

Hong Kong Geography Day 2016

# 香港地理日

Adapting Changes and Enhancing Sustainability:

Hong Kong and Beyond

19 November 2016  
Esther Lee Building, CUHK

Organizers

Co-Organizers



Department of Geography and  
Resource Management, CUHK



Department of  
Geography, HKBU



Department of  
Geography, HKU



Hong Kong  
Geographical Association



Department of Social Sciences, EdUHK





**HONG KONG GEOGRAPHY DAY 2016**  
*Adapting Changes and Enhancing Sustainability:  
Hong Kong and Beyond*



**19 November 2016**  
**Esther Lee Building**  
**The Chinese University of Hong Kong**

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## Introduction

Hong Kong Geography Day is the most important event of the geography education and research community in Hong Kong. It is held and hosted every other year by the three geography departments of The Chinese University of Hong Kong, Hong Kong Baptist University, and The University of Hong Kong on rotation. This biennial event aims to foster academic exchange and collaboration between geography-related faculty members and postgraduate students, and to promote geography education in secondary schools. The main theme of this year is: *Adapting Changes and Enhancing Sustainability: Hong Kong and Beyond*. The whole-day programme will address and highlight a variety of issues and challenges of global changes and sustainability, with the intent of consolidating what we have known and identifying gaps in research and teaching.

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## Date and Venue

**Time:** 9:00 a.m. to 4:30 p.m. (*Registration: 8:30 a.m. to 9:00 a.m.*)

**Date:** 19 November 2016, Saturday

**Venue:** Esther Lee Building (ELB), The Chinese University of Hong Kong

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## Language

English and Chinese (Cantonese)

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## Organizers

- ❖ Department of Geography and Resource Management, The Chinese University of Hong Kong
- ❖ Hong Kong Geographical Association

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## Supporting Organizations

- ❖ Department of Geography, Hong Kong Baptist University
- ❖ Department of Geography, The University of Hong Kong
- ❖ Department of Social Sciences, The Education University of Hong Kong

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## **Advisory Committee (in alphabetical order)**

- ❖ BAILEY Adrian J., Chair Professor, Department of Geography; Dean, Faculty of Social Sciences, Hong Kong Baptist University
- ❖ JIM Chi Yung, Chair Professor, Department of Geography, The University of Hong Kong
- ❖ LAU Ngar Cheung, Gabriel, AXA Professor of Geography and Resource Management, The Chinese University of Hong Kong
- ❖ LI Si Ming, Chair Professor, Department of Geography, Hong Kong Baptist University
- ❖ LIN Chu Sheng, George, Chair Professor, Department of Geography, The University of Hong Kong
- ❖ SHEN Jianfa, Chairman and Professor, Department of Geography and Resource Management, The Chinese University of Hong Kong
- ❖ WANG Donggen, Head and Professor, Department of Geography, Hong Kong Baptist University
- ❖ ZHANG Dian, David, Head and Professor, Department of Geography, The University of Hong Kong

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## **Organizing Committee**

### **Chairperson**

- ❖ LEE Wai Ying, Joanna, Executive Committee Member, Hong Kong Geographical Association; Professional Consultant, Department of Geography and Resource Management, The Chinese University of Hong Kong

### **Members (in alphabetical order)**

- ❖ CHEN Yongqin, David, Professor, Department of Geography and Resource Management, The Chinese University of Hong Kong
- ❖ CHEUNG Ting On, Lewis, Executive Committee Member, Hong Kong Geographical Association; Assistant Professor, Department of Social Sciences, The Education University of Hong Kong
- ❖ KU Ka Man, St. Mark's School
- ❖ LEE Fung, Harry, Executive Committee Member, Hong Kong Geographical Association; Assistant Professor, Department of Geography, The University of Hong Kong
- ❖ LEUNG Wing Kin, Executive Committee Member, Hong Kong Geographical Association; Po Leung Kuk Laws Foundation College
- ❖ LIU Pui Ying, Executive Committee Member, Hong Kong Geographical Association; Sing Yin Secondary School
- ❖ MAH Ngar Yin, Daphne, Executive Committee Member, Hong Kong Geographical Association; Assistant Professor, Department of Geography, Hong Kong Baptist University
- ❖ SHEN Jianfa, Chairman and Professor, Department of Geography and Resource Management, The Chinese University of Hong Kong
- ❖ XU Jiang, Chairperson, Hong Kong Geographical Association; Associate Professor, Department of Geography and Resource Management, The Chinese University of Hong Kong

## Programme Outline

TIME	PROGRAMME	
08:30-09:00	<b>Registration</b> <i>Ground Floor Foyer, Esther Lee Building</i>	
09:00-16:00	<b>Exhibition</b> <i>Ground Floor Foyer, Esther Lee Building</i> <ul style="list-style-type: none"> <li>- PGS Research Poster Competition (Poster Exhibition)</li> <li>- University Geography-related Programmes</li> <li>- Government Departments</li> <li>- Non-Governmental Organisations</li> <li>- Private Companies</li> </ul> <b>Open House, GRM at CUHK</b> (morning session) <i>2nd Floor, Wong Foo Yuan Building</i>	
09:00-10:35	<b>Opening Ceremony</b> <i>LT1, Ground Floor, Esther Lee Building</i>	
09:00-09:10	<b>Welcoming speeches by Prof. SHEN Jianfa &amp; Prof. XU Jiang</b>	
09:10-09:45	<b>Keynote speech: Mr. LING Kar Kan, JP</b> , Director of Planning, Planning Department, HKSAR Government <b>Title: Make Hong Kong Tomorrow-ready</b>	
09:45-10:20	<b>Keynote speech: Prof. Gabriel Ngar-Cheung LAU</b> , AXA Professor of Geography and Resource Management, CUHK <b>Title: Climate Change from a Hong Kong Perspective</b>	
10:20-10:35	<b>Prize award ceremony for secondary school International Geography Olympiad winners</b>	
10:35-11:00	<b>TEA BREAK</b>	
11:00-12:30	<b>Research Seminar: Session A</b> <i>ELB202, 2<sup>nd</sup> Floor, Esther Lee Building</i>  <b>Research Seminar: Session B</b> <i>ELB207, 2<sup>nd</sup> Floor, Esther Lee Building</i>	<b>Secondary School Talk</b> <u>Title: Learning strategies for DSE Geography students</u> <b>Mr. IP Kim Wai &amp; Prof. LAM Chi Chung</b> <i>LT1, Ground Floor, Esther Lee Building</i>  <b>GIS Workshop for Secondary School Teachers (by Esri China (HK) Limited)</b> <i>Rm222, 2<sup>nd</sup> Floor, Wong Foo Yuan Building</i>
12:30-14:00	<b>LUNCH</b>	
14:00-16:00	<b>Research Seminar: Session C</b> <i>LT1, Ground Floor, Esther Lee Building</i>  <b>Research Seminar: Session D</b> <i>ELB202, 2<sup>nd</sup> Floor, Esther Lee Building</i>	<b>Guided Fieldtrip for Secondary School Teachers: T·Park (14:30 – 17:15)</b> <i>Assembly at Ground Floor, Esther Lee Building (14:30)</i> <i>Depart from T·Park (17:15)</i>
16:00-16:30	<b>Prize presentation of paper/poster competition winners</b> <i>LT1, Ground Floor, Esther Lee Building</i>	

## Opening Ceremony

TIME	PROGRAMME
08:30-09:00	<p><b>Registration</b> <i>Ground Floor Foyer, Esther Lee Building</i></p>
09:00-09:10	<p><b>Opening Ceremony</b> <i>Lecture Theatre 1, Ground Floor, Esther Lee Building</i></p> <p><b>Welcoming speech</b></p> <ul style="list-style-type: none"> <li>• Prof. SHEN Jianfa, Chairman, Department of Geography and Resource Management, The Chinese University of Hong Kong</li> <li>• Prof. XU Jiang, Chairperson, Hong Kong Geographical Association</li> </ul>
09:10-09:45	<p><b>Keynote speech</b> <b>Mr. LING Kar Kan, JP</b> Director of Planning, Planning Department HKSAR Government <b>Title: Make Hong Kong Tomorrow-ready</b></p>
09:45-10:20	<p><b>Keynote speech</b> <b>Prof. Gabriel Ngar-Cheung LAU</b> AXA Professor of Geography and Resource Management, The Chinese University of Hong Kong <b>Title: Climate Change from a Hong Kong Perspective</b></p>
10:20-10:35	<p><b>Prize award ceremony for secondary school International Geography Olympiad winners</b></p>
10:35-11:00	<p><b>TEA BREAK</b></p>

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## Keynote Speakers



**Mr. LING Kar Kan, JP, FHKIP, RPP**  
**Director of Planning, Planning Department**  
**HKSAR Government**

Mr. Ling Kar Kan is a professional town planner with extensive experience including planning for the new airport and the Tung Chung New Town, review of the Town Planning Ordinance, harbor-front planning and development, planning enforcement and prosecution, cross-boundary planning, and planning for new development areas.

Mr. Ling is the Director of Planning, heading the Planning Department of the Hong Kong Special Administrative Region Government. He is also the chairman of the Metro Planning Committee and Rural & New Town Planning Committee of the Town Planning Board.

