

# The 17<sup>th</sup> International Conference on Geoinformatics 2009

## Final Program

Johnson Center, George Mason University

August 12<sup>th</sup>-14<sup>th</sup>, 2009 Fairfax, VA, USA

Notes: SS: Special Session; GS: General Session; PS: Poster Session

### August 12<sup>th</sup> 08:45am – 12:10pm

Plenary Session Chair: Liping Di		Location: Cinema
Time	Contents	
08:45-09:25	<b>Welcome Addresses</b> <b>Peter Stearns</b> , Provost, George Mason University <b>Vikas Chandhoke</b> , Dean of College of Science, George Mason University <b>Steve Kempler</b> , NASA Goddard Space Flight Center <b>Kenneth McDonald</b> , NOAA Data Management Architect <b>Hampapuram Ramapriyan</b> , IEEE GRSS <b>Mark Reichardt</b> , President and CEO of OGC <b>Yongmei Lu</b> , President of CPGIS, Texas State University	
09:30-10:05	<b>Michael Goodchild</b> , University of California Santa Barbara, USA <b>Title:</b> The Changing Face of GIS	
10:05-10:40	<b>John Townshend</b> , University of Maryland at College Park, USA <b>Title:</b> Terrestrial Monitoring Systems: Transitioning from Research to Operations	
Coffee Break		
11:00-11:35	<b>Mark Reichardt</b> , President and CEO of OGC <b>Title:</b> Moving Standards-Based Interoperability Beyond the Geospatial Core	
11:35-12:10	<b>Zdenka Willis</b> , Director of NOAA IOOS Program Office <b>Title:</b> United State Ocean Observing Initiatives	

### August 12<sup>th</sup> 13:30pm – 17:10pm

SS: Student Paper Competition, Chair: Xun Shi		Location: Room A
Time	ID	Title & Authors
13:30-13:55	008	Conversation and Management of Hutong-Historical and Cultural District of Beijing Inner City Supported by GIS Tianhang Huang, Anrong Dang and Pei Zhang
13:55-14:20	107	Quantitative Visualizations of Hierarchically Organized Data in a Geographic Context Donovan Parks and Robert Beiko
14:20-14:45	112	Urban forest inventory using open access web mapping services and photogrammetric solution Mary Thornhill, Amr Abd-Elrahman and Michael Andreu
14:45-15:10	115	Automatic Farmland Extraction From Multi-temporal Landsat TM Data Based On Artificial Neural Network Mu Bai, Huiping Liu, Wenli Huang, Yu Qiao and Xiaodong Mu
Coffee Break		
15:30-15:55	293	A Case Study of Developing Personalized Spatial Cognitive Road Network and Raster Capable Route Finding Algorithm for Pedestrian Evacuation Behavior Simulation Lei Wu and Hui Lin

