The 26th International Conference on Geoinformatics

Final Program

Kunming, China
June 28-30, 2018
2018 CPGIS Annual Conference Information

Sponsor
International Association of Chinese Professionals in Geographic Information Sciences (CPGIS)

Organizers
Yunnan Normal University
Wuhan University

Co-organizers
The Yunnan Provincial Committee of Jiusan Society
SuperMap Software Co., Ltd
Beijing PIESAT Information Technology Co., Ltd

Media Support
https://cpgis.org/
Information Department, Yunnan Normal University

Location
Chenggong Campus, Yunnan Normal University
No. 1 Yuhua District, Chenggong District, Kunming, China
Postcode: 650500
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## 2018 CPGIS Committee

### International Steering Committee

#### Honorary Chairmen

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<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guanhua Xu</td>
<td>Chinese Academy of Sciences</td>
<td>China</td>
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<tr>
<td>Deren Li</td>
<td>Wuhan University</td>
<td>China</td>
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<tr>
<td>Michael Batty</td>
<td>Center for Advanced Spatial Analysis, University College London</td>
<td>UK</td>
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<tr>
<td>Michael Goodchild</td>
<td>University of California at Santa Barbara</td>
<td>USA</td>
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#### Co-Chairs

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Country</th>
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<tbody>
<tr>
<td>Hui Lin</td>
<td>Chinese University of Hong Kong</td>
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<tr>
<td>Huadong Guo</td>
<td>Chinese Academy of Science</td>
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<tr>
<td>Jianya Gong</td>
<td>Wuhan University</td>
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<tr>
<td>Chenghu Zhou</td>
<td>Chinese Academy of Sciences</td>
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#### Members

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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Luc Anselin</td>
<td>University of Chicago</td>
<td>USA</td>
</tr>
<tr>
<td>Yifang Ban</td>
<td>KTH Royal Institute of Technology</td>
<td>Sweden</td>
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<tr>
<td>Shuming Bao</td>
<td>University of Michigan</td>
<td>USA</td>
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<tr>
<td>Jingming Chen</td>
<td>University of Toronto</td>
<td>Canada</td>
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<tr>
<td>Jun Chen</td>
<td>National Administration of Surveying, Mapping and Geoinformation</td>
<td>China</td>
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<tr>
<td>Christophe Claramunt</td>
<td>French Naval Academy Research Institute</td>
<td>France</td>
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<td>Yuemin Ding</td>
<td>Verizon</td>
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<td>Stewart Fothingham</td>
<td>Arizona State University</td>
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<td>Kun Yang</td>
<td>Yunnan Normal University</td>
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<td>Peng Gong</td>
<td>Tsinghua University</td>
<td>China</td>
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<tr>
<td>Daniel Griffith</td>
<td>University of Texas at Dallas</td>
<td>USA</td>
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<tr>
<td>Huili Gong</td>
<td>Capital Normal University</td>
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<td>Mei-Po Kwan</td>
<td>University of Illinois at Urbana Champaign</td>
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<td>Milan Konecny</td>
<td>Masaryk University</td>
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<td>Bin Li</td>
<td>Central Michigan State University</td>
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<td>Lin Liu</td>
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<td>Yongmei Lu</td>
<td>Texas State University</td>
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<td>Paul Longley</td>
<td>University College London</td>
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<td>University at Buffalo</td>
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<td>Liqui Meng</td>
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<td>Yuji Murayama</td>
<td>University of Tsukuba</td>
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<td>Douglas Richardson</td>
<td>American Association of Geographers (AAG)</td>
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<td>Shih-Lung Shaw</td>
<td>University of Tennessee</td>
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<td>Xin Shi</td>
<td>Dartmouth College</td>
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<td>Daniel SuI</td>
<td>National Science Foundation</td>
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<td>Chih-Hong Sun</td>
<td>National Taiwan University</td>
<td>Chinese-Taipei</td>
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<td>Vincent Tao</td>
<td>Global Earth Group</td>
<td>China</td>
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<td>Vladimir Tikunov</td>
<td>Moscow State University</td>
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<td>Fahui Wang</td>
<td>Louisiana State University</td>
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<td>David Wong</td>
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<td>Yichun Xie</td>
<td>Eastern Michigan University</td>
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<td>Xinfu Gu</td>
<td>Institute of Remote Sensing and Digital Earth Chinese Academy of Sciences</td>
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<td>Wanlin Yan</td>
<td>Keio University</td>
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<td>Keiji Yano</td>
<td>Ritsumeikan University</td>
<td>Japan</td>
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<tr>
<td>Anthony Yeh</td>
<td>University of Hong Kong</td>
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<tr>
<td>Benjamin Zhan</td>
<td>Texas State University</td>
<td>USA</td>
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<tr>
<td>Qiming Zhou</td>
<td>Hong Kong Baptist University</td>
<td>China</td>
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<tr>
<td>A-Xing Zhu</td>
<td>University of Wisconsin-Madison</td>
<td>USA</td>
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Jinping Li  Yunnan Normal University
Depeng Liu  Yunnan Normal University
Yan Liu  Yunnan Normal University
Chao Meng  Yunnan Normal University
Meie Pan  Yunnan Normal University
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Zhong Xie  China University of Geosciences
Lin Xin  Yunnan Normal University
Wen Xiong  Yunnan Normal University
Quanli Xu  Yunnan Normal University
Yulian Yang  Yunnan Normal University
Lijun Yun  Yunnan Normal University
Qinhong Zhen  Yunnan Normal University
Yanhui Zhu  Yunnan Normal University
Biography of Keynote Speakers

Prof. Deren Li
Academician of Chinese Academy of Science
Academician of Chinese Academy of Engineering
Professor, School of Remote Sensing and Information Engineering, Wuhan University

Prof. Jingming Chen
Fellow of Royal Society of Canada Senior Canada Research Chair
Professor, Department of Geography and Program in Planning, University of Toronto

Prof. Liqiu Meng
Vice president, Technical University of Munich
Professor, Department of Cartography, Technical University of Munich

Prof. Mei-Po Kwan
Professor, Department of Geography and Geographic Information Science, University of Illinois at Urbana-Champaign (UIUC)
Director, Space-Time Analysis and Reserach Lab, UIUC
Biography of Keynote Speakers

**Prof. Rongxing Li**
Professor, College of Surveying and Geoinformation, Tongji University. The Lowber B. Strange Professor, Department of Civil Environmental and Geodetic Engineering, The Ohio State University. Fellow of the American Society for Photogrammetry and Remote Sensing (ASPRS) and American Society of Civil Engineers (ASCE)

**Prof. Qiming Zhou**
Director of the Centre for Geo-computation Studies, Hong Kong Baptist University
Associate Dean of the Faculty of Social Science, Hong Kong Baptist University
Professor, Department of Geography, Hong Kong Baptist University

**Prof. Chih-Hong Sun**
Professor
Department of Geography, National Taiwan University

**Prof. Zhilin Li**
National "Thousand People Plan" Specially-invited Expert
Dean, Faculty of Geosciences and Environmental Engineering, Southwest Jiaotong University
Panel Discussion

Career Development in GIS

GIS, both as an academic field and an industry, has experienced rapid growth during the past 30 years. Most GIS professionals have gained through this growth. With the new international political atmosphere and “double first-rate” movement in China, what, if any, change is expected toward GIS? Would more Western trained GIS professionals return to China? Would more scholars move between programs within China? How to find the ideal academic job in this highly competitive environment? With the emphasis switching from the quantity of SCI publications to quality, more incentives are placed on publications with high impact factors. How to publish in top journals? The recent #MeToo movement has heightened the gender issues and sex harassment in workplace. What is the potential impact on GIS? The panelists, including top scholars, editors of top journals, deans and department heads, will share their personal experience. Each panelist will present for 5 minutes and then answer questions from the audience.