Mr. Ling was the President of the Hong Kong Institute of Planners from 2007 to 2009.

**Title: Make Hong Kong Tomorrow-ready**  
**Time: 09:10-09:45a.m.**  
**Venue: LT1, Ground Floor, Esther Lee Building**





**Prof. Gabriel Ngar-Cheung LAU**  
**AXA Professor of Geography and Resource Management**  
**Director, Institute of Environment, Energy and Sustainability**  
**The Chinese University of Hong Kong**

Gabriel Ngar-Cheung Lau previously served as the lead scientist of the Climate Diagnostics Project at the Geophysical Fluid Dynamics Laboratory (GFDL) of the U.S. National Oceanic and Atmospheric Administration (NOAA). He was concurrently a Lecturer with the rank of Professor at the Department of Geosciences and Program of Atmospheric and Oceanic Sciences at Princeton University.

Professor Lau was born in Hong Kong and spent his youth in this city. He majored in physics at United College, CUHK, and received the B.Sc. degree in 1974. He proceeded to pursue graduate studies at the University of Washington in Seattle, and received the Ph.D. degree in atmospheric sciences in 1978. He then went to Princeton and was associated with the research and teaching programs at GFDL throughout the 1978-2013 period.

He has authored or co-authored over 100 publications in various scientific journals, and has been designated as a Highly Cited Researcher by the ISI Web of Knowledge. He was a contributing author of the Fourth Assessment Report, and a lead author of the Fifth Assessment Report, of the Intergovernmental Panel on Climate Change (IPCC), which was recognized by the Nobel Peace Prize (2007).

**Title: Climate Change from a Hong Kong Perspective**

**Time: 09:45-10:20a.m.**

**Venue: LT1, Ground Floor, Esther Lee Building**

## Research Seminar Programme

TIME	PROGRAMME
11:00-12:30	<p align="center"><b>Session A</b></p> <p align="center"><b>Physical and Environmental Systems</b></p> <p align="center"><i>Venue: ELB202, 2nd Floor, Esther Lee Building</i></p>
<p><i>Session Chair: Dr. LI Jinbao, Department of Geography, The University of Hong Kong</i></p> <ol style="list-style-type: none"> <li>1. Westward movement of Chinese empire over the past 2000 years (<i>ZHANG Shengda, Department of Geography, The University of Hong Kong</i>)</li> <li>2. Possible changes in floods and water availability across China during the 21st century (<i>LI Jianfeng, Department of Geography, Hong Kong Baptist University</i>)</li> <li>3. Emission of riverine CO<sub>2</sub> from the Wuding River catchment on the Loess Plateau: Environmental controls and dam impact (<i>RAN Lishan, Department of Geography, The University of Hong Kong</i>)</li> <li>4. Far side of the moon - mismanaged solid waste (<i>FOK Lincoln, Department of Science and Environmental Studies, The Education University of Hong Kong</i>)</li> <li>5. 1,200 years of Yellow River flow and recent human disruption (<i>LI Jinbao, Department of Geography, The University of Hong Kong</i>)</li> </ol>	

TIME	PROGRAMME
11:00-12:30	<p align="center"><b>Session B</b></p> <p align="center"><b>Urban and Regional Development I: Urban and Economic Development</b></p> <p align="center"><i>Venue: ELB207, 2nd Floor, Esther Lee Building</i></p>
<p><i>Session Chair: Dr. Lachlan B. Barber, Department of Geography, Hong Kong Baptist University</i></p> <ol style="list-style-type: none"> <li>1. The spatial pattern of residential mobility in Guangzhou, China (<i>MAO Sanqin, Department of Geography, Hong Kong Baptist University</i>)</li> <li>2. Exploring the impact of high speed railways on the spatial redistribution of economic activities - Yangtze River Delta urban agglomeration as a case study (<i>LI Xijing and HUANG Bo, Department of Geography and Resource Management, The Chinese University of Hong Kong</i>)</li> <li>3. How about the role of context in the connection between built environment and travel behavior? (<i>WANG Donggen, Department of Geography, Hong Kong Baptist University</i>)</li> <li>4. State-sponsored and spontaneous urbanization in Fujian Province of China (<i>SHEN Jianfa and LIN Lijie, Department of Geography and Resource Management, The Chinese University of Hong Kong</i>)</li> <li>5. Inside the mobilities regimes of construction mega-projects: Worker experiences of rotational work (<i>Lachlan Barber, Department of Geography, Hong Kong Baptist University</i>)</li> </ol>	

TIME	PROGRAMME
14:00-16:00	<p style="text-align: center;"><b>Session C</b></p> <p style="text-align: center;"><b>Urban and Regional Development II : Tourism Development</b></p> <p style="text-align: center;"><i>Venue: Lecture Theatre 1, Ground Floor, Esther Lee Building</i></p>
<p><i>Session Chair: Professor Lawal M. Marafa, Department of Geography and Resource Management, The Chinese University of Hong Kong</i></p> <ol style="list-style-type: none"> <li>1. Recreational specialization and ecologically responsible behaviour of Chinese birdwatchers (<i>CHEUNG Ting On, Lewis, Department of Social Sciences, The Education University of Hong Kong</i>)</li> <li>2. Rural destination image and branding in China (<i>DUAN Xialei, Department of Geography and Resource Management, The Chinese University of Hong Kong</i>)</li> <li>3. Tourist sustainabilities: Public involvement in sustainability beyond the household (<i>Benjamin Iaquinto, Department of Geography, Hong Kong Baptist University</i>)</li> <li>4. Transformational tourism: The place (un)making of tourist destinations (<i>WANG Wenhui, Department of Geography, The University of Hong Kong</i>)</li> <li>5. The youth travel decision-making process: A case study of Hong Kong young outbound tourists (<i>SI Fung Hoi, Department of Geography and Resource Management, The Chinese University of Hong Kong</i>)</li> <li>6. Mining user generated contents to understand tourists perception of Hong Kong (<i>Lawal M. Marafa, Department of Geography and Resource Management, The Chinese University of Hong Kong</i>)</li> </ol>	

TIME	PROGRAMME
14:00-16:00	<p style="text-align: center;"><b>Session D</b></p> <p style="text-align: center;"><b>Global Change and Resource Management</b></p> <p style="text-align: center;"><i>Venue: ELB202, 2nd Floor, Esther Lee Building</i></p>
<p><i>Session Chair: Dr. MAH Ngai Yin, Daphne, Director of Asian Energy Studies Centre, Department of Geography, Hong Kong Baptist University</i></p> <ol style="list-style-type: none"> <li>1. Urban resilience in China's post-disaster reconstruction planning regulation: The case of Wenchuan County (<i>SHAO Yiwon, Department of Geography and Resource Management, The Chinese University of Hong Kong</i>)</li> <li>2. Trade routes and plague dissemination in pre-industrial Europe (<i>YUE Pak Hong, Ricci, Department of Geography, The University of Hong Kong</i>)</li> <li>3. Examine fear of crime and perceived safety in urban parks in Hong Kong (<i>MAK Kwun Ling, Bonnie, Department of Geography, The University of Hong Kong</i>)</li> <li>4. Population crisis in Qing dynasty: A quantitative analysis (<i>LEE Fung, Harry, Department of Geography, The University of Hong Kong</i>)</li> <li>5. The Xinjiang Inland Class: Multi-ethnic encounters and the spaces of prescription and negotiation in an eastern coastal city (<i>YUAN Zhenjie and ZHU Hong, South China Normal University</i>)</li> <li>6. Functional complementarity between state and market in energy transitions: A comparative case study of the smart grid developments in Japan and China (<i>MAH Daphne, Department of Geography, Hong Kong Baptist University</i>)</li> </ol>	

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**Session A: Physical and Environmental Systems**

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**Westward movement of Chinese empire over the past 2000 years**

*ZHANG Shengda, Department of Geography, The University of Hong Kong*

The exploitation and management of western frontier in historical China has been literally illustrated by present-day historians. However, quantitative studies of this issue are extremely rare. By quantifying the military expansion and population change in West China during three typical periods--Han, Tang and Qing dynasties, as well as being related to climatic variation, the 'westward movement' of Chinese Empire can be preliminarily outlined into two mainstreams: 1) the proportion of western population increases when rising temperature brings higher land carrying capacity (i.e. higher agricultural production) to the west and thus population grows rapidly; meanwhile, people migrating from the east mandatorily or voluntarily contributes to larger proportion. As a result, population center shifts westward. 2) agricultural regimes have stronger power to take control of western territory under warmer temperature together with higher land carrying capacity/agricultural production. Therefore, the proportion of western conflict augments, battle longitude decreases (more westward) whilst battle altitude goes up.

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**Possible changes in floods and water availability across China during the 21<sup>st</sup> century**

*LI Jianfeng, Department of Geography, Hong Kong Baptist University*

Climate change accelerates the hydrological cycle. Under a warming climate, precipitation extremes are projected to increase, leading to more frequent and severe floods. However, the spatial heterogeneity of changes in mean precipitation complicates projections of water availability in the future. In this study, discharge simulations from the Inter-Sectoral Impact Model Intercomparison Project (ISI-MIP) were analysed to evaluate the future possible changes in floods and water availability across China under Representative Concentration Pathway 2.6 (RCP2.6) and RCP8.5 scenarios. Results indicate that floods are projected to increase throughout China during 2070-2099 compared to those during 1971-2000. The increasing rates of large floods are higher than those of small floods. Water availability is projected to decrease in southern China, and increase in northern China under RCP8.5. There is no significant change in water availability under RCP2.6.