15:55-16:20	373	ASAR PSI technique applications to detect ground deformation in Mega-cities in the Pearl River Delta Region in China Qing Zhao
16:20-16:45	060	GWSC-VMR, A GIS Supported Conceptual Distributed Hydrological Model for Cold and Arid Regions Tianfang Fang, Guizuo Wang and Liliang Ren
16:45-17:35		CPGIS Annual Awards Committee Meeting
<b>SS01 Chair: Robert Gilmore Pontius Jr</b>		<b>Location: Room B</b>
Time	ID	Title & Authors
13:30-13:50	164	Post Accuracy Assessment Soft Classification using virtual globes Rahul Rakshit
13:50-14:10	093	A System for Visualizing Spatiotemporal Urban Datasets Stefan Hertel, Matthias Wagner and Rüdiger Westermann
14:10-14:30	238	Accuracy assessment of object-oriented classification using virtual globes Robert Gilmore Pontius Jr, Jenner Alpern, Albert Decatur, Nicholas Giner, Rahul Rakshit and Colin Polsky
14:30-14:50	399	Visualizing LIDAR in Google Earth Martin Isenburg and Jonathan Shewchuk
14:50-15:10	141	A Framework of Spatio-Temporal Data Adaptive Visualizations for Mobile Environment Jianwei Yu and Bisheng Yang
Coffee Break		
15:30-15:50	276	Using progressive transmission of 3D/4D geospatial information over the Internet to facilitate geo-visualization in World Wind Jing Li, Huayi Wu, Chaowei Yang, Jibo Xie, Zhenlong Li and Qunying Huang
15:50-16:10	316	Sensitivity of a land change model to pixel resolution and precision of the independent variable Hao Chen and Robert Pontius
16:10-16:30	319	Object-Base High Resolution Land Cover Mapping: Operational Considerations Jarlath O'Neil-Dunne, Sean MacFaden, Keith Pelletier, Morgan Grove and Austin Troy
16:30-16:50	417	Using virtual world technology to construct immersive 3D virtual university Bin Chen, Fengru Huang and Hui Lin
16:50-17:10	083	Three-dimensional Spatial Indexing Method of Complicated Geological Scene Zhenwen He, Gang Liu, Zhengping Weng and Chonglong Wu
<b>SS02 Chair: Yu Liu, Jing Zhang</b>		<b>Location: Room C</b>
Time	ID	Title & Authors
13:30-13:50	021	KIDGS: A Geographical Knowledge-informed Digital Gazetteer Service Yu Liu, Runqiang Li, Kaichen Chen, Yihong Yuan, Lingli Huang and Hao Yu
13:50-14:10	022	On Geo-social Network Services Qian Huang and Yu Liu
14:10-14:30	258	Spatial distribution of the inlinks to Beijing tourist attractions/websites Lina Qi, Yi Zhang, Lili Song, Yu Liu and Yong Gao
14:30-14:50	135	Discovery of Spatial Links between Individuals on the Geospatial Semantic Web Alina-Dia Miron, Jérôme Gensel and Marlene Villanova-Oliver
14:50-15:10	312	A Semantic-Enabled Meta-Catalogue for Intelligent Geospatial Information Discovery Wenwen Li, Chaowei Yang and Rob Raskin
Coffee Break		
15:30-15:50	159	Integrating Semantic World Modelling, 3D-Simulation, Virtual Reality and Remote Sensing Juergen Rossmann, Michael Schluse, Ralf Waspe and Martin Hoppen
15:50-16:10	180	Semantic Relation Representation of geographic concept based on lattice Hong Wang, Lin Li and Ping-chao Song
16:10-16:30	243	Beijing-based urban public transport travel distance cognitive research Liu Bao, Zhang Jing, Du Chong and Jiang Jiefeng
16:30-16:50	259	Extracting the international markets of a tourist attraction from inlinks Yi Zhang, Lina Qi, Yu Liu, Lili Song and Yong Gao

16:50-17:10	444	The Analysis of the Ring Road Impact Factor on Route Choose Xiaohui Hou, Jing Zhang, Chong Du and Lianjun Zhang
<b>SS03 Chair: Zhengwei Yang, Rick Mueller, Ying Ke</b>		<b>Location: Room D</b>
Time	ID	Title & Authors
13:30-13:50	031	Spatial Variability of Micro-elements in Agricultural Soil of Chongming , Shanghai Guangrong Shen
13:50-14:10	063	Comparison of Sub-pixel Classification Approaches for Crop-specific Mapping Yang Shao and Ross Lunetta
14:10-14:30	465	An Improved Methodology for Paddy Field Measurement Using LANDSAT ETM+ Yang Liu, Ruixin Yang
14:30-14:50	165	Crop phenology date estimation based on NDVI derived from the reconstructed MODIS daily surface reflectance data Hu Zhao, Zhengwei Yang, Liping Di, Lin Li and HaiHong Zhu.
14:50-15:10	222	Data partnership synergy: the cropland data layer Rick Mueller, Claire Boryan and Robert Seffrin
Coffee Break		
15:30-15:50	245	Building Geospatial Web Portal for Use of National Agricultural Statistics in Geographic Context Peisheng Zhao, Liping Di, Weiguo Han and Zhengwei Yang
15:50-16:10	366	A Study of Modis and Awifs Multi-sensor Fusion for Crop Classification Enhancement Zhengwei Yang, Yanglong Ling and Claire Boryan
16:10-16:30	379	GIS Application for Supporting Agricultural Disaster Loss Assessment Ying Ke and Ted Payne
16:30-16:50	242	Habitat-GIS-based models for ground beetles (Coleoptera: Carabidae) distribution in agricultural landscape Changliu Wang, Yunhui Liu and Jan C. Axmacher
16:50-17:10		
<b>GS01 Chair: Zhong Liu</b>		<b>Location: Room E</b>
Time	ID	Title & Authors
13:30-13:50	272	Providing Global Precipitation Data Information through Google Earth Zhong Liu, Gregory Leptoukh and Aijun Chen
13:50-14:10	436	Three Dimensional Peer-2-Peer (3DP2P) Networks Clayton Thomas, Damian Watkins and Craig Scott
14:10-14:30	001	Visualization of vertical profiles from campaign mission on Google Earth Aijun Chen, Gregory Leptoukh, Steven Kempler, Christopher Lynnes and Yuqi Bai
14:30-14:50	254	Fast and Semi-automatic 3D Modeling and Roaming of Large-scale Terrain Yuanzheng Shao, Liping Di, Bingxuan Guo and Jing Cao
14:50-15:10	260	Extracting the international markets of a tourist attraction from inlinks Zhichao Zhang, Deren Li, Yixuan Zhu and Pingxiang Li
Coffee Break		
15:30-15:50	079	Analysis Spectral Features of Water Quality in Baiyangdian Wetland, China Lin Zhu, Huili Gong, Wenji Zhao, Xiaojuan Li, Feina Lin, Bo Zhou, Yanfang Xiao and Jing Zhang
15:50-16:10	113	The Research of Shared Platform of Water Environment Information Service based on GEOGLOBE Haitao Cao, Jianya Gong and Xiaoling Chen
16:10-16:30	322	Utilizing Particle System to Simulate Airflow of Laneway in Underground Mine Environment Qunying Huang, Shanjun Mao, Yunfeng Jiang, Bentao Ru, Mei Li and Ping Dong.
16:30-16:50	361	Spatial Uncertainty Analysis for Water Distribution under Fragility Curves Ming-Ko Chung and Che-Hao Chang
16:50-17:10	402	Web Decision Support and Visualization Tools for Water Quality Management in the Chesapeake Bay Watershed