Panelists:
- Lin Liu (Chair), University of Cincinnati, Guangzhou University. Overview
- Qingyun Du, Wuhan University. Recruitment in China
- Mei-Po Kwan, University of Illinois at Urbana-Champaign. Publication
- Yu Liu, Peking University. Publication, Promotion in China
- Yongmei Lu, Texas State University. Gender Issues and Workplace Environment
- Shih-Lung Shaw, University of Tennessee. Recruitment and Promotion in U.S.

New Generation of GIS

The past decade has witnessed several revolutionary technologies: a) cloud computing (C2) changing the way how computing is used, b) artificial intelligence (AI) changing all walks of human life, c) Internet of Things (IoT) that integrates physical and virtual world, d) mobility which moves service to human beings or machines with their current contexts, e) big data (BD) as characterized by 4Vs and calling for value extraction. These disruptive technologies have also brought challenges and opportunities to the geographical information science domain such as aspects of big spatiotemporal data analytics, human dynamics and physical/virtual world linkage analyses, increasing complexity of applications, and cross-domain integration and analyses. A rethinking of the GIS architecture, theory, methodology, software, tool, and solution is needed in the era of BD, AI, IoT, C2, and mobility. This panel is designed to capture the need for such a rethinking and the directions/fields that we should focus our efforts on in the next decade including questions of: (1) What are the specific GIS challenges we are facing today in lieu of BD, AI, IoT, C2 and mobility? (2) What architecture is needed to support addressing such challenges? (3) What new functionalities are needed? (4) How would the structure of the government in China impact GIS future? (5) What new research directions are needed? (6) How should we adjust the curriculum for educating our next generation GIScientists? (7) How the GIS industry will be impacted?

We are inviting experts to join us with the following as a start, everyone is welcomed to participate this half day discussion critical to our domain. To ensure in-depth exchange, the first hour will be in English and the remaining discussion will be in Chinese. We will explore the possibility of establishing a new committee within CPGIS.

Panelists:
- Deren Li, Academician, Wuhan University
- Yao Lin, Wuhan University
- Hui Lin, Chinese University of Hong Kong
- Qing Zhu, Southwest Jiaotong University
- Chaowei Yang, George Mason University & NSF Spatiotemporal Innovation Center (Chair)
- Lin Li, Wuhan University
- Jason Wang, Taibo Research
- Qingfeng Guan, Chinese Univ. of Geosciences - Wuhan
- Shihong Du, Peking University
- Baoxuan Jin, Dept. of Natural Resource, Yunan province
- Axing Zhu, Univ. of Wisconsin-Madison (Chair)
Panel Discussion

Human Dynamics in Smart Cities

With accelerated technological advancements and convergence, there have been major changes in how people carry out their daily activities and how they interact with each other. Residents in cities and communities around the world are increasingly connected with their surrounding built and natural environments as well as places and people far away by smart technologies, creating new opportunities for innovation, improved services, and enhanced quality of life as well as new challenges to the economic, social, cultural and environmental systems in today's world. Research on human dynamics has been gaining momentum in geography and other disciplines in recent years. With the astonishing technological transformations taking place now, it is imperative to improve our understanding of human dynamics in order to leverage these new opportunities to tackle the challenges ranging from climate change, public health, traffic congestion, economic growth, to digital divide, social equity, political movements, and cultural conflicts, among others.

Following very successful symposia on this topic at many international meetings in previous four years, we would like to start this Human Dynamics and Smart Cities Panel at 2018 CPGIS annual meeting in Kunming, China to engage researchers with interests in different aspects of human dynamics research from interdisciplinary perspectives.

Panelists

- Meipo Kwan, University of Illinois at Urbana-Champaign
- Yu Liu, Peking University
- Yongmei Lu, Texas State University
- Shih-Lung Shaw, University of Tennessee (Chair)
- Xinyue Ye, Kent State University (Chair)

Urban remote sensing: problems and challenges

The Urban remote sensing field has been developed for more than thirty years with significant progresses thanks to technology development and sensor advances. Remote sensing technology has been applied for estimating urban parameters (e.g. urban impervious surface, urban forest, housing, population, etc.), simulating urban development, analyzing urban heat island, as well as other applications. Under the era of big data and artificial intelligence, it is necessary to re-examine the status of urban remote sensing field, and think about future directions of urban remote sensing.

This panel discussion attempted to discuss relevant urban remote sensing issues.

Panelists

- Changshan Wu (Chair), Tianjin Chengjian University and University of Wisconsin-Milwaukee
- Peijun Du, Nanjing University
- Hanqiu Xu, Fuzhou University
- Bailang Yu, East China Normal University
- Kun Tan, China University of Mining and Technology
- Huazhong Ren, Peking University
- Hongsheng Zhang, The Chinese University of Hong Kong
Conference Timetable

Confrence Venue

- Huixue 2 Building 101, Chenggong Campus, Yunnan Normal University (YNNU).
- National Experimental Teaching Center for Teacher Education (NETCFTE) Level 1 and 2, Chenggong Campus, YNNU.

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<tr>
<th>28 June 2018 (Thursday)</th>
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<tbody>
<tr>
<td><strong>Time</strong></td>
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<td>9:00-22:00</td>
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</table>

** Please go to the School of Information Science and Technology (Ruizhi 4 Building, Chenggong Campus, Yunnan Normal University) for registration and collect the conference material. Thank you!
## Conference Venue
- Huixue 2 Building 101, Chenggong Campus, Yunnan Normal University (YNNU).
- National Experimental Teaching Center for Teacher Education (NETCFTE) Level 1 and 2, Chenggong Campus, YNNU