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## **Emission of riverine CO<sub>2</sub> from the Wuding River catchment on the Loess Plateau: Environmental controls and dam impact**

*RAN Lishan, Department of Geography, The University of Hong Kong*

River ecosystems contribute significantly to carbon dioxide (CO<sub>2</sub>) emission to the atmosphere. However, global estimates of CO<sub>2</sub> emission remain greatly uncertain owing to the absence of a comprehensive and spatially-resolved CO<sub>2</sub> emission measurement. Based on intensive field measurements using floating chambers, riverine CO<sub>2</sub> emission in the Wuding River catchment on the arid/semiarid Loess Plateau was investigated, and the impacts of dam impoundment were evaluated. Partial pressure of CO<sub>2</sub> (pCO<sub>2</sub>) in streams were found to respond positively to dissolved organic carbon (DOC) and negatively to dissolved oxygen (DO), demonstrating that respiration of allochthonous organic carbon was an important source of riverine CO<sub>2</sub> supersaturation. Lateral export of soil CO<sub>2</sub> from groundwater also made substantial contribution. All the surveyed streams were net CO<sub>2</sub> sources and the CO<sub>2</sub> effluxes exhibited strong spatial and seasonal variability, showing strong dependence on flow velocity and discharge. The mean CO<sub>2</sub> efflux was 172, 116, and 218 mmol m<sup>-2</sup> d<sup>-1</sup> in spring, summer, and autumn, respectively. Furthermore, unlike the commonly observed strongest CO<sub>2</sub> emission in the lowest-order headwater streams, the CO<sub>2</sub> efflux presented a gradually increasing trend with stream order. This largely reflected the unique geomorphologic landscape of deeply incised channels in the study catchment in controlling CO<sub>2</sub> emission. In contrast, the pCO<sub>2</sub> in reservoirs was more controlled by primary production with aquatic photosynthetic assimilation constraining it at a lower level. Both the magnitude and direction of CO<sub>2</sub> emission in reservoirs have been greatly altered. Contrast to streams with large CO<sub>2</sub> effluxes, reservoirs were small carbon sources and even carbon sinks, due largely to greatly reduced turbulence and enhanced photosynthesis. In view of the large number of dams on the Loess Plateau, assessing the resulting CO<sub>2</sub> efflux changes and their implications for regional carbon budget warrants further research.

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## **Far side of the moon - mismanaged solid waste**

*FOK Lincoln, Department of Science and Environmental Studies, The Education University of Hong Kong*

Solid waste is an issue to many cities around the world. In Hong Kong, around 20% of all the solid waste going into our landfills are plastics. As 40% of all plastics has been used in single-use disposable applications: packaging, it can be inferred that many of the plastic waste going into our rapidly saturating landfills are packaging materials. Debates on plastic waste management has been focused upon the managed portion of the issue, while leaving the mismanaged plastics relatively untouched. This neglected portion refers to plastic wastes which escaped our waste management system. When this portion of waste entered the environment, it becomes a diffused form of pollution and as a result, more difficult to be mitigated. Examples may include uncollected litter and accidental spillage of plastic matters. This form of pollution occurring in our oceans has become an issue of global proportions. While recycling may serve as an end-of-pipe solution to deal with managed plastic wastes, local efforts on plastic waste minimization, in general, have been relatively ineffective. A solution is therefore urgently needed. A survey of different types of food products in Hong Kong indicated that on average, 4.3% of food product weight is composed of plastic packaging materials. And polypropylene is the most used plastic to package food products. In addition, the data obtained is used to develop a novel labelling system for food products which indicates the product's efficiency in plastic packaging. The label can be applied to products to inform consumer's purchasing decision which contributes to waste minimisation goals.

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## **1,200 years of Yellow River flow and recent human disruption**

*LI Jinbao, Department of Geography, The University of Hong Kong*

The Yellow River is the lifeblood of the dry north of China and cradle of Chinese culture and civilization. It is also China's Sorrow, with flooding a frequent threat throughout human history. In recent decades, the shortage of river flow caused panic in the populous northern China, a major reason for the implementation of the massive South-to-North Water Diversion Project. The short, heavily disturbed gauge records inhibit perception of long-term Yellow River flow variations and quantitative assessment of natural versus human impact on recent flow anomalies. Here we use a basin-wide tree-ring network to reconstruct the Yellow River flow for the past 1,200 years, and show that the flow exhibits marked variations at interannual to centennial timescales. Interannual flow variability is closely coupled to the multi-decadal to centennial hydrological mean state swings, while the latter vary coherently with the Tibetan Plateau and the Northern Hemisphere temperatures, with increased flow in warm periods and vice versa for flow reduction. The river flow has overall increased since the early twentieth century, and that recent flow reduction pales in comparison with its precedents. However, human interventions caused a loss of nearly half of natural flow since the 1970s, most responsible for recent downstream zero flow events. Under joint effects of natural and human factors, future Yellow River water management will likely be challenged by both extreme flooding and drought events.

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## **Session B: Urban and Regional Development I: Urban and economic development**

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### **The Spatial Pattern of Residential Mobility in Guangzhou, China**

*MAO Sanqin, Department of Geography, Hong Kong Baptist University*

In urban China, residential behaviours have experienced fundamental changes in recent decades. While there have been works on the trends and causes of residential relocation for different population groups, less attention has been paid to the spatial dimension of residential change; yet, the latter underscores a major part of urban dynamics. To address this, the present study makes use of a survey conducted in the City of Guangzhou in late 2012 to analyse residential shifts across three distance zones – inner core, inner suburbs and outer suburbs – and depicts complex mobility trends. Multinomial logit models show persistent impacts of institutional factors such as the hukou system, nature and rank of employment on the spatial dimension of residential behaviour among the people of Guangzhou.

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### **Exploring the impact of high speed railways on the spatial redistribution of economic activities - Yangtze River Delta urban agglomeration as a case study**

*LI Xijing and HUANG Bo, Department of Geography and Resource Management, The Chinese University of Hong Kong*

The high speed railway (HSR) network in China has developed rapidly over the past ten years, offering a new means of travel and also regenerating and redistributing economic activities by encouraging population mobility. Using the Yangtze River Delta urban agglomeration as a case study, this paper investigates the redistribution of economic activities resulting from HSRs by developing a locally weighted regression model, geographically network weighted regression (GNWR). This GNWR is formulated in light of the current account identity in economics, and incorporates the changes in network-based travel time from HSRs and the degrees of cities, thereby offering a more appropriate method of capturing the movement of economic activities. Importantly, the coefficients in GNWR through standardization can reflect the net inflow or outflow of different cities in terms of their residents' investment and/or consumption. The results of the analysis show that HSRs have significantly changed the spatial redistribution of economic activities due to more frequent and rapid mobility. For net inflow, cities benefit from the spatial redistribution of the income from other areas; for net outflow, city residents redistribute the income to gain profits from other cities with better geographical conditions. The HSR network has also promoted the economic activities of second-tier cities alongside primary cities in the study area, redistributing the income in the region, and bridging the development gaps between cities.

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## **How about the role of context in the connection between built environment and travel behavior?**

*WANG Donggen*, Department of Geography, Hong Kong Baptist University

The literature on the travel behavior impacts of built environment is well established. However, the role of spatial and temporal contexts in the connection between built environment and travel behavior is not well understood. For example, Boarnet (2013) argues, most of the research findings are based on city-wide averages, variations between different locations or the roles of location and place have not received much research attention. The argument for place or location in the connection between built environment and travel behavior is supported by the studies highlighting the importance of location in explaining travel behavior. We thus argue that the travel behavior impacts of built environment can be place or location-dependent. Further, there is hardly any research on the temporal variations of the built environment impacts. The so-called Uncertain Geographical Context Problem suggests that there is a temporal dimension concerning the effects of geographical context on human behavior or outcomes because of the uncertainty in the timing and duration in which individuals are exposed to the context (Kwan, 2012). In other words, the travel behavior impacts of built environment can be time-dependent. To empirically verify these arguments, this study investigates the spatio-temporal patterns of taxi ridership and explore the spatio-temporal variations of the built environment impacts. Using the GPS tracking data of all taxis in Beijing for the entire month of October, 2012, taxi ridership are aggregated at the geographic scale of traffic analysis zone (TAZ), whose built environment is characterized by residential and employment densities and transport facilities densities of urban road, parking lot, bus and metro stations. Geographically weighted regression analysis models are developed to establish statistical relations between taxi ridership and built environment for different traffic zones across different time periods (time of the day and day of the week). Findings of this study will help us understand how built environment affects the taxi ridership at different locations of a city and during different time periods of the day or the week. The study will enrich the literature with empirical evidence on place and time dependent effects of built environment on travel behavior.