		Cassandra Mullinix, Huajun Zhang, John Aguinaldo and Paul Hearn
<b>GS02 Chair: Meixia Deng, Nouhad Amaneddine</b>		<b>Location: Room F</b>
Time	ID	Title & Authors
13:30-13:50	036	Reconciling inconsistent perspectives in collaborative GIS using multi-agent method Eric Zheng Chang and Songnian Li
13:50-14:10	105	Towards Building a Geo-Service Broker Kealeboga Kaizer Moreri, Xiaolun Yi and Darka Mioc.
14:10-14:30	309	Computational Cyber-Laboratory for Earth Science Studies Meixia Deng and Liping Di
14:30-14:50	310	Data Cleaning approaches in Web2.0 VGI Application Xinlin Qian, Deren Li, Liping Di, Pingxiang Li, Lite Shi and Liefei Cai
14:50-15:10	360	Trip Assignment for Journey-after-vehicle-theft in Mesa, Arizona Yongmei Lu, Bruce Taylor and Christopher Koper
Coffee Break		
15:30-15:50	338	The Evolution of Administrative Division in Beijing and the Analysis on its Spatial Pattern Based on GIS Yongfu Li, Anrong Dang and Tianhang Huang
15:50-16:10	403	Modeling Real-Estate search service using GIS technology Nouhad Amaneddine and Nader Chmeit
16:10-16:30	408	Changes in landscape pattern of wetlands in the Pearl Rivers estuary in the past two decades Lang Xu, Xiaoxiang Chen, Xiaolan Li and Zhijian He
16:30-16:50	410	Spatio-temporal data model based on dynamic correlation Shengxiao Wang, Shaoyu Shi, Biao Liu and Kai Cao
16:50-17:10	464	China Geo-Explorer: A Web Based Platform for Spatial Data Integration, Analysis and Service Shuming Bao, Xinyan Zhu and Xu Zhang

18:00-20:00	Reception Dinner Welcome Address by Dr. Vikas Chandhoke, Dean of College of Science, GMU Best Student Paper Award and CPGIS Best Service Award Announcing Geoinformatics2010's Organizer and Site
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## August 13<sup>th</sup> 08:30am –12:10pm