### 29 June 2018 (Friday)

<table>
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<th>Event</th>
<th>Organiser</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:00-8:30</td>
<td>Registration</td>
<td>Organizing Committee</td>
<td>Huixue 2 Building, Level 1</td>
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<tr>
<td>8:30-9:30</td>
<td>Opening Ceremony</td>
<td>Kun Yang</td>
<td>Huixue 2 Building 101</td>
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<tr>
<td>9:30-10:10</td>
<td>Keynote Speech</td>
<td>Kun Yang</td>
<td>Huixue 2 Building 101</td>
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<tr>
<td>10:10-10:50</td>
<td>Tea Break and Group Photo</td>
<td>Hui Lin</td>
<td>Huixue 2 Building 101</td>
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<td>11:30-12:10</td>
<td>Liqiu Meng</td>
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<td>12:10-13:30</td>
<td>Lunch Break</td>
<td>Organizing Committee</td>
<td>Fontaine Blanche Hotel, Level 1</td>
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<tr>
<td>13:30-14:30</td>
<td>Panel Discuss</td>
<td>Lin Liu et al.,</td>
<td>NETCFTE Conference Room 1</td>
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<td>Chaowei Yang et al.,</td>
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<td>14:30-15:00</td>
<td>Tea Break and Poster Session</td>
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<tr>
<td>15:00-16:30</td>
<td>Deans Forum of Geodesy and Geomatics</td>
<td>Jianya Gong</td>
<td>Ruizhi 4 Building 216</td>
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<tr>
<td>16:30-17:30</td>
<td>CPGIS Committee &amp; Editorial Board Meeting</td>
<td>Jianya Gong</td>
<td>Ruizhi 4 Building 216</td>
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<td>15:00-18:30</td>
<td>Oral Session</td>
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<td></td>
<td>Session 1 Urban GIS and Smart City</td>
<td>Yu Liu, Bailang Yu</td>
<td>Session Room 1</td>
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<td>Session 2 Remote Sensing Sciences and Application</td>
<td>Peijun Du, Lixin Wu</td>
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<td>Session 3 Environment GIS and Application</td>
<td>Caijun Xu, Huanfeng Shen</td>
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<td>Session 4 Multi-dimensional Spatial Data Model</td>
<td>Xiaoyong Chen, Bo Huang</td>
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<td>Session 5 Spatio-temporal Data and Sharing</td>
<td>Huayi Wu, Shixiong Hu</td>
<td>Session Room 5</td>
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<td>Session 6 VGI and Crowsourcing</td>
<td>Guoxiang Liu, Hanqiu Xu</td>
<td>Session Room 6</td>
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<td>Session 7 Internet of Things for GIS</td>
<td>Wei Luo, Qingyun Du</td>
<td>Session Room 7</td>
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<td>Session 8 Geospatial Cloud Computing</td>
<td>Shih-Lung Shaw, Qin Kun</td>
<td>Session Room 8</td>
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<td>Session 9 Student Paper Competition</td>
<td>Xiang Chen</td>
<td>Session Room 9</td>
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<tr>
<td>19:00-20:30</td>
<td>CPGIS Night (for CPGIS members and all registered participants)</td>
<td>Organizing Committee</td>
<td>Fontaine Blanche Hotel, Level 2</td>
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</tbody>
</table>
## Conference Timetable

### Conference Venue
- Huixue 2 Building 101, Chenggong Campus, Yunnan Normal University (YNNU).
- National Experimental Teaching Center for Teacher Education (NETCFTE) Level 1 and 2, Chenggong Campus, YNNU

### 30 June 2018 (Saturday)

**Time** | **Event** | **Organiser** | **Location**
---|---|---|---
8:00-8:30 | Registration | Organizing Committee | Huixue 2 Building, Level 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Keynote Speaker</th>
<th>Topic</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:30-9:10</td>
<td>Keynote Speech</td>
<td>Mei-Po Kwan</td>
<td>Geospatial Technologies for a Sustainable City</td>
<td>Huixue 2 Building 101</td>
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<tr>
<td>9:50-10:10</td>
<td>Tea Break</td>
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<tr>
<td>10:10-10:50</td>
<td></td>
<td>Rongxing Li</td>
<td>Unique Opportunity in Tripolar Study: Macro- or Micro-Sensing</td>
<td>Huixue 2 Building 101</td>
</tr>
<tr>
<td>10:50-11:30</td>
<td></td>
<td>Chih-Hong Sun</td>
<td>Smart Earth Collaboration Platform</td>
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<tr>
<td>11:30-12:10</td>
<td></td>
<td>Zhilin Li</td>
<td>Research on Scale in GIsScience: Statue of 30 Years Development</td>
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<tr>
<td>12:10-13:30</td>
<td>Lunch Break</td>
<td>Organizing Committee</td>
<td>Fontaine Blanche Hotel, Level 1</td>
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<tr>
<td>13:30-14:30</td>
<td>Panel Discuss</td>
<td>Shih-Lung Shaw and Xinyue Ye et al., NETCFTE</td>
<td>Urban Remote Sensing Problems and Challenges</td>
<td>NETCFTE Conference Room 1</td>
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<td>14:30-15:00</td>
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<td>NETCFTE Conference Room 2</td>
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<tr>
<td>15:00-18:30</td>
<td>Oral Session</td>
<td>Xinchang Zhang, Xiang Chen</td>
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<td>Session 1</td>
<td>Urban GIS and Smart City</td>
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<td>Session 2</td>
<td>Remote Sensing Sciences and Application</td>
<td>Axing Zhu, Jin Zhang</td>
<td>Session Room 2</td>
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<td>Session 3</td>
<td>Environment GIS and Application</td>
<td>Xinyue Ye, Min Deng</td>
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<td>Session 4</td>
<td>Multi-dimensional Spatial Data Model</td>
<td>Lin Liu, Yun Zhang</td>
<td>Session Room 4</td>
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<td>Session 5</td>
<td>Spatio-temporal Data and Sharing</td>
<td>Zhilin Li, Yaosheng Pan</td>
<td>Session Room 5</td>
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<td>Session 6</td>
<td>VGI and Crowsourcing</td>
<td>Hongchao Fan, Yaolong Zhao</td>
<td>Session Room 6</td>
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<tr>
<td>19:00-20:30</td>
<td>Award Dinner (for CPGIS members and all registered participants)</td>
<td>Organizing Committee</td>
<td>Fontaine Blanche Hotel, Level 2</td>
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</table>
Venue Location
Venue Location (Chenggong Campus, Yunnan Normal University)
Conference Room Location Map (National Experimental Teaching Center for Teacher Education (NETCFT) Level 1)

The 26th International Conference on Geoinformatics Conference Room Location Map

14
Local Transportation

From Kunming Changshui International Airport to Yunnan Normal University (YNNU)

**OPTION 1: BUS & KUNMING SUBWAY**
1. Walk to Airport Center station (300m, about 5 minutes)
2. Board the Line 6 train (Toward East Bus Station)
3. Exit train at East Bus Station
4. Transfer to the Line 3 train (Toward Xishan Park)
5. Exit train at Dongfeng Square
6. Transfer to the Line 2 train (Toward South Ring Road)
7. Exit train at South Ring Road
8. Transfer to the Line 1 train (Toward South University Town)
9. Exit train at Lianda street
10. Board the Z59 bus (Toward East Canteen of YNNU)
11. Arrive (YNNU and Fontaine Blanche Hotel)