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## **State-sponsored and spontaneous urbanization in Fujian Province of China**

*SHEN Jianfa and LIN Lijie, Department of Geography and Resource Management, The Chinese University of Hong Kong*

This paper examines the unbalanced urbanization process in Fujian province from 1982 to 2010 using the perspective of dual-track urbanization. The analysis is mainly based on 67 county-level units using the data from four censuses in post-reform period. The spontaneous track of urbanization is a new process of urbanization in China emerged in the reform period. It plays an important role in linking urban and rural areas in China and also creates problems of rural-urban integration and social cohesion. This paper examines the roles of spontaneous and state-sponsored urbanization in the process of urbanization and their impact on the spatial pattern and structure of urbanization in Fujian. It is found that rural to urban migration plays the most significant role in the process of urbanization while state-sponsored urbanization and rural urbanization play an equal role in the process in Fujian. There was a significant shift of state-sponsored urbanization from county-level cities and counties to urban areas of central cities, Fuzhou and Xiamen, and from the inland area to coastal area in Fujian after 1990. There have also been significant shift and growth of temporary population towards the central cities in the reform period. The shift from small towns to large urban areas is clear in both tracks of urbanization.

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## **Inside the mobilities regimes of construction mega-projects: Worker experiences of rotational work**

*Lachlan Barber, Department of Geography, Hong Kong Baptist University*

This presentation will report on research that is concerned with interpreting the role that various actors play in influencing the work and mobility arrangements at large-scale construction projects, and in understanding how these arrangements are experienced on the ground by workers and their families. Theoretically, I draw upon and develop the concept of "mobilities regimes", a formulation advanced by sociologists and others that locates relations of power and inequality in the co-constitution of mobility and institutional structures. The presentation is based on research conducted as part of the On the Move Partnership, a research initiative examining employment-related geographical mobility (E-RGM) in a variety of sectors and provinces across Canada. It draws upon research conducted between December 2014 and June 2016. A total of sixty interviews to date have been conducted with workers as well as with key informants, including government officials, employers, labour organizations. I argue that a mobilities regime is legible in policies and project documents produced by governments, employers, and labour organizations, but also in the experiences of workers. These gendered experiences reveal that mobile work is well-remunerated and offers freedom, but that it may become a lifestyle from which it is difficult to retreat. By articulating the agency of workers within the system that depends upon their continued participation, I highlight how the mobilities regime encompasses not only the workplace and the various agents and institutions that create it, but also the home and family.

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## **Session C: Urban and Regional Development II: Tourism Development**

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### **Recreational specialization and ecologically responsible behaviour of Chinese birdwatchers**

*CHEUNG Ting On, Lewis, Department of Social Sciences, The Education University of Hong Kong*

Birdwatching is a popular nature-based recreational activity that has millions of participants worldwide. Hong Kong is an important birdwatching destination in Southeast Asia, and the number of birdwatchers visiting Hong Kong has steadily increased in recent decades. This study investigated how recreational specialization, particularly that of birdwatchers, influences the pro-environmental attitudes and ecologically responsible behaviour of Chinese birdwatchers. Questionnaire surveys and interviews were conducted in Hong Kong, and 387 completed questionnaires were collected. The results of structural equation modelling indicate a direct positive association between the birdwatchers' specialization and pro-environmental attitudes and an indirect positive association between their specialization and ecological responsible behaviour. These findings suggest that understanding birdwatchers' specializations is essential for predicting their behaviour when visiting ecologically sensitive destinations. Therefore, birdwatcher specialization levels are highly important and could be used to formulate visitor management strategies at birdwatching sites and reduce the negative effects of visitor impacts on the avian community.

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### **Rural destination image and branding in China**

*DUAN Xiaolei, Department of Geography and Resource Management, The Chinese University of Hong Kong*

Rural tourism has been a hot topic in China in last two decades. However, the development of rural tourism is quite unbalanced in terms of tourist arrivals and economic benefits. Some rural destinations are much more famous than those who have similar resources. One of the major reasons lies in the effectiveness of destination branding. It is widely accepted that destination image is an integral and influential part of the traveler's decision process and consequently travel behaviors. Destination marketing authorities at all levels have an ultimate goal of building strong and positive images for their destinations. The extent to which image building benefits their targets can be greater if it takes place in the context of branding. This research attempts to investigate on the essential attributes of rural destination image and construct a destination-branding model specifically for rural tourism of China in the hope to fill the research gap of current studies on destination branding.

There are mainly four objectives of this research: 1) Investigate on attributes affecting rural destination image in China; 2) Test the relationship between tourist motives and rural destination image; 3) Test the relationship between rural destination image and tourist behavior; 4) Assess the gap between the projected and perceived destination image

## **Tourist sustainabilities: Public involvement in sustainability beyond the household**

*Benjamin Iaquinto, Department of Geography, Hong Kong Baptist University*

As holidaying is a routine aspect in the lives of an increasing number of people, questions of sustainability in tourism are becoming highly urgent. But efforts to increase public involvement in sustainability commonly overlook the actions of tourists. In research investigating sustainability at the level of the individual, practices of sustainability are usually assessed among householders who are considered settled in one location on a nearly permanent basis. There is little consideration of the dynamic relationship between mobility and sustainability practices. Using interviews and participant observation with backpackers, this paper considers the relations between mobility and sustainability practices. The central claim of this paper is that pace, as a form of mobility, is responsible for enabling and obstructing practices of sustainability. Pace is understood as speed plus rhythm and it is this combination that is expressed in the intermittent mobilities of backpackers, allowing the effects of pace to enable or obstruct practices of sustainability to be determined. Attending to pace expands theories of social practice by demonstrating new ways practices are maintained and disrupted. It shows how the performance of sustainability is dependent on the relations mobile people have with practices rather than on their individual choices or attitudes.

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## **Transformational tourism: The place (un)making of tourist destinations**

*WANG Wenhui, Department of Geography, The University of Hong Kong*

Borrowing from geographical theory, this paper examines the dynamic role of tourism in shaping places at tourist destinations. Drawing specifically from the geographical discourse related to possibilism, systems theory, globalization, and modernization, a conceptual framework is introduced for understanding the relations between tourism and the place. Given tourism's persistent impacts on the place, the framework provides a distinctive context for examining the multi-directional nature of the relations and its transformative capacity. Discussed are the implications for collective discovery and for the transition to a place making approach to tourism planning and management and a new era for tourism geography.

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## **The youth travel decision-making process: A case study of Hong Kong young outbound tourists**

*Si Fung Hoi, Department of Geography and Resource Management, The Chinese University of Hong Kong*

In the 21st century, tourism, as a kind of human activity involving the geographical space, has gained increasing attention from the geographers, and becomes one of their research interests. As a global trend, young tourists become a major segment of outbound travellers. Increasing Western studies have put their focus on youth tourism development.

Hong Kong is one of the largest tourists origins in the globe, but few studies have put the city under youth tourism study, nor apply the academic theory originated in the West in explaining the emergence and attributes and youth travellers. This thesis, with Hong Kong as a case study, studies youth tourists' travel decision-making process and the factors shaping it. This research fills in the academic gap that youth outbound tourist development in Hong Kong is underexplored, and there is a lack of studies in identifying youth people's characters and perceptions towards travel recently. It also reminds the importance of studying youth tourists' opinions from a practitioner's perspective.

The aims of the study include (1) identifying and characterizing the young tourists, (2) examining the factors shaping the above process and their relative importance, and (3) evaluating the role of tourism service providers and the importance of their role in shaping the above process. Different methodologies include questionnaires, interviews and visual image analysis were being conducted to understand the perceptions towards travel, travel intentions and obstacles of Hong Kong youth tourists. After integrating and analysing different sets of data suggested above, several findings were observed. First, youth tourists in Hong Kong have their own travel characteristics, and are therefore necessary to differentiate from other tourist segments in Hong Kong and other young travellers worldwide. Second, factors identified from the previous literature and being considered as influencing youth travel decision-making process had different weighting and importance in different stages of decision-making. Individual's travel decisions varied in accordance with the interaction of these factors. Third, diverse tourism suppliers had made different contributions to motivate the youth tourists to travel and some of them gain increasing importance in affecting youth travel decisions. Yet, the analysis of visual images further figures out the differences between the information providers (i.e. suppliers) and the recipients (i.e. youth tourists) in terms of their travel image depiction.

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## **Mining user generated contents to understand tourists perception of Hong Kong**

*Lawal M. Marafa, Department of Geography and Resource Management, The Chinese University of Hong Kong*

Many tourists now rely on the internet and indeed social media to source for information on their destination. Many destinations similarly use the social media to use tourists to visit their attraction. Both tourists and destinations now rely on users of such platforms for disseminate information. This process facilitates the interaction of users mostly by way of social media platforms. Users are now capable of creating user-generated-contents (UGC) facilitating information sharing and collaboration. This trend of sharing information is significantly impacting the tourism industry and specifically on tourist's behavior. According to some scholars, tourists increasingly choose to use online services and its network to arrange their trips due to perceived value, perceived usefulness and perceived ease of use, etc. They also use same to record, share and review their experiences. Consequently, UGC have eventually affected how other tourists plan when and where to visit. As this use becomes commonplace, the social media and the internet are playing increasingly important roles as information sources for both travelers and decision-makers. Hong Kong as a destination is very prominent on the social media (e.g. in Facebook, Twitter, Instagram, line, Weibo, Tencent, to mention a few) and is also being affected by UGCs and electronic word of mouth (eWOM). This study is conceptualized to mine this data and study the views, comments and sentiments expressed by the tourists that visited. The contents generated will allow researchers and decision-makers to understand tourist's responses on the services provided and the experiences that they had. These responses could have a lasting implication on tourism at the destination. This study therefore explores the growing importance of social media (example of TripAdvisor) and online interactivity within the tourism industry with specific example on tourists visiting Hong Kong. Using tools of content analysis, comments and views are then coded, categorized, mapped and interpreted with a possible classification of user-generated contents that details their experiences in Hong Kong.