<b>SS04 Chair: Jessica Lin, Peggy Agouris</b>		<b>Location: Room A</b>
Time	ID	Title & Authors
08:30-08:50	026	Query and Visualization of extremely large datasets over the Web using Quadtree based KML Regional Network Links Upendra Dadi, Cheng Liu and Ranga Raju Vatsavai
08:50-09:10	101	A Novel Feature Ranking Modelling in GIS Context: Addressing Complexity and Cost Issues Alberto Gemelli, Claudia Diamantini and Domenico Potena
09:10-09:30	102	Very High Spatial Resolution Images: Segmenting, Modeling and Knowledge Discovery Erick López-Ornelas
09:30-09:50	158	Spatial interpolation via GWR, a plausible alternative? Danlin Yu
09:50-10:10	237	Detecting Spatio-Temporal Outliers with Kernels and Statistical Testing James Rogers, Daniel Barbara and Carlotta Domeniconi
Coffee Break		
10:30-10:50	372	Determining and Mapping Thermokarst Using Remote Sensing Katarina Doctor
10:50-11:10	351	Analysis with Linear Referencing Kevin Curtin
11:10-11:30	455	An Application of Geographical Information System and Remote Sensing Techniques for Detection of Oil Spill Anwar S. Dahish and Anuar Ahmad Hj Ahmad
11:30-11:50	367	Sea Surface Temperature: Hurricanes Gustav, Hanna, and Ike, August – September 2008 Sinclair Sheers
11:50-12:10	025	Research on Road Centerline Extraction from Aerial Image Based on Sorting Bingxuan Guo, Qi Li and Yuanzheng Shao
<b>SS05 Chair: Shawn Newsam</b>		<b>Location: Room B</b>
Time	ID	Title & Authors
08:30-08:50	065	Mapping Surface Cover Using EO-1 Hyperion Data: Ongoing Studies in Arid Environments David Leverington
08:50-09:10	086	A Structured Sub-pixel Detector Based on Dynamic Endmembers Bo Du, Liangpei Zhang, Pingxiang Li and Yanfei Zhong
09:10-09:30	247	Feature Shape and Elevation Based Road Classification and Extraction on High Spatial Resolution Remote Sensing Imageries Tao Tang, Xiao Wang, Zhixin Shi and Joaquin Carbonara
09:30-09:50	235	Research on the Geometry Rectification Model of Infrared Image of HJ-1B Satellite with Sparse Ground Control Points Jingbo Chen, Zhongming Zhao and Chengyi Wang
09:50-10:10	269	Object-oriented Multi-feature Fusion Change Detection Method for High Resolution Remote Sensing Image Wenjie Wang, Zhongming Zhao and Haiqing Zhu.
Coffee Break		
<b>GS03 Chair: Yusoff Safiah</b>		<b>Location: Room B</b>
10:30-10:50	018	Estimation and analysis of land surface water and heat fluxes in mountain-plain area based on remote sensing and DEM Hequn Yang, Yong Liu, Yinming Yang and Cong Zhang
10:50-11:10	371	The Application of Geographic Information System (GIS) in Forest Harvesting in Malaysia Yusmah Muhammad Yusoff Safiah
11:10-11:30	156	The Digital Irrigation System Information Management and Water Use Decision Support System Sui Zhang, Debao Tan and Yuanlai Cui

11:30-11:50	463	Application of GIS system for landslide Hazard Assessment Janak chand
11:50-12:10	299	Application of SWAT for sediment yield estimation in a mountainous agricultural basin Zheng Duan, Xianfeng Song and Junzhi Liu
<b>SS06 Chair: Guoqing Li, Carol X. Song, Yu Fang</b>		<b>Location: Room C</b>
Time	ID	Title & Authors
08:30-08:50	057	The Spatial Analysis Service Based on the Spatial Information Grid Yunxuan Yan, Guoqing Li, Yi Zeng and Jibo Xie
08:50-09:10	092	The Framework and Realization of Grid Node Computing Pool of China Geological Spatial Information Grid Zhong Xie, Mingqiang Guo, Liang Wu and Ying Huang
09:10-09:30	241	The Node Management in a Geospatial Data Grid Pengfei Wu, Yu Fang, Bin Chen, Yong Zhao, Menglong Yan and Yixian Sun
09:30-09:50	131	Spatial Data Access Control in Grid Environment Menglong Yan, Yong Gao, Lun Wu, Yixian Sun, Pengfei Wu and Yong Zhao
09:50-10:10	172	Grid Vector Map Service Based on WSRF Yong Zhao, Yu Fang, Bin Chen, Menglong Yan, Pengfei Wu and Yixian Sun
Coffee Break		
10:30-10:50	396	Improvement and Experiment on Grid-oriented Map Display Service Lixia Guo, Guoqing Li, Wenyang Yu and Jibo Xie
10:50-11:10	355	A Study on Temperature Interpolation Methods Based on GIS Wenjing Cao, Jinxing Hu and Xiaomin Yu.
11:10-11:30	416	Urban land suitability evaluation based on BP network Yan Wang, Junru Cao, Peilin Wu and Zhenbai Song
11:30-11:50	435	Geospatial Data Grid with Computational Capability Hao Chen, David Goodenough, Aimin Guan, Randall Sobie, Ashok Agarwal, Belaid Moa, Ian Gable, Patrick Armstrong, Ronald Desmarais, Andre Charbonneau, Roger Impey and Wayne Podaima
11:50-12:10		
<b>SS07 Chair: John Qu, Shengjie Niu</b>		<b>Location: Room D</b>
Time	ID	Title & Authors
08:30-08:50	230	Microphysical Properties of Dense Fogs in the Winter of Nanjing Based on Remote Sensing Shengjie Niu, Dan Xu, Chunsong Lu and Lijuan Zhao ( <b>invited talk</b> )
08:50-09:10	221	Analysis of Hurricane Impacts on Forest Combining Modeling with Remote Sensing Measurements Wanting Wang, John Qu, Xianjun Hao and Yongqiang Liu.
09:10-09:30	377	Population Density Study with Remote Sensing and GIS Jia Lu
09:30-09:50	394	NASA Remote Sensing Data to Support Regional Land Use/Land Cover Change Study Suhung Shen, Gregory Leptoukh and Irina Gerasimov
09:50-10:10	381	Inter-Sensor Comparison between Terra and Aqua MODIS over Ocean sites and an initial life-time assessment of uncertainty in AOT due to radiometric calibration Sriharsha Madhavan, John Qu and Xiaoxiong (Jack) Xiong.
Coffee Break		
10:30-10:50	382	Asian dust storm detection using MODIS and CALIPSO Yong Xie and John Qu
10:50-11:10	375	Observational Study on Optical Properties of Dust Aerosol from a Semi-Arid Site in North China during 2002-2007 Dan Xu and Shengjie Niu.
11:10-11:30	387	Estimating forest aboveground biomass over regional scales using Landsat 5 TM data Min Li, John J. Qu and Xianjun Hao
11:30-11:50	449	Intercomparison of candidate methods for mineral dust aerosol classification using MODIS infrared and visible channels