**OPTION 2: TAXI**
Time Required: Around 1 hour
Fare: around CNY 120

**OPTION 3: LIMOUSINE**
Time Required: Around 1 hour
Fare: CNY 35 per car per trip
Airport representative from hotel will meet guest at the Arrival Hall with a hotel signage and escort guest to the limousine.
Advance reservation is necessary. Please call Reservations office of Fontaine Blanche Hotel (located in YNNU) at +8618187114747.
Boarding schedule
08:30  10:30  12:30  14:30  16:30  18:30

From Kunming High-speed Railway Station to Yunnan Normal University (YNNU)

**OPTION 1: TAXI**
Time Required: Around 15 minutes
Fare: around CNY 10

**OPTION 2: BUS**
1. Walk to BaiZhiYing stop (958m)
2. Board the Line 216 bus
3. Exit bus at JuXian Street
4. Walk to destination (456m)
5. Arrive (Fontaine Blanche Hotel located in YNNU)
# Invited Technical Sessions

## Session 1 Urban GIS and Smart City

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<thead>
<tr>
<th>Time</th>
<th>No.</th>
<th>Topic</th>
<th>Speaker</th>
<th>Time</th>
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<th>Topic</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>15:00–15:15</td>
<td>1</td>
<td>Introduction to SuperMap GIS Technology</td>
<td>Jiawei Zhang</td>
<td>15:00–15:15</td>
<td>1</td>
<td>Evaluating SNAP Food Retailer Access By an Improved 2SFCA Method</td>
<td>Xiang Chen</td>
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<td>SuperMap Software Co., Ltd.</td>
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<td>Arkansas Tech University</td>
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<td>University of Hong Kong</td>
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<td>Chinese Academy of Sciences</td>
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<tr>
<td>15:30–15:45</td>
<td>3</td>
<td>Simulate Crowd Movement and Behaviors in a Rally</td>
<td>T. Edwin Chow</td>
<td>15:30–15:45</td>
<td>3</td>
<td>Analysis of China's Urban Network Structure from the Perspective of &quot;Streaming&quot;</td>
<td>QiQi Zhang</td>
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<td>Texas State University</td>
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<td>China University of Geosciences</td>
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<tr>
<td>15:45–16:00</td>
<td>4</td>
<td>Indoor Evacuation Planning Based on Individual-level Simulation</td>
<td>Xu Dong</td>
<td>15:45–16:00</td>
<td>4</td>
<td>Analysis on the Evolutionary Characteristics of the Spatial Structure of Midwest City System</td>
<td>Yuying Li</td>
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<tr>
<td>16:00–16:15</td>
<td>5</td>
<td>Considering Space Layout of Beacon Node to Improve Positioning</td>
<td>Wuping Liu</td>
<td>16:00–16:15</td>
<td>5</td>
<td>Mapping Solar Energy Potential in an Urban Environment</td>
<td>Jun Luo</td>
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<td>Missouri State University</td>
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<td>16:15–16:30</td>
<td>6</td>
<td>Testing 3 Hypotheses about Human Emotion Landscape</td>
<td>Fei Teng</td>
<td>16:15–16:30</td>
<td>6</td>
<td>Comparative Study of Urban Forms on Macro Scale</td>
<td>Wang Tan</td>
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<td>Wuhan University</td>
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<td>16:30–16:45</td>
<td>7</td>
<td>An Improved Algorithm for Mining Movement Patterns Between Zones: A Case Study of Shanghai Subway Commuter</td>
<td>Xing-Xing Zhou</td>
<td>16:30–16:45</td>
<td>7</td>
<td>Spatial Distribution Pattern of High-end Hotels Based on Multi-Source Data-A Case Study of Central Beijing City</td>
<td>Yin Xu</td>
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<td>China University of Geosciences</td>
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<tr>
<td>16:45–17:00</td>
<td>8</td>
<td>Research on the Influence Range of Rail Transit on Housing Price based on GIS and Reachability Theory</td>
<td>Rongxuan Yang</td>
<td>16:45–17:00</td>
<td>8</td>
<td>Study on the Potential Location of Sculptures at Urban Highway Entrances and Exits</td>
<td>Chuanjia Gong</td>
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<td>Huazhong Agricultural University</td>
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<td>Nanjing University</td>
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## Invited Technical Sessions

### Session 1 Urban GIS and Smart City

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<tr>
<th>Time</th>
<th>No.</th>
<th>Topic</th>
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<tbody>
<tr>
<td>17:00–17:15</td>
<td>9</td>
<td>Semantic Annotation of 3D Architecture Models Based on the Geometric structure Characteristics</td>
<td>Xuan Sun Nankai University</td>
<td>17:00–17:15</td>
<td>9</td>
<td>Understanding Urban Functionality from POI Space</td>
<td>Dongwan Fan Wuhan University</td>
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<tr>
<td>17:45–18:00</td>
<td>12</td>
<td>Land Use Projections in China Under Global Socioeconomic and Emission Scenarios: Utilizing a Scenario-based Land-use Change Assessment Framework</td>
<td>Na Dong The Chinese University of Hong Kong</td>
<td>17:45–18:00</td>
<td>12</td>
<td>DASSCNA: A New Structural Community Detection Algorithm for Spatial Networks</td>
<td>You Wan Wuhan University</td>
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<tr>
<td>18:00–18:15</td>
<td>13</td>
<td>An Agent-Based Procedure with an Embedded Agent Learning Model for Residential Land Growth Simulation: The Case Study of Shenzhen, China</td>
<td>Zhifeng Li Nanjing University</td>
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<tr>
<td>18:15–18:30</td>
<td>14</td>
<td>Combining Global and Local Indicators Accessibility Calculation Methods and Evaluation of Scenic Spots</td>
<td>Zhibo Xiang Taiyuan University of Technology</td>
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# Invited Technical Sessions