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## Session D: Global Change and Resource Management

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### **Urban resilience in China's post-disaster reconstruction planning regulation: The case of Wenchuan County**

*SHAO Yiwu, Department of Geography and Resource Management, The Chinese University of Hong Kong*

Recent years have witnessed a growing tendency of resting on the resilience theory as the guidelines for the formulation of new urban plans. However, restorative resilience analysis, the application of resilience thinking to introspect the reconstruction planning system, has not yet been well addressed. Based on this understanding, this paper attempts to examine whether there are evidences of urban resilience in China's reconstruction planning legislation and policies on different geographical levels, through identifying eight proxy resilience attributes. Planning legislation and policies are focused because they are perceived to have great shaping potential in defining normative planning discourses and legitimizing planning practices. The paper has developed two major arguments. Firstly, while urban resilience is still not explicitly on the agenda of the reconstruction planning in China, specifications of planning legislation and policies are interpreted to convey certain attributes of urban resilience. Robustness and efficiency are of prime importance in these documents. Diversity, social connectivity, flexibility and capital building are reflected with various degrees. Redundancy and innovation are identified as lacking attributes, reflecting insufficient understanding of the evolutionary resilience perspective, partly due to the necessity to maintain the status quo. Secondly, the reconstruction planning legislation and policies jointly enable, at least rhetorically, a highly connected and efficient environment for post-disaster reconstruction efforts across levels and among institutions, especially through the adoption of a multi-layered partner support program. The above arguments are elaborated through an empirical analysis of the reconstruction planning in Wenchuan County following the 2008 Sichuan Earthquake.

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### **Trade routes and plague dissemination in pre-industrial Europe**

*YUE Pak Hong, Ricci, The University of Hong Kong*

Despite the massive number of works hypothesizing the possible role of trade route in spreading plague in European history, the hypothesis has never been conclusive due to the lack of quantitative research. Here, we settle this long lasting question through statistical analysis on the geo-referenced major trade routes in the early modern period and the 6656 geo-referenced plague outbreak records in AD1347-1760. OLS estimation results show that major trade route took a dominating role in spreading plague outbreaks in pre-industrial Europe. By the negative correlation between plague outbreaks and their distance from major trade ports, statistic result supports the non-existence of permanent plague focus in the inland areas of historical Europe. Major trade route decided the major plague outbreak points and navigable rivers were responsible for the geographic pattern of sporadic plague cases. Altogether, we summarized our findings as a schematic mechanism of plague spreading in historical Europe. Such a pattern might be key in understanding how pandemics spread in human history.

## **Examine fear of crime and perceived safety in urban parks in Hong Kong**

*MAK Kwun Ling, Bonnie, Department of Geography, The University of Hong Kong*

Parks, considered as a type of urban green space (UGS), have become an important focus of new environmental strategies for cities (Madge, 1997). Some elements of the park design and management, however, may be perceived as undesirable to discourage visit. Some of such negative concerns may have stronger impacts on some segments of the population, thus degrading the social inclusiveness of the communal spaces. The fear of crime, and the basic human instinct to guard against or avoid it, is of paramount importance in making visit decisions. It is necessary to study whether fear of crime is perceived as a hindrance for citizen to access urban parks, examine the factors that evoke such fear, and explore ways to alleviate the negative emotion.

In comparison with numerous Western European and some Asian cities, research on fear of crime in urban parks in Hong Kong remains relatively unexplored. Eight urban parks in Hong Kong in different size are selected as study sites. Triangulation approach will be applied in this study. The data will be obtained through a standardized and structured questionnaire and semi-structured interviews.

As Hong Kong is an international cultural metropolis, a thorough understanding of the subject will expand the research knowledge base of fear of crime in a cross-cultural context and enhance its knowledge hub. From a practical perspective, the knowledge may help urban planners, landscape architects, business and community developers to be more aware of establishing long-term attainable goals to match residents' expectations and create parks that are safe and perceived as safer and less-fear provoking by local residents. The inclusion of residents' expectations helps to put the concept of social inclusiveness into practice and this lays the foundations for making Hong Kong a more competitive, vibrant and liveable city.

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## **Population crisis in Qing dynasty: A quantitative analysis**

*LEE Fung, Harry, Department of Geography, The University of Hong Kong*

There is a continuing debate over whether the series of population checks in late imperial China were caused by overpopulation or not. The debate may be rooted in the absence of quantitative estimates of population pressure. In the present study, fine-grained historical socioeconomic and population datasets together with statistical methods were utilized to estimate quantitatively the population pressure in China in the period 1730–1910. The possible paths through which population pressure was translated into demographic catastrophes were also examined. Statistical results show that (1) the frequency of various population checks was positively correlated with subsistence pressure, (2) food strain and its associated demographic catastrophes were driven by the synergistic work of climate-induced agricultural shrinkage and population growth, and (3) the synthesis significantly determined population growth dynamics across China at various geographic levels. To conclude, overpopulation in late imperial China is not a myth, and the series of population checks and eventually population collapse were caused by subsistence pressure during the period. When examining historical Chinese demography, the adverse effect of climatic forcing on human carrying capacity should be considered.

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## **The Xinjiang Inland Class: Multi-ethnic encounters and the spaces of prescription and negotiation in an eastern coastal city**

*YUAN Zhenjie and ZHU Hong, South China Normal University*

The Xinjiang Inland Class (Xinjiang Neidi Ban, or Xinjiangban) has far-reaching implications for Beijing's governance of ethnic minorities in Xinjiang. Existing literature on this policy has focused primarily on the dichotomy of the policy as an overarching structure and Uyghur students' responses, with limited attention being paid to multi-ethnic interactions that constitute the situated dynamics of policy implementation. Utilizing the notions of the space of prescriptions and the space of negotiations to develop an analytical framework, this paper argues that the social relations and orders in Xinjiangban are ongoing constructions borne by everyday experiences of domination and negotiation, and that space is constitutive of this situated dynamic. Based on a nearly four-year study of a Xinjiangban, we make a case for the hegemony, but also fluidity and incoherence in the implementation of the policy: 1) since the norms of Han-centered education, patriotism and ethnic integration have been prescribed by the political center, practices of implementation at the local level work hard to render invisible the ethnicity and religiosity of the students. 2) Driven by the need to achieve upward mobility, minority students in fact hold open attitudes to the barely veiled cultural hegemony in this policy. However, minority students also use innovative and improvised tactics to re-assert their ethnicities and religious identities, assembling fluid resources embedded in time-space arrangements. In Xinjiangban, minority students do comply with the spaces of prescriptions, but simultaneously keep alive and assert their ethnic and religious belonging and identities.

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## **Functional complementarity between state and market in energy transitions: A comparative case study of the smart grid developments in Japan and China**

*MAH Daphne, Department of Geography, Hong Kong Baptist University*

Smart grids represent one of the most revolutionary developments in energy management systems. They are increasingly being adopted and implemented in developed and developing economies (e.g. the US, South Korea, Japan, and China). By applying advanced information technology to modernise existing electricity networks, smart grids provide opportunities to integrate more decentralised electricity supply systems (e.g. renewable energy), and allow electricity consumers to play much more active roles in energy conservation and efficiency. Smart grid diffusions however present major governance challenges which are seriously under-studied.

This seminar aims at exploring the essential elements of and the barriers to effective smart grid diffusions from an Asian perspective. Based on a comparative study of Japan and China, the seminar will discuss how state and market interact in ways to create favourable conditions for and/or barriers to smart grid deployments. Some observations on the variety of state-market interactions that have emerged in Japan and China in response to major barriers such as utilities' disincentive, lack of energy products and services, and high barriers to entry will also be discussed.



