Lecture Hall of the Shaanxi Normal University on the 24 November. They introduced their researches about Ecological Footprint and Food Waste as well as the Modified Mono Window Algorithm to scholars and students. On 25November, they attended a forum with teachers and students in the College of Tourism and Environment Science. The researcher from UniSA and the Shaanxi Normal University see excellence cooperative research opportunities in the field of land use management and remote thermal investigations.
Meetings

Prof John Boland (UniSA) present at the Shaanxi Normal University (Xian)

Dr Conrad H Philipp (UniSA) present at the Shaanxi Normal University (Xian)

He He (UniSA) and Prof Jing Li (Shaanxi Normal University, from right)

Students and Colleagues from Prof Jing Li at the Shaanxi Normal University
Meetings

Harbin Institute of Technology, Harbin

The Harbin Institute of Technology (HIT) is a research university and a member of the top best Universities in China. HIT undertakes research and numerous private and governmental projects, which may have a bearing on its international ranking, although it is widely recognized as one of the top universities in the country, especially when it comes to local science and engineering league tables. HIT is one of only ten universities in the world that have designed, built, and launched their own satellites (in 2004, 2008, and 2013). It made the largest contribution to the success of the Shenzhou series and Kuaizhou series spacecrafts.

Dr Su Wanqing (third from the right) and his team followed by He He (UniSA), Prof John Boland (UniSA) and Dr Conrad Philipp (Unisa, from right to left) at the Harbin Institute of Technology (Harbin)

Meeting with Academician Jiang Huan Cheng and his team from the Jiang Architects & Engineers, Shanghai

27-29 November 2014

Dr Su Wanqing is the Assistant Director of the College of Architecture and Regional Planning. The field of his research mainly includes urban planning, environment and behaviour of dwelling. As a visiting scholar, he worked at University of Sheffield.

Prof Wang Zheng is the director of the Department of Civil Engineering Materials since 2009. His research involves reuse of construction waste and application of new building materials.

Prof John Boland and Dr Conrad Philipp performed their presentations to Dr Wanqing and his team about ‘Climate Statistical Analysis for Energy Meteorology’ and Urban heat investigations in the Asia Pacific region. Dr Wanqing and his team described some research projects which they had finished and are actually dealing with. We hope to arrange research collaborations about urban climate in cold and warm regions.

Prof John Boland and Dr Conrad Philipp had an interesting discussion with Prof Wanqing about future research collaborations.

Prof John Boland (UniSA) present at the Harbin Institute of Technology (Harbin)
Further steps for upcoming activities within the China-Australia Centre for Sustainable Urban Development

- 2nd CAC_SUD seed funding field campaign to the P.R. China in 2015
- Cooperative Paper and research activities
- Grant applications

The Australia-China Council (ACC) is the Australian Government’s advisory and funding body dedicated to strengthening of cultural, education, business, and more broadly, people-to-people relations between Australia and China. Each year, we deliver around A$700,000 in grants for organizations and individuals across Australia. The Council’s funding is determined by the Government, and is subject to the scope and availability of funding in each financial year (http://www.dfat.gov.au/acc/grants/).

Australia-China Science research fund (ACSRF) provides support for strategic science and research collaboration of mutual benefit to Australia and China. Funding is available to support Australia-China Joint Research Centres and Group Missions. Group missions are visits by Australian groups to China or Chinese groups to Australia to achieve specific purposes related to research and research-driven innovation: http://www.industry.gov.au/science/internationalcollaboration/acsrf/Pages/default.aspx

- Early and mid-career researcher exchange programs with Chinese partner/s
- Research-related workshops and symposia with Chinese partner/s
- Research-related visits and secondments of Australian researchers to China (including cross-disciplinary and cross-institutional missions)
- Research-industry missions to China
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