## Session 2 Remote Sensing Sciences and Application

<table>
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<tr>
<th>Time</th>
<th>No.</th>
<th>Topic</th>
<th>Speaker</th>
<th>Time</th>
<th>No.</th>
<th>Topic</th>
<th>Speaker</th>
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</thead>
<tbody>
<tr>
<td>15:00–15:15</td>
<td>1</td>
<td>Adding Value to Big Data: From Data Fusion, Analytics to Decision Support</td>
<td>Bo Huang, The Chinese University of Hong Kong</td>
<td>15:00–15:15</td>
<td>1</td>
<td>Population Mapping Based on Deep Features of Remote Sensing Imagery</td>
<td>Xiaoyue Xing, Beijing Normal University</td>
</tr>
<tr>
<td>15:15–15:30</td>
<td>2</td>
<td>Re-estimation of the Greenland Ice Sheet Changes from ICESat Measurements with Slope Correction</td>
<td>Fang Zou, Chinese Academy of Sciences</td>
<td>15:15–15:30</td>
<td>2</td>
<td>Tree Crown Discrimination using Three-dimensional Shape Signatures Derived from LiDAR Point Clouds</td>
<td>Liang Pin, University of North Texas</td>
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<tr>
<td>15:45–16:15</td>
<td>4</td>
<td>A Simple Model for Correcting The Blooming Effects in DMSP-OLS Images</td>
<td>Yang Hu, Beijing Normal University</td>
<td>15:45–16:00</td>
<td>4</td>
<td>An Improved Cascade Forest Classifier for Hyperspectral Imagery Classification</td>
<td>Fuyu Wu, China University of Mining and Technology</td>
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<tr>
<td>16:00–16:15</td>
<td>5</td>
<td>Forest Biomass Estimation Based on GF-1 Images with Inversion Algorithm in the Qinling Mountains</td>
<td>Wanlong Sun, Tsinghua University</td>
<td>16:00–16:15</td>
<td>5</td>
<td>Collaborative Representation for Hyperspectral Unmixing</td>
<td>Hongjun Su, Hohai University</td>
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<tr>
<td>16:30–16:45</td>
<td>7</td>
<td>Combining MODIS, NCEP/NCAR and DEM Data for Near Land Surface Atmospheric Water Vapor Estimation</td>
<td>Shanznen Yi, Huazhong University of Science and Technology</td>
<td>16:30–16:45</td>
<td>7</td>
<td>Recent Drought Conditions in The Yangtze River Basin Observed by Satellite Gravimetry</td>
<td>Shuanggen Jin, Chinese Academy of Sciences</td>
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</table>
## Invited Technical Sessions

### Session 2 Remote Sensing Sciences and Application

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<tr>
<td>16:45–17:00</td>
<td>8</td>
<td>Dynamic Model Constrained Optimal Flight Speed Determination of Surveying UAV Under Wind Condition</td>
<td>Akram Akbar Tongji University</td>
<td>16:45–17:00</td>
<td>8</td>
<td>Reconstructing Monthly ECV Global Soil Moisture with an Improved Spatial Resolution</td>
<td>Wenlong Jing Guangzhou Institute of Geography</td>
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<tr>
<td>17:30–17:45</td>
<td>11</td>
<td>Preliminary Comparison of the Multispectral Cameras Onboard UAV Platform for Environment Monitoring</td>
<td>Feng Chen Xiamen University</td>
<td>17:30–17:45</td>
<td>11</td>
<td>Multi-classifier Based Urban Land Cover Classification from GF-2 Imagery</td>
<td>Yincai Guo Beijing University</td>
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<tr>
<td>17:45–18:00</td>
<td>12</td>
<td>Spatial-temporal Change of Vegetation Coverage Based on NDVI in Liupanshui City</td>
<td>Li He Yunnan Normal University</td>
<td>17:45–18:00</td>
<td>12</td>
<td>Research on the Change of the City Gravity Migration of Urban Agglomeration in the Middle Reach of Yangtze River based on DMSP Nighttime Light</td>
<td>Min Li Wuhan University</td>
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<tr>
<td>18:00–18:15</td>
<td>13</td>
<td>Study on Removing Shadow in Water of High Resolution Remote Sensing Image</td>
<td>Liang Xiao Yunnan Normal University</td>
<td>18:00–18:15</td>
<td>13</td>
<td>Damage Extraction of Metro Tunnel Surface from Roughness Map Generated by Point Cloud</td>
<td>Xingran Ao Tongji University</td>
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<tr>
<td>18:15–18:30</td>
<td>14</td>
<td>Analysis of Thermal Structure of Arctic Lakes Using In Situ and Multi-date Landsat-8 Data</td>
<td>Yan Huang East China Normal University</td>
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# Invited Technical Sessions

## Session 3 Environment GIS and Application

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<th>Topic</th>
<th>Speaker</th>
<th>University/Institution</th>
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<tbody>
<tr>
<td>15:00-15:15</td>
<td>1</td>
<td>Monitoring of the habitat change of Timber Rattlesnake using GIS</td>
<td>Shixiong Hu</td>
<td>East Stroudsburg University of PA</td>
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<tr>
<td>15:15-15:30</td>
<td>2</td>
<td>Disaster Vulnerability Assessment Using Emergency Events Database (EM-DAT) and Geographic Weighted Regression</td>
<td>Zhuojun Xie</td>
<td>The Chinese University of Hong Kong</td>
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<tr>
<td>15:30-15:45</td>
<td>3</td>
<td>Automatic Approach to Detecting Craters through Training Machine Learning Classifier with Existing Crater Map and Topographic Characteristics</td>
<td>Yanwen Wang</td>
<td>IGSNRR, CAS</td>
</tr>
<tr>
<td>15:45-16:00</td>
<td>4</td>
<td>Spatial Statistic Interpolation of Morphological Factors Impact Limestone Pinnacle Development in Lunan Stone Forest National Park</td>
<td>Tao Tang</td>
<td>State University of New York</td>
</tr>
<tr>
<td>16:00-16:15</td>
<td>5</td>
<td>A GeoSpatial Insight: the Natural Resources and Environment in South Asia</td>
<td>Ainong Li</td>
<td>Chinese Academy of Sciences</td>
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<tr>
<td>16:15-16:30</td>
<td>6</td>
<td>Based on the Energy Analysis of Cultivated Land Resource Sustainable Utilization Evaluation in Wuhan City</td>
<td>Ahu Lin</td>
<td>Huazhong Agricultural University</td>
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<td>Evaluation of Urban Green Space Volume based on Airborne LiDAR Data and Aerial Color Image</td>
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<td>Assessment and Spatially Varying Causes Exploration of Ecosystem Health: A Case Study of Wuhan, China</td>
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<td>Correlation Analysis of PM2.5 and O3 Concentrations in China</td>
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## Invited Technical Sessions