## PGS Paper and Poster Competition

TIME	PROGRAMME
09:00-16:30	<b>Poster Exhibition</b> <i>Venue: Ground Floor Foyer, Esther Lee Building</i>
10:35-11:00	<b>Poster Q &amp; A Session</b> <i>Venue: Ground Floor Foyer, Esther Lee Building</i>
16:15-16:30	<b>Prize Presentation of Paper/Poster Competition</b> <i>Venue: Lecture Theatre 1, Ground Floor, Esther Lee Building</i>

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## Papers

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### **The sustainability transition in China's resource-dependent cities: Policy challenges and a research agenda**

*CHEN Kang, Department of Geography, The University of Hong Kong*

Sustainable development of resource-dependent cities (RDCs) is a major challenge in a number of resource-rich countries. In their early evolutionary stages these cities can experience all the pressures of rapid development. Many subsequently encounter serious difficulties as the resource base depletes leaving a weak and unbalanced local economy, a host of social issues, as well as severe environmental degradation. Such cities have been the focus of research for almost 100 years but the primary emphasis has been on cases drawn from Western countries. Only limited attention has been given to the impacts of resource development and exploitation in developing economies like China. With rapid industrialization and urbanization and the pressure to develop indigenous energy, mineral and other resources, an increasing number of Chinese RDCs have developed over the past 50 years and many are now characterized by serious sustainability issues. The need for effective development strategies for such cities to manage change and to enhance their long-term sustainability is an urgent problem and has started to attract the attention of Chinese policy makers. This is becoming an even more urgent priority as China attempts to achieve a better balance between supply and demand factors as the country plays an increasingly pivotal role in the global economy. This paper reviews the literature concerning resource-dependent regions and examines in detail the challenges confronting RDCs in China. It highlights the academic significance of the sustainability transition for these cities, proposes a transition framework and sets out a research agenda for future study.

## **Simulation effects of land use/cover change and anthropogenic heat release on the urban warming in the Pearl River Delta**

*CAO Zheng and WU Zhifeng, School of Geographical Sciences, Guangzhou University*

With the rapid urbanization process in the Pearl River Delta, a great deal of anthropogenic heat is discharged into the atmosphere. Besides the global climate change, the land use/cover change (LUCC) and the anthropogenic heat release (AHR) are becoming the two key factors, which are playing a more and more important role in the local climate. To figure out the influence of LUCC and AHR on regional climate, the high-resolution (3km) Weather Research and Forecasting (WRF) model, with a single-layer urban canopy parameterization scheme, is carried out. January and July in 2010 are selected as the behalf of winter and summer. Three scenarios were designed to understand which of the LUCC and AHR affects the regional climate more significantly: (1) Due to the impact of urbanization, temperature of any transformation between two different LUCC rise. (2) Due to the impact of AHR, temperature change has seasonal feature in different LUCC type. (3) By the impact of AHR, temperature of construction area rise the most significantly, followed by the forest and the grassland, the least significantly is the water body area.

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## **Urban resilience in China's post-disaster reconstruction planning regulation: The case of Wenchuan County**

*SHAO Yiwen, Department of Geography and Resource Management, The Chinese University of Hong Kong*

Recent years have witnessed a growing tendency of resting on the resilience theory as the guidelines for the formulation of new urban plans. However, restorative resilience analysis, the application of resilience thinking to introspect the reconstruction planning system, has not yet been well addressed. Based on this understanding, this paper attempts to examine whether there are evidences of urban resilience in China's reconstruction planning legislation and policies on different geographical levels, through identifying eight proxy resilience attributes. Planning legislation and policies are focused because they are perceived to have great shaping potential in defining normative planning discourses and legitimizing planning practices. The paper has developed two major arguments. Firstly, while urban resilience is still not explicitly on the agenda of the reconstruction planning in China, specifications of planning legislation and policies are interpreted to convey certain attributes of urban resilience. Robustness and efficiency are of prime importance in these documents. Diversity, social connectivity, flexibility and capital building are reflected with various degrees. Redundancy and innovation are identified as lacking attributes, reflecting insufficient understanding of the evolutionary resilience perspective, partly due to the necessity to maintain the status quo. Secondly, the reconstruction planning legislation and policies jointly enable, at least rhetorically, a highly connected and efficient environment for post-disaster reconstruction efforts across levels and among institutions, especially through the adoption of a multi-layered partner support program. The above arguments are elaborated through an empirical analysis of the reconstruction planning in Wenchuan County following the 2008 Sichuan Earthquake.

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## **The production of space and 'urban fortunes' in China: A case study of the Baishizhou Village in Shenzhen**

*Yi Wenyuan and NG Mee Kam, Department of Geography and Resource Management, The Chinese University of Hong Kong*

Urban space in Chinese cities is transforming as a mixed result of changing economic, social and political contexts. The causes and consequences of spatial production are conventionally understood as a process driven by capitalist globalization, industrialization and urbanization, urban-rural integration or state decentralization. Limited research, however, has been done from the perspective of the production of 'exchange' and 'use' values (Gottdiener, 1985; Harvey, 1973; Lefebvre, 1991; Logan and Molotch, 2007) in the urban development process. This study attempts to fill this gap and investigates what are the relationships between the production of space and 'urban fortunes' in the Chinese context. This paper reviews Lefebvre's triadic production of space framework and its extensions, attempting to build an appropriate framework for Chinese urban studies. This framework tries to scrutinize the mechanisms of spatial production and institutional interventions at the states and community levels that produce the 'urban fortunes' in Shenzhen Through a case study of the Baishizhou Village.

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## **Posters**

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### **The impact of climatic change – What the GRACE terrestrial water storage change data can tell us in arid zone?**

*HUANG Junyi Richard and ZHOU Qiming, Department of Geography, Hong Kong Baptist University*

Terrestrial water storage (TWS) changes are of particular importance in northwest of China with extensive arid or semiarid zone. TWS changes obtained from time-variable gravity observations of the Gravity Recovery and Climate Experiment (GRACE) satellite mission over the Kaidu River Basin and precipitation data from the National Satellite Meteorological Centre of China (NSMC) in Bayanbulak station (43°01'01"N, 84°08'16"E) from 2002 to 2012 are analyzed, China to determine whether there is a statistically significant correlation between them. Multiple linear regression analysis is used to test the temporal statistical significance. In terms of seasonal variation, there is a significant correlation relation between of TWS change and rainfall between 2002 and 2007, with a certain lag time. The maximum monthly increase of TWS occurs in March to May, while the maximum monthly rainfall occurs in June to August. The data also displays a decrease trend of TWS in the study area since 2007, whereas the rainfall variation has been limited. It also revealed a direct relation between the data sets over the whole area in Xinjiang, China. This pilot study verifies the feasibility of the latest GRACE-Tellus RL-05 gridded Level-3 data of monthly surface mass changes for hydrological study in Xinjiang. Further investigation is needed to study the lag effect of rainfall and TWS change, and examine the efficiency of GRACE for quantifying the spatial-temporal changes of individual hydrological components (e.g groundwater) in a greater spatial coverage.

## **Soil-atmosphere N<sub>2</sub>O and CH<sub>4</sub> exchanges were suppressed by litter layer in a subtropical secondary forest**

*CUI Jinglan and LAI Yuk Fo Derrick, Department of Geography and Resource Management, The Chinese University of Hong Kong*

Forest soil has a great potential in affecting future climate change through exchanging greenhouse gases (GHGs) with the atmosphere. As a proxy of elevated atmospheric CO<sub>2</sub> concentration, enhanced litter production can affect soil GHG fluxes and induce feedbacks to the climate system. However, these litter-soil-atmosphere interactions remain unclear. In this study, we carried out static chamber measurements and field manipulations in a subtropical secondary forest in Hong Kong over one year to investigate the temporal variations and controls, as well as the effects of litterfall on soil-atmosphere GHG fluxes. Our results show distinct seasonal patterns of GHG fluxes and soil parameters. While CO<sub>2</sub> flux didn't respond significantly to litter manipulation, regression analysis indicates CO<sub>2</sub> releases was regulated by soil temperature and moisture. Litter reduction stimulated N<sub>2</sub>O emissions by 105%, with most pronounced effect during the hot-humid season from May to October. Moreover, litter addition was found to reduce CH<sub>4</sub> uptake by 32%. Our findings suggest that the presence of litter might serve a physical barrier for gas diffusion. It is suggested that the biogeochemical feedback of litterfall should be taken into account in simulating the response of forest GHG fluxes to future global change.

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## **Complying with voluntary energy conservation agreements: Hong Kong's shopping malls**

*KWOK Tin Fai, XU Yuan and WONG Pui Ting, Department of Geography and Resource Management, The Chinese University of Hong Kong*

Voluntary agreements can complement mandatory policies for achieving energy conservation. However, its effectiveness could be compromised since entities are not obliged to participate. A survey was conducted to solicit empirical data on shopping mall visitors' responses to unsatisfactory ambient environment. Visitors are less tolerant to hotness in mall and would tend to leave, but are unlikely to leave for unsatisfactory lighting, and the advertising effect of outdoor lighting is significant. Utilising the economic model of crime and punishment, the enterprise decisions in ambient environment setting are rationalised and the compliance with four voluntary agreements is predicted. A low compliance rate for the 25.5°C guideline is contributed by the strong reaction to hotness. The prevalent compliance with the Earth Hour is caused by the high potential business image penalty on non-compliance and minimal compliance cost. "De-lamp" is expected to receive more support since visitors would not have strong reactions toward a dimmed environment while the Charter on External Lighting would receive less support given the significant advertising effect of outdoor lighting. Overall, we are cautiously pessimistic on the effectiveness of voluntary agreements for significant energy conservation in Hong Kong, given visitors' lacking of green preference and the ineffective public surveillance.