		Aleta Duvall and Rahul Ramachandran
11:50-12:10	071	Models and Algorithms for Contaminated Area Detection Based on Geospatial Lifelines Xiaotao Zhou, Jun Luo, Haohan Zhu, Wenqi Ju, Jianping Fan and F. Benjamin Zhan
<b>GS04 Chair: Jianfei Chen, Martin Habermeyer</b>		<b>Location: Room E</b>
Time	ID	Title & Authors
08:30-08:50	195	An evaluation on human interpretation error in geographical data: a case study with land use data Yuki Hanashima
08:50-09:10	236	Estimation of Manning's roughness coefficient distribution for hydrodynamic model using remotely sensed land cover features A. K. M. Hossain, Xiaobo Chao and Yafei Jia
09:10-09:30	420	Geostatistical Analysis on Human Impact Indexes for Land Use/Cover in Fujian Province and Fuzhou City Zhiqiang Chen and Jianfei Chen
09:30-09:50	437	Enhancing a GIS Cellular Automata Model of Land Use Change Using Support Vector Machine_PDF Onuwa Okwuashi, Jack McConchie, Peter Nwilo and Etim Ey
09:50-10:10	425	Changes of Eroded Landscape Pattern Based on Optimum Scale Zhibiao Chen, Aiping Zou, Zhiqiang Chen and Lihui Chen
Coffee Break		
10:30-10:50	087	W42 - A Scalable Spatial Database System for Holding Digital Elevation Models Martin Habermeyer, Achim Roth and Ursula Marschalk
10:50-11:10	287	3D GIS Database Model for Efficient Management of Large Scale Underground Spatial Data Gang Liu, Qing Zhu, Zhenwen He, Yeting Zhang, Chonglong Wu, Xiaoming Li and Zhengping Weng
11:10-11:30	404	Efficient Managing Large Scale Species Range Maps in a Spatial Database Environment Jianting Zhang
11:30-11:50	422	The Lifespan Model of GIS Data Representation over Scale Space Tinghua Ai and Jingzhong Li
11:50-12:10	291	An MRDB Approach for Propagating Updates across Navigable Maps at Different Resolutions Bijun Li, Weifeng Zhao, Qingquan Li and Bisheng Yang
<b>GS05 Chair: Guido Cervone, Yeqiao Wang</b>		<b>Location: Room F</b>
Time	ID	Title & Authors
08:30-08:50	200	Integration of Remote Sensing and in situ Observations for Inventory and Monitoring of Regional Ecological Security of the Changbai Mountains Yeqiao Wang, Zhengfang Wu, Jiang Feng, Xing Yuan, Hongyan Zhang, Jiquan Zhang and Jiawei Xu
08:50-09:10	209	Combining remote sensing data and an inundation model to map tidal mudflat regions and improve flood predictions: A proof of concept demonstration in Cook Inlet, Alaska Hua Liu and Tal Ezer
09:10-09:30	335	Design and Implementation of Statistic Remote Sensing Platform Based on Design Patterns Xiaodong Wang, Huiping Liu, Shoudong Zhu, Xiaoluo Zhou and Yu Qiao
09:30-09:50	066	The Neural Network Classification of Remotely Sensed Imagery Using Neighborhood Characteristic Mu Bai, Huiping Liu, Wenli Huang and Xiaodong Mu
09:50-10:10	348	A Winner Takes All Mechanism for Automatic Object Extraction from Multi-Source Data Adriano Mancini, Emanuele Frontoni and Primo Zingaretti
Coffee Break		
10:30-10:50	428	Extracting the Spatial Features from Satellite Images Using the Multilayer Level Set Method Yishuo Huang and Jer-Wei Wu
10:50-11:10	032	032. K Nearest Neighbors Search in Road Network with Considering Traffic Restriction for Location Based Service Lin Xu, Qingquan Li, Bisheng Yang and Tong Zhang
11:10-11:30	462	Agent-based Location Choice Simulation