### Session 3 Environment GIS and Application

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<tr>
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<tbody>
<tr>
<td>16:30–16:45</td>
<td>7</td>
<td>Loss and Recovery of Forests in Liaoning Province, China</td>
<td>Mingming Jia</td>
<td>16:30–16:45</td>
<td>7</td>
<td>Identifying Inequality of School’s Facilities and Resources Distribution Problems in Abbottabad City, Pakistan through Geographical Visualization.</td>
<td>TANVEER Hashir</td>
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<td>Chinese Academy of Sciences</td>
<td>16:45–17:00</td>
<td>8</td>
<td>Mining Soil–environment Relationships from Individual Soil Polygons for Updating Conventional Soil Maps</td>
<td>Wei Cheng Chinese Academy of Sciences</td>
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<tr>
<td>16:45–17:00</td>
<td>8</td>
<td>Spatial Distribution of Heavy Metals’ Concentrations in the Soil of the Qinling Mountains</td>
<td>Zhaoxue Tian</td>
<td>16:45–17:00</td>
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<td>17:15–17:30</td>
<td>10</td>
<td>Scale Features of Spatial Aggregation and Cluster Analysis of Coal Mines</td>
<td>Fankai Sun</td>
<td>17:15–17:30</td>
<td>10</td>
<td>Loss and Recovery of Forests in Liaoning Province, China</td>
<td>Rong Zhang Liaoning Technical University</td>
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<td>17:30–17:45</td>
<td>11</td>
<td>Structural Establishment and Relational Expression of the Fenhe River System</td>
<td>Kemeng Hu</td>
<td>17:30–17:45</td>
<td>11</td>
<td>Study on the Response of PM2.5 Pollution to Different Geographical Factors</td>
<td>Danning Zhang Xi’an Jiaotong University</td>
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<td>17:45–18:00</td>
<td>12</td>
<td>Land Surface Temperature Retrieval and Result Analysis Based on Landsat Imagery in Dianchi Basin</td>
<td>Junyi Chen</td>
<td>17:45–18:00</td>
<td>12</td>
<td>Earthquake Damage Monitoring and Assessment Based on High-resolution Remote Sensing Images—Take Lushan Earthquake as an Example</td>
<td>Xinfang Yuan Chinese Academy of Science</td>
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<tr>
<td>18:00–18:15</td>
<td>13</td>
<td>Slope Collapse Recognition from High-resolution Remote Sensing Images based on Visual Attention Model</td>
<td>Xiaolu Song</td>
<td>18:00–18:15</td>
<td>13</td>
<td>A Multi-regional Input–Output Analysis of Carbon Footprint Changes In China From 2007 to 2010</td>
<td>Min Huang Sun Yat-sen University</td>
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<td>Beijing Piesat Information Technology Co., Ltd</td>
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## Invited Technical Sessions

### Session 4 Multi-dimensional Spatial Data Model

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<tbody>
<tr>
<td>15:00–15:15</td>
<td>1</td>
<td>Theory And Method of Three Dimensional Geological Structure Modeling Driven by Knowledge Rules</td>
<td>Wang Yongzhi Jiangxi University of Science And Technology</td>
<td>15:00–15:15</td>
<td>1</td>
<td>Design of Hydrogeological Information Model for Rock Tunnel</td>
<td>Yilan Yan Tongji University</td>
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<tr>
<td>15:15–15:30</td>
<td>2</td>
<td>Measuring Spatial Access to Healthcare using a Multimodal Two Step Floating Catchment Area Method</td>
<td>Yan Lin University of New Mexico</td>
<td>15:15–15:30</td>
<td>2</td>
<td>Debris Flow Forecasting of Northwest of Yunnan Province Based On LR, SVM and RF Statistical Model</td>
<td>Mei Yang Wuhan University</td>
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<tr>
<td>15:15–16:00</td>
<td>4</td>
<td>Detecting Clusters Over Intercity Transportation Networks in Mainland China using K-shortest Path and Hierarchical Clustering</td>
<td>Hanqiu Yue China University of Geosciences</td>
<td>15:45–16:00</td>
<td>4</td>
<td>Study on the Coupling Development of Key Urban Agglomerations and Industry Clusters Along the Silk Road in the Perspective of Spatial Flow</td>
<td>Tong Liu China University of Geosciences</td>
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<td>16:00–16:15</td>
<td>5</td>
<td>A Space-time Measure for “Food Desert” Identification under the Linear Tessellation Model</td>
<td>Lu Wang Wuhan university</td>
<td>16:00–16:15</td>
<td>5</td>
<td>Visual Integration of Multiple Traffic Information for Online Map Design</td>
<td>Junfan Jiang East China Normal University</td>
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<td>16:15–16:30</td>
<td>6</td>
<td>A Dynamic Risk Assessment Method of Waterlogging Points by Coupling Hydrology Model with Deep Neural Network</td>
<td>Zhipeng Gui Wuhan University</td>
<td>16:15–16:30</td>
<td>6</td>
<td>A Comparative Analysis of Visualization Methods of Travel Time for Schematic Road Map</td>
<td>Xiaotong Hou Southwest Jiaotong University</td>
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<td>16:30–16:45</td>
<td>7</td>
<td>A Method for Compensating Deviations Adaptively Transforming DDM from Navigation Serving to Non-navigation Serving</td>
<td>Shuaidong Jia Dalian Naval Academy</td>
<td>16:30–16:45</td>
<td>7</td>
<td>A practice to search the Summit of a DEM-using Simulated Annealing Technique</td>
<td>Mengdi Wang East China Normal University</td>
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<td>16:45–17:00</td>
<td>8</td>
<td>A New Method of Selecting K-means Initial Cluster Centers Based on Hotspot Analysis</td>
<td>Qu Chen East China Normal University</td>
<td>16:45–17:00</td>
<td>8</td>
<td>Adaptive Web 3D Visualization for Diverse Terminals</td>
<td>Yunhao Zhang Southwest Jiaotong University</td>
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<td>17:00–17:15</td>
<td>9</td>
<td>A Study to Compare Three Different Spatial Downscaling Algorithms of Annual TRMM 3B43 Precipitation</td>
<td>Wenhao Xie Huazhong University of Science and Technology</td>
<td>17:00–17:15</td>
<td>9</td>
<td>Reconstructing 3D Scenes from UAV Images using a Structure-from-Motion Pipeline</td>
<td>Xuean Zhang China University of Geosciences</td>
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<tr>
<td>17:15–17:30</td>
<td>10</td>
<td>An Improved Weighted Total Least Squares for Condition Equation and Corresponding Bias-Corrected Method</td>
<td>Jie Han Tongji University</td>
<td>17:15–17:30</td>
<td>10</td>
<td>An Assessment of Paths for Transforming IFC to Shapefile for Integration of BIM and GIS</td>
<td>Junxiang Zhu Curtin University</td>
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<td>17:30–17:45</td>
<td>11</td>
<td>Construction and Application of an Automatic Document Generation Model</td>
<td>Lin Mi Chinese Academy of Sciences</td>
<td>17:30–17:45</td>
<td>11</td>
<td>Extracting and Tagging WMS Domain Themes Based on Multi-label Text Classification</td>
<td>Min Zhang Wuhan University</td>
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## Invited Technical Sessions