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## **Study on the campus planning and spatial applicability--A case study of South China Agricultural University**

*CAI Wenlan and LIU Hongjie, South China Normal University*

According to campus size problems in the process of campus planning and construction in recent years, this article combines with the field research, data collection and analysis of typical campus space of campus in South China Agricultural University and applies theory of outer space and space-related behavior theory to analyze the campus in order to analyze space applicability of SCAU. Campus can be seen as a miniature version of our city, which concludes the city functions such as residence, business, recreation and so forth. Therefore, this study might give some inspirations and references to the city development in terms of spatial applicability.

Analysis results showed that (1) South China Agricultural University of overall scale is suitable, but per capita index is relatively low; (2) From analysis of D/H value in external space we found that scale between different community has Big difference so that the reasonable campus planning should be according to different function using and different people flow; (3) From analysis of students travel efficiency found that different community has different travel efficiency, which is related to internal traffic organization, building layout and public space scale.

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## **GDP Spatialization in Guangdong Province based on night-time data**

*LI Qing and SONG Tao, School of Geography, South China Normal University*

The spatialization of the social economical data at small scale areas is conducive to reflect the differences in the distribution area of internal statistics, which makes up the defects in administrative unit as the basis for the lack of spatial data. Data based on the resolution of 1km ×1km which was from DMSP/OLS night-time light imagery. The night-time light data was extracted at the scale of prefecture-level city in Guangdong Province with the GIS technology and statistic methods. With the spatialization model, two night-time light indices were defined. To find the most appropriate spatial correlation data model, the researcher respectively did the correlation analysis between the night-time light data and the total GDP value of Guangdong, and each sub industrial value of GDP. Then a GDP density map was generated of Guangdong Province in 2013 at the resolution of 1km ×1km, which matches up to the resolution of DMSP/OLS data. The experimental results showed that the GDP and DMSP/OLS night-time light data had significant correlation within in Guangdong province, and the density of GDP grid fitting results with the GDP administrative value results was corrected by the county data, the density of GDP grid is reliable. Due to the special nature of the economic development of Guangdong Province, in this paper, the experimental results and previous studies were slightly different. Some new assumptions, ideas for future improvements of spatialization model were presented in this paper.

## **Net Ecosystem CO<sub>2</sub> Exchange in a Subtropical Estuarine Mangrove Wetland in Hong Kong**

*LIU Jiangong, LAI Yuk Fo Derrick and Suvadip Neogi, Department of Geography and Resource Management, The Chinese University of Hong Kong*

Mangroves are one of the most carbon-rich forests in the tropics as well as one of most productive ecosystems of the world. While mangroves are generally regarded as long-term sinks of atmospheric carbon dioxide (CO<sub>2</sub>), only a few studies have quantified the magnitude and temporal dynamics of CO<sub>2</sub> fluxes in these coastal wetlands at the ecosystem scale. In this study, we aimed to characterize the variability and controls of net ecosystem CO<sub>2</sub> exchange (NEE) in a subtropical estuarine mangrove wetland dominated by *Kandelia obovata* in Hong Kong by means of an eddy covariance system. Our preliminary results show that the mangrove ecosystem was a net CO<sub>2</sub> sink during the day but a net source at night, with monthly averaged NEE exhibiting a typical diel pattern ranging between -4.2 to 3.8 μmol m<sup>-2</sup> s<sup>-1</sup>. Variability of NEE was found to be related to various bio-physical parameters, including photosynthetically active radiation, air temperature, and vapour pressure deficit. Our findings shed light on the temporal variability and governing factors of CO<sub>2</sub> fluxes in the subtropical mangroves. Further studies will be conducted to characterize the longer-term variability of NEE and methane fluxes to assess the overall role of subtropical mangroves in mitigating climate change.

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# University Geography Programmes



## Department of Geography and Resource Management The Chinese University of Hong Kong



### **Introduction**

The undergraduate programme offers training in broad-based geographical knowledge with a focus on resource management. Students learn about the latest developments and current research in geography and resource management, and how to understand the relationships between geography and other related disciplines.

### **Curriculum**

The curriculum is both comprehensive and balanced in the coverage of urban and regional development, physical and environmental systems, geoinformatics and resource management techniques.

The first year programme is designed for students to take courses in geographical techniques and other introductory courses about geography, environment and society. In their second, third and fourth years, students focus on one or more of the four concentration areas, namely **Physical and Environmental Systems, Geographical Information and Analysis, Urban and Regional Development and Global Change and Resource Management**, depending on their personal interests and career objectives. Students are required to write a thesis in their final year.



### **Teaching Methods**

Various teaching methods are used, including lectures, tutorials, web-based teaching and learning, field studies and student-based independent research. The objective is to cultivate independent learning, critical thinking, data collection and analysis and the ability to solve complex problems related to the environment, resources, and urban and regional development.

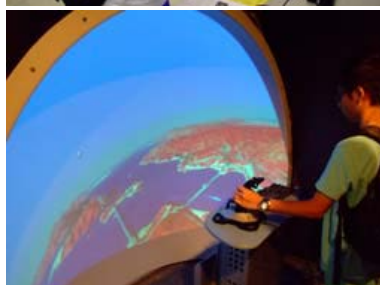
Field teaching is an integral part of geography. Under the supervision of faculty members, students have the opportunity to conduct field practicum locally, in Mainland China and in overseas countries to broaden their knowledge base of real-world issues. Over the years, our students have visited Jiangxi, Guangxi, Shanghai, the Pearl River Delta, the Three Gorges region, Xinjiang, Yunnan, Silk Road, Gansu, Taiwan, Singapore, Malaysia, Australia, North America, Europe and Africa.



### **Laboratories and Facilities**

The Department maintains six well-equipped laboratories and operates a number of other facilities for teaching and research:

- Spatial Information and Decision Support Laboratory
- Geographic Information Systems and Remote Sensing Laboratory
- Soils and Geomorphology Laboratory
- Environmental Laboratory
- Hydrology and Climatology Laboratory
- Landscape Laboratory
- Air Quality Monitoring Station
- Automatic Weather Station
- Greenhouse
- Rainfall Simulator







### **Introduction**

The **Geography Department of Hong Kong Baptist University (HKBU)** is one of seven academic departments that constitute the Faculty of Social Sciences. The Department can be traced back to the then History and Geography Department established in 1960. In 1978, Geography became a separate department housed under the Faculty of Social Sciences. We have seventeen full-time academic teaching staff, one adjunct professor and a comparable number of support and research staff. All faculty members hold doctoral degrees from renowned universities around the world, and their research interests cover a wide range of specializations in human, physical and technological geography.

### **Research Centres and Facilities**

Three research centers are housed within the Department: the Centre for China Urban and Regional Studies (CURS); the Asian Energy Studies Centre (AESC), and the Centre for Geo-computation Studies (CGS). Other major facilities include: Geoinformatics Laboratory, Physical Geography Laboratory, Sediment Laboratory, Environmental Laboratory, Geosciences Laboratory, Human Geography Research Laboratory, Geographic Resource Centre/Map Library. The Department, though the youngest among the three geography departments in Hong Kong, has emerged as a significant scholastic centre in our discipline.

### **Whole Person Education**

Our undergraduate curriculum reflects the University's emphasis on the importance of "Whole Person Education" by providing students with a wide range of interactive learning experiences. Geography distinguishes itself by its integrated approach to studying the interactions between people and their physical and social environments. The existing geography curriculum at HKBU gives students a rigorous training in geographical methodology while gaining an understanding of spatial order and the interdependence of the world's peoples and regions. The curriculum also promotes the application of relevant geographical concepts and the techniques needed to solve real-world problems.



### **Programmes**

The Department offers three undergraduate programmes, they are: the **BSocSc (Hons) in Geography**, the **BSocSc (Hons) in China Studies - Geography Concentration**, and the **BSocSc (Hons) in Geography and BEd (Hons) in Liberal Studies Teaching**. In addition, we also offer a new top-up degree jointly with the HKBU College of International Education: the **BSocSc (Hons) in Environment and Resources Management**. At postgraduate level, the Department offers postgraduate studies by research, leading to the **M.Phil and Ph.D degrees**. These studies can be taken in methodological, physical, or human geography. Currently, we participate, along with other departments, in the **MSocSc in Contemporary China Studies**, which offers a concentration in urban development and environmental management; and a **Master of Arts in Global Society** newly launched in 2016.



### **Academic Excellence and Career Prospects**

Our Department has always been proud of its ability to maintain a strong and intimate relationship with our students and alumni. Many of our graduates occupy prominent positions in their respective professions. Overall, the Geography Department at HKBU has an outstanding team of academic staff, high quality students, and an established commitment to achieve academic excellence.





The Department of Geography was established in 1954 in the Faculty of Arts to offer the geography curriculum (with Geology as a subsidiary subject) in the Bachelor of Arts degree programme. In 2007, the Department moved to the Faculty of Social Sciences, and the geography curriculum is offered, together with the other four core social sciences disciplines, in the Bachelor of Social Sciences (BSS) degree programme. Hence, the Department of Geography at HKU is the oldest and earliest geography department in Hong Kong.