		Yi Chao, Jiyuan Guo, Qi Wang and Yang Yue
11:30-11:50	378	Determining Coral Reef Health by using Sea Surface Temperature Variance Chad Blevins and Guido Cervone
11:50-12:10	452	Space - Time Spread of Sexually Transmitted Diseases (STDs) in 2 States: A Preliminary Analysis Michelle Kloc, Naoru Koizumi, Amit Patel and Arnauld Nicogossian

### August 13<sup>th</sup> 13:30pm – 17:10pm

<b>SS08 Chair: Pi-Hui Huang</b>		<b>Location: Room A</b>
Time	ID	Title & Authors
13:30-13:50	039	Using Mobile Sensors for In-situ Monitoring of Debris Flows in Taiwan Hsiu-Yi Ko, Yao-Min Fang, Ying-Hui Chang and Tian-Ying Chou
13:50-14:10	049	Using Neural Network Classifier and the GIS technique for Automatic Landslide Hazard Assessment Wen-Tzu Lin and Pi-Hui Huang
14:10-14:30	091	Landslide caused by typhoon-induced disaster: A case study on Shihmen watershed Wen-Chieh Chou
14:30-14:50	202	Implementation of a Pilot GIS for a Volunteer-Based Water Quality Monitoring Program Timothy Love, Chris Trumbauer and Charles Cole
14:50-15:10		
Coffee Break		
15:30-15:50	347	Uncertainty Propagation of Earthquake Loss Estimation System On the Early Seismic Damage Evaluation Chi-Jan Huang, Che-hao Chang and Kuan-Yung Chang
15:50-16:10	349	A study of Real-Time Identification and Monitoring of Barge-Carried Hazardous Commodities Yangrong Ling, Mingzhou Jin, Michael Hilliard and John Usher
16:10-16:30	448	An Evaluation of Potential Natural Disaster Response Using the National Polar-orbiting Operational Environmental Satellite System (NPOESS) Mark Bowman, Kyle Foster and Matthew Wilkerson
16:30-16:50	198	Examining Effects of Past Volcanic Eruptions on Forests of the Changbai Mountain with in situ and Remote Sensing Observations Jiawei Xu, Yu Liang and Yeqiao Wang
16:50-17:10		Discussion
<b>SS09 Chair: Peisheng Zhao</b>		<b>Location: Room B</b>
Time	ID	Title & Authors
13:30-13:50	023	Geospatial workflow models for adaptive controlled validity and accuracy Didier Leibovici, Gobe Hobona, Kristin Stock and Mike Jackson.
13:50-14:10	027	Creating Web Service Interfaces and Scientific Workflows Using Command Line Tools: A GRASS example Upendra Dadi and Liping Di
14:10-14:30	154	Workflow-Oriented the Optimal Path Web Services in Multi-Level Road Network Yumin Chen and Jianya Gong
14:30-14:50	395	Delegation in Geoprocessing Workflows Bastian Schäffer
14:50-15:10	376	A Model Driven Framework for Geographic Knowledge Discovery Octavio Glorio, Jose Zubcoff and Juan Trujillo
Coffee Break		
15:30-15:50	297	Multi-level Semantic Matching of Geospatial Web Services An Luo, Yandong Wang, Lanfang Wang and You He
15:50-16:10	313	A Global planning of geo-processing workflow in a distributed and collaborative environment Xianfeng Song, Chuanrong Li and Lingli Tang