### Session 5 Spatio-temporal Data and Sharing

<table>
<thead>
<tr>
<th>Time</th>
<th>No.</th>
<th>Topic</th>
<th>Speaker</th>
<th>Time</th>
<th>No.</th>
<th>Topic</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>15:00–15:15</td>
<td>1</td>
<td>Some Thoughts on Spatiotemporal Intelligence in the Future GIS Research</td>
<td>Huayi Wu, Wuhan University</td>
<td>15:00–15:15</td>
<td>1</td>
<td>Kylin Cloud: A Low Cost Mini-UAV Laser Scanning System for Good Quality Point Clouds Capture</td>
<td>Bisheng Yang, Wuhan University</td>
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<tr>
<td>15:15–15:30</td>
<td>2</td>
<td>Spatial Big Data and GIS Based Spatial Analysis of Housing Prices in Singapore</td>
<td>Kai Cao, National University of Singapore</td>
<td>15:15–15:30</td>
<td>2</td>
<td>Using Sequential Gaussian Simulation to Assess the Spatial Uncertainty of PM2.5 in China</td>
<td>Yulian Yang, Yunnan Normal University</td>
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<tr>
<td>15:30–15:45</td>
<td>3</td>
<td>Quantify the Scale Effect in Geospatial Big Data using Semi-variograms</td>
<td>Lei Chen, Peking University</td>
<td>15:30–15:45</td>
<td>3</td>
<td>Crime Data Analysis Under a Space-time Statistical Analysis Framework</td>
<td>Yangqing Xu, The University of Toledo</td>
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<tr>
<td>15:45–16:00</td>
<td>4</td>
<td>A Characterization and Comparison of Spatial Temporary Applications and Internet Big Data Benchmarks</td>
<td>Wen Xiong, Yunnan Normal University</td>
<td>15:45–16:00</td>
<td>4</td>
<td>The Life Satisfaction of Consumption-led Migrants</td>
<td>Hongxian Zhang, Guangdong Polytechnic Normal University</td>
</tr>
<tr>
<td>16:00–16:15</td>
<td>5</td>
<td>Research on Location Selection of Urban Sculpture Based on Big Data</td>
<td>Sha Xu, Research Institute for Smart Cities</td>
<td>16:00–16:15</td>
<td>5</td>
<td>The Market Potential Estimation of Retailers using Big Data Based on Deep Learning Technology</td>
<td>Yao Lu, Wuhan University</td>
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<tr>
<td>16:15–16:30</td>
<td>6</td>
<td>Identifying Local Spatiotemporal Autocorrelation Patterns of Taxi Pick-ups and Drop-offs</td>
<td>Song Gao, University of Wisconsin, Madison</td>
<td>16:15–16:30</td>
<td>6</td>
<td>A Network-Constrained Spatial Statistical Approach to Identify High Risk Roads for Hit-and-parked-vehicle Collisions: The Case in Brisbane, Australia</td>
<td>Liu Yan, University of Queensland</td>
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# Invited Technical Sessions

## Session 5 Spatio-temporal Data and Sharing

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<tbody>
<tr>
<td>16:45–17:00</td>
<td>8</td>
<td>Optimization Strategies of Flow Line Design in Geo-Infographics</td>
<td>Yue Zhao, East China Normal University</td>
<td>16:45–17:00</td>
<td>8</td>
<td>The Development of China’s Tourism Finance Research in the Past Thirty-Seven Years</td>
<td>Zhongke Chen, Yunnan Normal University</td>
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<tr>
<td>17:00–17:15</td>
<td>9</td>
<td>VMT, Accessibility, and GDP: A Geographical Analysis</td>
<td>Yong Lao, California State University</td>
<td>17:00–17:15</td>
<td>9</td>
<td>Global Urban Area Mapping from Nighttime Light Data from 2000 to 2012</td>
<td>Zuoqi Chen, East China Normal University</td>
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<tr>
<td>17:15–17:30</td>
<td>10</td>
<td>Ancient Poets’ Mobility and The Transition of Culture Centre Based on Poem Data</td>
<td>Shen Ying, Wuhan University</td>
<td>17:15–17:30</td>
<td>10</td>
<td>Temporal and Spatial Variation of Urban Heat Island Effect in Plateau Lake Region Based on RS—A 30-Year Case Study in Dianchi Basin</td>
<td>Meng Zhang, Yunnan Normal University</td>
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<td>17:30–17:45</td>
<td>11</td>
<td>A Spatio-temporal Kernel Density Estimation Approach to Predicting Crime Hotspots</td>
<td>Fahui Wang, Louisiana State University</td>
<td>17:30–17:45</td>
<td>11</td>
<td>Research on Location Selection of Urban Sculpture Based on Big Data</td>
<td>Sha Xu, Nanjing University</td>
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<td>17:45–18:00</td>
<td>12</td>
<td>A Spatiotemporal Analytic for Measuring Levels of Spatial and Temporal Clustering with an Extended Nearest Neighbor Index</td>
<td>Jay Lee, Henan University, Kent State University</td>
<td>17:45–18:00</td>
<td>12</td>
<td>Guizhou Big Data Management System</td>
<td>Shaofu Lin, Beijing Advanced Innovation Center for Future Internet Technology</td>
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<tr>
<td>18:00–18:15</td>
<td>13</td>
<td>Research on Basic Support Capacity of Resources &amp; Environment in China’s Silk Road Economic Belt Based on GIS</td>
<td>Yingmei Wu, Yunnan Normal University</td>
<td>18:00–18:15</td>
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## Invited Technical Sessions

### Session 6 VGI and Crowdsourcing

<table>
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<th>Time</th>
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<tbody>
<tr>
<td>15:00–15:15</td>
<td>1</td>
<td>Cafeteria Locating and Capacity Planning Based on Taxi Track Data</td>
<td>Yanbing Zhu</td>
<td>15:00–15:15</td>
<td>1</td>
<td>Characterizing the Supply-Demand Relationship in Urban Health Care Services Using Taxi Trajectories Data</td>
<td>Yimin Chen</td>
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<td>Sun Yat-sen University</td>
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<td>15:15–15:30</td>
<td>2</td>
<td>Determination and Recognition of GPS Track Drift Points</td>
<td>Pengyuan Wang</td>
<td>15:15–15:30</td>
<td>2</td>
<td>Define and Determine Place Functionality Based on Multi-Source Data</td>
<td>Chao Ye</td>
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<td>15:30–15:45</td>
<td>3</td>
<td>A New Method to Measure Urban Neighbourhood Vibrancy Based on Mobile-Phone Data</td>
<td>Jia Chen</td>
<td>15:30–15:45</td>
<td>3</td>
<td>Reconstruction of 3D Facade Models By Using Facade Grammar</td>
<td>Yuefeng Wang</td>
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<td>4</td>
<td>Modeling Place Visiting Probability During Gaps in Trajectories with Habitual Mobility Pattern</td>
<td>Ren Chang</td>
<td>15:45–16:00</td>
<td>4</td>
<td>Features of User Access Session In WMTS</td>
<td>Ru Li</td>
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<td>16:00–16:15</td>
<td>5</td>
<td>Building Footprint Similarity Measure Based on Radial Distance</td>
<td>Zhiyao Zhao</td>
<td>16:00–16:15</td>
<td>5</td>
<td>A Quantitative Assessment of VGI Image Data Quality with a Case Study of London</td>
<td>Xuan Ding</td>
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<td>16:15–16:30</td>
<td>6</td>
<td>Out-of-home Eating and the Impact on Childhood Obesity</td>
<td>Yingru Li</td>
<td>16:15–16:30</td>
<td>6</td>
<td>Enriching Place Semantics using Street-level Imagery</td>
<td>Fan Zhang</td>
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<td>16:30–16:45</td>
<td>7</td>
<td>Cycle Periodic Behavior Detection and Sports Place Extraction Using Crowdsourced Running Trace Data</td>
<td>Wei Yang</td>
<td>16:30–16:45</td>
<td>7</td>
<td>Integrating Taxi Data and Social Media Data to Discover Dynamic Functional Regions in a City</td>
<td>Ju Liu</td>
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<td>16:45–17:00</td>
<td>8</td>
<td>Extracting Coach Schedule Information from Massive Trajectory Data</td>
<td>Jun Li</td>
<td>16:45–17:00</td>
<td>8</td>
<td>Inferring Demographics from Mobile Position Data</td>
<td>Liu Yang</td>
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<td>17:00–17:15</td>
<td>9</td>
<td>Interactive 3D Building Modeling and Semantic Labeling from VGI Image Data</td>
<td>Gefei Kong</td>
<td>17:00–17:15</td>
<td>9</td>
<td>Modeling User Activity Space from Location-Based Social Media: An Exploratory Analysis</td>
<td>Yihong Yuan</td>
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<td>10</td>
<td>Reconstructing Individual Activity Trajectories by Hidden Semi-Markov Model</td>
<td>Zixuan Han</td>
<td>17:15–17:30</td>
<td>10</td>
<td>The Detection of Taxi Driver's Social Circle From Trajectory Data in Shanghai</td>
<td>Wei Jiao</td>
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<td>17:30–17:45</td>
<td>11</td>
<td>Evaluation of Public Satisfaction With Medical Facilities by using Weibo check-in Data in Zhejiang Province</td>
<td>Wang Jindi</td>
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## Invited Technical Sessions