*What's the uniqueness of Geography at HKU?*

The Geography curriculum is not offered as a JUPAS Direct Admission programme with fixed student quotas. Instead, geography courses at HKU are offered not only to students admitted into the **Bachelor of Social Sciences (BSS)**, **Bachelor of Arts (BA)** and **Bachelor of Science (BSc)** degree programmes, but also to other programmes. At HKU, BSS, BA and BSc students are not required to decide their disciplinary majors in the first year of study. Instead, they will have the opportunity to **explore and study** courses related not only to geography but also other subjects offered by other departments. Thus, students can use their first year at HKU to identify their academic interests and career path before deciding on the disciplinary majors which fit their individual needs. In the second year of study, BSS students can choose Geography as **either** a Single major **or** a Double major with another social sciences/arts/science discipline, whereas BA and BSc students can declare a Double major in Geography with another 'core' arts or science discipline. BSS/BA/BSc students at HKU have a wide choice in their disciplinary majors. The Department does not set a cap on the number of Geography majors in each academic year.

The Department offers a contemporary and well-designed curriculum with an emphasis on China studies, human-environmental interaction, resource and environmental management, tourism and leisure, and transport and urban planning. Students are offered a wide range of stimulating and well-structured courses that are grouped under four main themes, namely **China & the Pacific Rim**, **Environment & Resources**, **Tourism & Leisure**, and **Urban & Transport**. Majoring in Geography enables students to have an edge in the pursuit of careers in urban planning, transport logistics, environmental impact assessment, tourism, finance and administration, trade and public policy making. It also equips them to pursue postgraduate studies.



*Field trip to China*

In addition to the geography undergraduate curriculum, the Department also plays a leading role in the 'Urban Governance' major programme offered under the Bachelor of Social Sciences degree. The Department also provides a number of postgraduate programmes via (a) research studies for **MPhil** and **PhD** degrees, and (b) the offering of two taught postgraduate programmes: **MA in China Development Studies** and **MA in Transport Policy & Planning** (with participation from two other HKU departments).



*UK field trip*

The Department has 17 well-qualified academic staff who are committed to provide high-quality education that enables students to acquire both geographic knowledge and training along with a range of transferable skills. The Department also engages experienced visiting and part-time teachers with specialized expertise to enrich our teaching programmes. It has educated well over 3,340 bachelor graduates, 200 research graduates and 710 taught postgraduates. Many of them are world-class academic scholars, prominent government officials and business leaders, as well as senior executives and professionals.

## Introduction



Department of Social Sciences (SSC) was established in July 2009. The department offers wide range of social sciences related undergraduate and professional development programme for in-service teachers such as Bachelor of Social Sciences (Honours) in Global and Environmental Studies, Bachelor of Education (Honours) (Business, Accounting and Financial Studies) (Five-year full time), Bachelor of Education (Honours) (Geography) (Five-year Full-time), Bachelor of Arts (Honours) in Liberal Studies Education, Certificate in Professional Development Programme on Enhancing Curriculum Planning and Teaching of Life and Society in Junior Secondary Curriculum (Five-Week Full-time Block Release), etc.

### Bachelor of Education (Honours) (Geography)

The Bachelor of Education (Honours) (Secondary) programme seeks to prepare qualified, competent and professional secondary school teachers capable of satisfying the education needs of learners with multiples aspects of competence and academic abilities. The new major “Geography” in 5-year full-time BEd (S) aims at equipping pre-service teachers who will be able to teach geography curricula in senior and junior forms respectively at secondary schools.

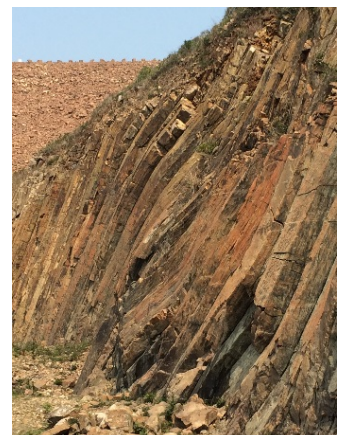
Geography Major students are required to complete 39 credit points of major courses and 6 credit points of pedagogy courses on geographical education. There are altogether 13 Geography Major Courses with 2 Pedagogy courses in Geographical Education proposed to cover three compulsory parts namely “Living with our Physical Environment”; “Facing Changes in the Human Environment”; “Confronting Global Challenges” and four elective parts namely “Dynamic Earth: The Building of Hong Kong”; “Weather and Climate”; “Transport Development, Planning and Management”; “Regional Study of Zhujiang (Pearl River) Delta” of the HKDSE Geography Curriculum.



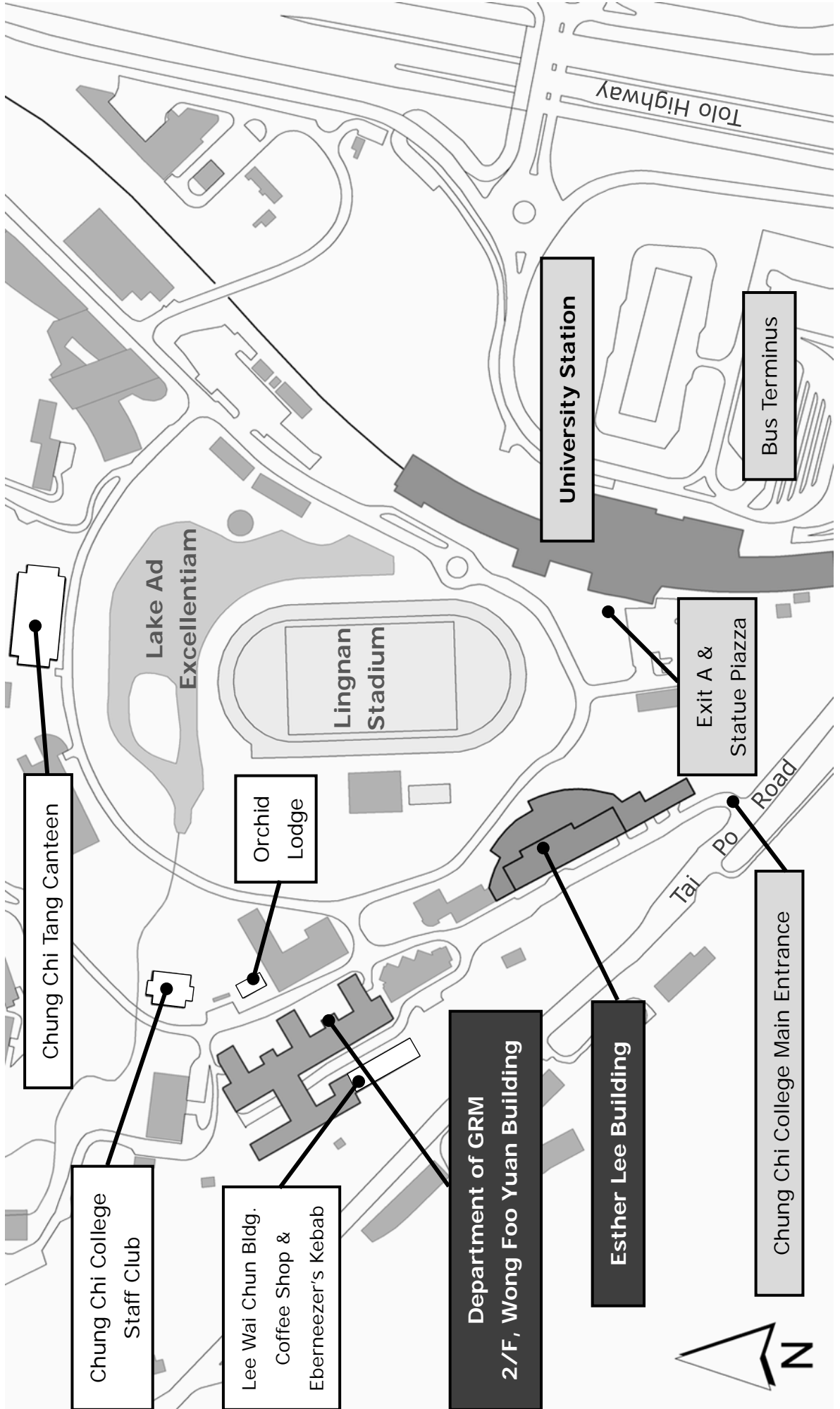
The Resources Management minor (5 courses with 15 credit points) is designed to provide students with in-depth understanding of the contemporary issues in resources management, thus enhancing their preparedness for career options in diversified sectors. It introduces the essential concepts and examines natural and cultural resources conservation and management practices. It also discusses critically the problems and challenges of the current practices of resources management.

This is a UGC-funded programme which aims to:

- equip students with the disciplinary and pedagogical knowledge necessary for being fully qualified secondary geography teachers;
- exhibit a broad understanding of the physical, human and cultural geographical issues and display competencies in integrating geographical concepts and theories into decision making;
- apply critical thinking to analyze the geographical and environmental issues that address the relationship among land, nature and people in the physical and human environments;
- demonstrate the pedagogical literacy and competency required for the development and implementation of curriculum in secondary schools; and
- develop essential abilities to plan, execute, report on field work and geographical research with the skills of data analysis, Geographic Information System, remote sensing and field studies.



Location Map  
Hong Kong Geography Day 2016





# Floor Plan Ground Floor, Esther Lee Building

