Sino-German Workshop Urban Remote Sensing and Surveying



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2009.09.22 - 2009.09.24

at the Haiyi Jinjiang Hotel



武汉市武昌洪山路特1号武汉电信商务会议中心

organized by



LIESMARS

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德国 灵感与创新 ●♥●●●●●●● Deutschland Land der Ideen

Deutschland und China -Gemeinsam in Bewegung

DEUTSCH-CHINESISCHES Jahr der Wissenschaft und Bildung 德中科学教育年 2009/10

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, 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

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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, Universitaet Karlsruhe

Secretary: Dr. Timo Balz, Wuhan University

Members: Mr. 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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Deutschland und China – Gemeinsam in Bewegung

Tuesday, 2009-09-22

09:00 -	Opening Ceremony		
09:45	Break		
10:00 -	Remote Sensing in urban areas		
11:30	Remote sensing data fusion in urban areas	Uwe Soergel Leibniz Universitaet Hannover	
	High resolution thermal mapping of buildings using 3D city models	Uwe Stilla Technische Universitaet Muenchen	
	Progress on Fast Processing of Digital Aerial and Low Altitude Images	Yongjun Zhang Wuhan University	
11:30 -	Ethical Questions in Surveillance and Location Based Services		
12:00	Ethical Design of Location-Based Services	Sandro Gaycken Universitaet Stuttgart	

14:00 -	Advanced SAR		
15:15	TerraSAR-X Services Applications to Support the Chinese	Ralf Duering	
	Development	Infoterra GmbH	
	SAR Tomography for 4D city mapping using TerraSAR-X	Xiaoviang 7hu	
	Spotlight data		
		DEN	
		Wen Hong	
	DEM Extraction with PolSAR Data	Chinese Academy of	
		Sciences	
15:30 –	Creation and applications of 3D city models		
16:15	3D City Reconstruction from LiDAR - The 3D Berlin Project	Martin Kada	
		Universitaet Stuttgart	
	Grammar supported façade reconstruction from mobile LiDAR	Norbert Haala	
	mapping	Liniversitaet Stuttaart	
		Shivershaet Stattgart	
	Break		
16:30 -	PS-InSAR / D-InsAR (1)		
17:45	Persistent Scatterer Interferometry for Subsidence	Alexander Schunert	
	Measurements	Leibniz Universitaet	
		Hannover	
	Practical monitoring of Urban Subsidence in Large Scale Area with InSAR Technology	Chao Wang	
		Chinese Academy of	
		Sciences	
	Urban subsidence mapping with advanced satellite differential- INSAR techniques	Yonghong Zhang	
		Chinese Academy of	
		Surveying and Mapping	

Wednesday (morning), 2009-09-23

09:00 -	PS-InSAR / D-InsAR (2)		
10:00	Persistent Scatterer Interferometry in Urban Areas Based on TerraSAR-X High Resolution Spotlight Datastacks	Xiaoxiang Zhu DLR	
	Small Stack PS-InSAR in Shanghai	Mingsheng Liao Wuhan University	
10:00-	Traffic analysis		
11:00	Traffic Monitoring in Large-scale Urban Areas by Airborne LiDAR - Feasibility and Analysis	Wei Yao Technische Universitaet Muenchen	
	Extracting and Modeling Natural Objects from Mobile Laser Scanning Point Clouds	Bisheng Yang Wuhan University	
Break			
11:15 –	Disaster Prevention and Preparedness		
12:15	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 Universitaet Karlsruhe	

Wednesday (afternoon), 2009-09-23

Technical tour to the State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuda Geoinformatics Co Ltd, Wuda Zoyon Science and Technology Co Ltd, and Leador.

Thursday, 2009-09-24 (at LIESMARS)

10:00 -	Lectures (open)		
12:00	Cyberwarfare - Introduction and Implications for Geographic	Sandro Gaycken	
	Information Systems	Universitaet Stuttgart	
	On the feasibility of image matching for high quality urban 3D	Norbert Haala	
	data collection	Universitaet Stuttgart	
	SAR Tomography and PSI using TerraSAR-X data stacks	Xiaoxiang Zhu	
		DLR	

14:00 -	Discussion in special interest groups		
17:00	SAR	Lidar	Visualization

The workshop will be held at the Haiyi Jinjiang Hotel

海怡锦江大酒店

湖北武汉市武昌洪山路特1号武汉电信商务会议中心

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