Sino-German Workshop

Urban Remote Sensing and Surveying

2009.09.22 - 2009.09.24

at the

Haiyi Jinjiang Hotel

organized by

LIESMARS

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Academic committee

Chair:
Prof. Dr. Deren Li, Wuhan University

Prof. Li is Director of the State Key Laboratory of Information Engineering in Surveying Mapping and Remote Sensing (LIESMARS) of the Wuhan University. He is Academician of the Chinese Academy of Science, of the Chinese Academy of Engineering and of the International Academy of European and Asian Studies. He is Vice President of the Chinese Society of Geodesy, the Chinese Society of Photogrammetry and Cartography, of the Chinese Society of Image and Graphics and of the Chinese Society of Geography. He is Chairman of the Academic commission of Wuhan University.

Secretary:

Prof. Dr. Mingsheng Liao, Wuhan University

Members:

Prof. Dr. Uwe Stilla, Technische Universität München
Prof. Dr. Jianya Gong, Wuhan University
Prof. Dr. Uwe Sörgel, Leibniz Universität Hannover
PD Dr. Norbert Haala, Universität Stuttgart

Organization committee

Chair:
Prof. Dr. Mingsheng Liao, Wuhan University

Prof. Liao is full Professor at the State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University. He published more than 30 peer-reviewed journal articles and a book about Synthetic Aperture Radar Interferometry. His area of research covers remote sensing image processing, algorithms for interferometric SAR, data fusion and applications of remote sensing data.

Vice-Chair:
Prof. Dr. Stefan Hinz, Universität Karlsruhe

Secretary:
Dr. Timo Balz, Wuhan University

Members:
Prof. Dr. Xu Yang, Wuhan University
Ms. Lite Shi, Wuhan University
Abstract

Surveying and Mapping has a history going back thousands of years. The techniques changed over time and nowadays the highly precise position estimation from space using the Global Positioning System (GPS) has become a standard technique and is even implemented in many modern mobile phones.

In urban areas surveying and mapping is of the utmost importance for planning and construction. GPS allows the navigation in unknown cities and satellite images show the growth and state of the cities. The quality of the air, the amount of impervious surfaces, growth and urbanization can be surveyed from space. The digitalization of surveying and the wide usage of GIS in cartography will continue to change our image of the earth.

With the launch of the commercial remote sensing system IKONOS in 1999 a new era of remote sensing started. Because of the high spatial resolution of one meter, satellite remote sensing in urban areas became possible. With Google Earth, remote sensing reached the mass market. The launch of the German high-resolution radar remote sensing system TerraSAR-X in 2007 marked a new milestone in remote sensing. With a spatial resolution of one meter, radar systems can be used in urban areas. A tremendous change in radar remote sensing is about to start.

Because of these developments, but also because of the special scientific and economical importance of radar remote sensing in Germany and China, radar remote sensing is the focus of the workshop. The new technique offers a variety of scientific co-operations.
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<td>09:00 – 09:30</td>
<td>Opening Ceremony</td>
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| 09:30 – 10:00 | Ethical Questions in Surveillance and Location Based Services | Sandro Gaycken  
Universität Stuttgart |
|          | Ethical Design of Location-Based Services    |                                                                |
| 10:15 – 12:00 | Remote Sensing in urban areas               |                                                                |
|          | Remote sensing data fusion in urban areas    | Uwe Sörgel  
Leibniz Universität Hannover |
|          | Evaluation of Urban Heat Environment Using Multi-algorithm and Multi-scale Images | Peijun Du  
China University of Mining and Technology |
|          | High resolution thermal mapping of buildings using 3D city models | Uwe Stilla  
Technische Universität München |
|          | Application of Co-training Based Semi-supervised Learning Method in Remote Sensing Image Classification | Changqing Ke  
Nanjing University |
| 13:30 – 14:30 | Advanced SAR                                |                                                                |
|          | SAR Tomography for 4D city mapping using TerraSAR-X Spotlight data | Xiaoxiang Zhu  
DLR |
|          | DEM Extraction with PolSAR Data              | Wen Hong  
Chinese Academy of Sciences |
| 14:45 – 15:15 | Creation and applications of 3D city models |                                                                |
|          | 3D City Reconstruction from LiDAR - The 3D Berlin Project | Martin Kada  
Universität Stuttgart |
|          | On the feasibility of image matching for high quality Urban 3D Data Collection | Norbert Haala  
Universität Stuttgart |
| 15:15 – 16:15 | Traffic analysis                            |                                                                |
|          | Traffic Monitoring in Large-scale Urban Areas by Airborne LiDAR - Feasibility and Analysis | Wei Yao  
Technische Universität München |
|          | Extracting and Modeling Natural Objects from Mobile Laser Scanning Point Clouds | Bisheng Yang  
Wuhan University |
| 16:30 – 17:30 | Disaster Prevention and Preparedness        |                                                                |
|          | Design and develop a CVGE to support emergence response on air pollution accident | Bingli Xu  
Chinese University Hong Kong |
|          | Spatial data mining and integration of vague textual information to support preparedness and disaster management | Daniela Richter  
Universität Karlsruhe |
Wednesday (morning), 2009-09-23

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<th>Time</th>
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| 09:30 – 12:30 | Persistent Scatterer Interferometry for Subsidence Measurements | Alexander Schunert  
Leibniz Universität Hannover |
|         | Small Stack PS-InSAR in Shanghai                                       | Mingsheng Liao  
Wuhan University |
| Break   |                                                                       |                                              |
|         | Persistent Scatterer Interferometry in Urban Areas Based on           | Xiaoxiang Zhu  
TerraSAR-X High Resolution Spotlight Datastacks | DLR |
|         | Urban subsidence mapping with advanced satellite differential-INSAR   | Yonghong Zhang  
Chinese Academy of Surveying and Mapping |
| Break   |                                                                       |                                              |
|         | Practical monitoring of Urban Subsidence in Large Scale Area with     | Chao Wang  
InSAR Technology |
|         | PS-InSAR Technology                                                   |                                              |

Wednesday (afternoon), 2009-09-23

Technical tour to the State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing

Thursday, 2009-09-24 (at LIESMARS)

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<th>Time</th>
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| 10:00 – 11:30 | TerraSAR-X Services Applications to Support the Chinese Development | Ralf Düring  
Infoterra GmbH |
|         | Cyberwarfare and Security – Ethical questions in the information age | Sandro Gaycken  
Universität Stuttgart |
|         | n/a                                                                  | Norbert Haala  
Universität Stuttgart |
| 14:00 – 17:00 | Discussion in special interest groups                                |                                              |
|         | SAR                                                                  |                                              |
|         | LIDAR                                                                |                                              |
|         | Visualization                                                         |                                              |
The workshop will be held at the Haiyi Jinjiang Hotel

海恰锦江大酒店

湖北武汉市武昌洪山路特1号武汉电信商务会议中心

Haiyi Jinjiang Hotel - Wuhan Telecom Business Conference Center, Te 1, Hongshan Road, Wuhan