16:10-16:30	405	Towards a Semantic-Based Automatic Orchestration of Geo-Processing Services Michael Owonibi and Peter Baumann
16:30-16:50	406	Increasing Process Reliability in a Geospatial Web Services Composition Sergio A. B. Cruz, Antonio M. V. Monteiro and Rafael Santos
16:50-17:10	085	ISDC model for the semantical classification of geoscience metadata Bernd Ritschel
<b>SS10 Chair: Xuan Shi, Lan-Kun Chung</b>		<b>Location: Room C</b>
Time	ID	Title & Authors
13:30-13:50	094	SOA-Based platform for water resource information exchanging Cheng-Te Yang, Geui-Lin Huang, Fu-Hsun Huang, Ting-Wu Ho, Pi-Hui Huang and Jiann-Min Yang
13:50-14:10	095	The Invasive Species Forecasting System: A Workflow-Oriented Decision Support Framework for Managing Biological Invasions John Schnase, Neal Most, Roger Gill and Peter Ma
14:10-14:30	053	The measurement of Geospatial Web Service quality in SDIs Sheng Gao, Darka Mioc and Xiaolun Yi
14:30-14:50	108	A SOA based debris flow monitoring system - Architecture and proof-of-concept implementation Lan-Kun Chung, Bastian Baranski, Yao-Min Fang, Yin-Huei Chang, Tien-Yin Chou and Bing Jean Lee
14:50-15:10	244	Using AJAX for Desktop-like Geospatial Web Application Development Weiguo Han, Liping Di and Peisheng Zhao
Coffee Break		
<b>SS11 Chair: George Percivall</b>		<b>Location: Room C</b>
15:30-15:50	168	OGC WPS Implementation of Data Pre-processing, Integration Service in SEPS Xinlin Qian, Liping Di and Genong Yu
15:50-16:10	170	Discover, Visualize, and Deliver Geospatial Data through OGC Standards-based WebGIS System Yaxing Wei, Suresh-Kumar Santhana-Vannan and Robert Cook
16:10-16:30	385	OGC Web Map Service Implementation Challenges for Mobile Computers Clodoveu Davis, Fatima Figueiredo and Yuri Kimo.
16:30-16:50	207	Sensor Web Service Integration for Pandemic Disease Spread Simulation Genong Yu, Liping Di, James Smith, Bei Zhang, Huilin Wang and Min Min
16:50-17:10	174	Integration of Geospatial Web Services and Web Portal Technologies for Geospatial Information Sharing and Processing Jie Yuan, Peng Yue and Jianya Gong
<b>GS06 Chair: Genong Yu, Fang Qiu</b>		<b>Location: Room D</b>
Time	ID	Title & Authors
13:30-13:50	369	Land use/Land cover Change Detection in Amol Simin Tavallaei
13:50-14:10	454	Real-time Traffic Data Management for Dynamic Vehicle Navigation System Yang Yu and Bin Li
14:10-14:30	205	Geospatial Cloud Computing: concept and use cases Genong Yu and Liping Di
14:30-14:50	206	Severe Weather Event Detection and Tracking Sensor Web Genong Yu, Liping Di, John Moses and Peichuan Li
14:50-15:10	456	Design and Implementation of a Location Awareness System for Field Police Work Duansheng Chen
Coffee Break		
15:30-15:50	218	Implementation of a Prototype System for Data and Sensor Planning Service Bei Zhang, Liping Di, Genong Yu and Huilin Wang
15:50-16:10	228	Implementation of Sensor Observation Service for Satellite Imagery Sensors Huilin Wang, Liping Di, Genong Yu and Bei Zhang
16:10-16:30	257	Web Service for Extracting Terrain Openness from DEM Data Wei Luo, Xiaoyan Li, Tomasz Stepinski and Liping Di