### Session 7 Internet of Things for GIS

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<th>Time</th>
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<th>Topic</th>
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<tbody>
<tr>
<td>15:00–15:15</td>
<td>1</td>
<td>An improved Geo-Detector: Spatial Association Detector (SPADE)</td>
<td>Wei Luo</td>
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<td>George Mason University</td>
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<td>15:45–16:00</td>
<td>4</td>
<td>The Importance of Items’ Order In Word2vec-Based Recommendation</td>
<td>Ling Cai</td>
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<td>Chinese Academy of Sciences</td>
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<td>16:00–16:15</td>
<td>5</td>
<td>Analysis Method of Accessibility of Rescue At Sea Based on CA</td>
<td>Yuchen Liu</td>
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<td>Yunnan Normal University</td>
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<td>16:15–16:30</td>
<td>6</td>
<td>Indoors Locality Positioning Using Cognitive Distances and Directions</td>
<td>Yankun Wang</td>
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<td>16:30–16:45</td>
<td>7</td>
<td>Revealing the Linkage Network Dynamic Structures of Chinese Maritime Ports Through Automatic Identification System Data</td>
<td>Hongchu Yu</td>
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<td>16:45–17:00</td>
<td>8</td>
<td>Measure of Betweenness Centrality Based on Gravity Model</td>
<td>Xiaohuan Wu</td>
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<td>17:00–17:15</td>
<td>9</td>
<td>SOCO-Field: An Observation Capability Representation for GeoTask-Oriented Multi-Sensor Cognition</td>
<td>Jie Li</td>
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<td>China University of Geosciences</td>
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<td>17:15–17:30</td>
<td>10</td>
<td>Disaster Scene Fusion Modeling and Visualization Method for Emergency in the Network Environment</td>
<td>Weilian Li</td>
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<td>Southwest Jiaotong University</td>
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<td>17:30–17:45</td>
<td>11</td>
<td>Multilevel Solar Potential Analysis of Building Based on Ubiquitous Point Clouds</td>
<td>Fuxun Li</td>
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## Invited Technical Sessions

### Session 8 Geospatial Cloud Computing

<table>
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<th>Time</th>
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<th>Topic</th>
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<tbody>
<tr>
<td>15:00-15:15</td>
<td>1</td>
<td>HP-LDA: Hybrid Parallel Latent Dirichlet Allocation Based on Heterogeneous CPU-GPU Systems</td>
<td>Hongyan Wang Wuhan University</td>
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<tr>
<td>15:30-15:45</td>
<td>3</td>
<td>Change Analysis and an Algebra-Based Updating Method for Spatial Data Across Multiple Scales</td>
<td>Min Yang Wuhan University</td>
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<tr>
<td>15:45-16:00</td>
<td>4</td>
<td>A Spark Based Deep Learning Framework: Supporting Large-scale Traffic prediction</td>
<td>Fa Li Wuhan University</td>
</tr>
<tr>
<td>16:00-16:15</td>
<td>5</td>
<td>A New Multi-Source Data Fusion Workflow for Geographical Entity Change Detection and Prediction</td>
<td>Xiaojia Yuankun Wuhan University</td>
</tr>
<tr>
<td>16:15-16:30</td>
<td>6</td>
<td>New Taipei, Taiwan: Classification of Protected Areas</td>
<td>Hongyuan Huang China Institute of Land Survey</td>
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<tr>
<td>16:30-16:45</td>
<td>7</td>
<td>Research on the Online Extraction of Spatial Index Information of Multi Source Surveying and Mapping Data Based on Cloud Storage</td>
<td>Jingyi Zhang Nanjing Normal University</td>
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### Session 9 Student Paper Competition

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<tbody>
<tr>
<td>15:00-15:15</td>
<td>1</td>
<td>Detecting and Analyzing Flight Unstable Approaches with QAR Big Data</td>
<td>Chen Wu Wuhan University</td>
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<tr>
<td>15:15-15:30</td>
<td>2</td>
<td>Inter-annual and Seasonal Variabilities in Surface Runoff and Soil Water Storage in Arkansas-Red River Basin</td>
<td>Chen Xu University of Oklahoma</td>
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<tr>
<td>15:30-15:45</td>
<td>3</td>
<td>A Small-patched Convolutional Neural Network for Mangrove Mapping at Species Level using High Resolution Remote Sensing Image</td>
<td>Luoma Wan The Chinese University of Hong Kong</td>
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<tr>
<td>15:45-16:00</td>
<td>4</td>
<td>Detecting and Analysing Spatial-temporal Aggregation of Flight Turbulence with the QAR Big Data</td>
<td>Mengyue Wu Wuhan University</td>
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<tr>
<td>16:00-16:15</td>
<td>5</td>
<td>An Unsupervised Domain Adaptation Method for Multi-Modal Remote Sensing Image Classification</td>
<td>Wei Liu Harbin Institute of Technology</td>
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<tr>
<td>16:15-16:30</td>
<td>6</td>
<td>Measurement of Blooming effect of DMSP-OLS Nighttime Light Data Based on NPP-VIIRS Data</td>
<td>Zheyuan Shen The Hong Kong Polytechnic University</td>
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</tbody>
</table>
**Hotel Accommodations**

**Fontaine Blanche Hotel**
No. 768, Juxian Street, Jinjingming North Road Chenggong, Kunming, Yunnan China
Tel: +86-871-67468888

**Fairyland Hotel**
Zhiyuan Road Gaotie South Station Pangbo Ding The 7th Street Unit Block 1 Building 1 Chenggong, Kunming, Yunnan China
Tel: +86-871-68119508