16:30-16:50	325	Sharing Geospatial Processing Algorithms Developed with Open Source GIS Tools through a Web Processing Service Xiaoyan Li, Liping Di, Peisheng Zhao, Upendra Dadi and Weiguo Han
16:50-17:10	413	Revitalizing GRASS using service oriented architecture Fang Qiu, Haiting Huang, Bryan Chastain, Yaochen Qin, Shuang Li and Liping Di
<b>GS07 Chair: Lizhi Miao</b>		<b>Location: Room E</b>
Time	ID	Title & Authors
13:30-13:50	103	Integration of geospatial information for mobile and services devices Erick Lopez-Ornelas and Fernando Farfán-Olvera
13:50-14:10	211	WASP: An Innovative Sensor Observation Service with Web-/GIS-based Architecture Jen-Chu Liu and Kuo-Yu Chuang
14:10-14:30	248	A mobile hot-spot navigator for instant POI finding in an unfamiliar area - A case study of restaurants finding in Da-an District, Taipei city, Taiwan Wei Shen Lai and Chia-Chun Shih
14:30-14:50	374	Shortest Path Queries in Mobile Broadcast Environments Ta-Chih Su, Yun-Tung Hsieh and Chuan-Ming Liu
14:50-15:10	358	Geographical Information Retrieval based on User's Operation on both Digital Maps and Directory Services Rika Kotera, Daisuke Kitayama and Kazutoshi Sumiya
Coffee Break		
15:30-15:50	004	Research on the system of matching and rectifying vector electronic map Shoudong Zhu, Huiping Liu, Xiaodong Wang, Xiaoluo Zhou and Yu Qiao
15:50-16:10	352	Enterprise Spatial Data Deployment Strategies in a Global Engineering Environment – The Bechtel Experience Tracy McLane and Yongmin Yan
16:10-16:30	273	Incremental Identification of Topological Errors in Spatial Data Markus Prosegger and Abdelhamid Bouchachia
16:30-16:50	106	GML Parsing Technology Service and its Sharing Platform Lizhi Miao
16:50-17:10	292	Geographic Knowledge Map and Its Application in Seismic Knowledge Representation Jun Xu, Yonghui Yao, Tao Pei and Changqing Yao
<b>GS08 Chair: Helena Mitasova, Suhung Shen</b>		<b>Location: Room F</b>
Time	ID	Title & Authors
13:30-13:50	042	Development of integrated typhoon remote sensing application system based on .NET and ArcGIS Engine Hequn Yang, Yinming Yang and Shengmao Zhang
13:50-14:10	062	Riverbank Erosion, Sandbank deposition and Migration of River Channel: A Study of the Padma and the Jamuna Rivers in Bangladesh Using RS and GIS Md. Tariqul Islam
14:10-14:30	153	A Real-time Parallel Implementation of Douglas-Peucker Polyline Simplification Algorithm on Shared Memory Multi-core Processor Computers Jingsong Ma and Shoucheng Xu
14:30-14:50	081	Analysis of ground deformations based on parallel geostatistical computations of PSInSAR data Jacek Strzelczyk, Stanisława Porzycka and Andrzej Leśniak
14:50-15:10	099	Inversion Modeling of Chlorophyll-a Concentration in Water by Multi-Angle Polarized Reflection Yang Han, Yeqiao Wang, Yunsheng Zhao and Yunfeng Lu
Coffee Break		
15:30-15:50	117	Effects of Mining on the Ecosystems Integrating GIS and Hydrological Model Jing Zhang, Mark Ross, Huili Gong and Xiaojuan Li
15:50-16:10	124	New measures of terrain dynamics derived from time series of lidar data Helena Mitasova, Eric Hardin, Russell Harmon and Margery Overton
16:10-16:30	314	Prospectivity mapping for gold deposits hosted by iron formation (BIF), in a portion of western Churchill Province that includes Melville Peninsula, Nunavut, Canada

		Pouran Behnia, John Kerswill, Graeme Bonham-Carter and Jeff Harris.
16:30-16:50	239	The Detection and Removal Of Conflicts In Road Network Generalization By Delaunay Triangulation Yafeng Huang, Tinghua Ai and Huihui Liu
16:50-17:10		

19:00-23:00	Geoinformatics Night [Invited Only] Buses depart from conference hotel at 6:00pm	
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## August 14<sup>th</sup> 08:30am –12:10pm

<b>GS09 Chair: Subhas Chakravarty, Huili Gong</b>		<b>Location: Room A</b>
Time	ID	Title & Authors
08:30-08:50	089	Geospatial Data Mining for Pest Management - a Framework Amiya Kumar Tripathy, J. Adinarayana and D. Sudharsan
08:50-09:10	161	A Performance Evaluation on DCT and Wavelet-based Compression Methods for Remote Sensing Images based on Image Content Shayron Nichols, Hyunju Kim, Ali A. Humos and Hyun Jung Cho
09:10-09:30	227	The Comparative Study of Three Methods of Remote Sensing Image change detection Lu Xu, Zongyi He and Shaoqing Zhang
09:30-09:50	304	Stability maps for really exploitable automatic classification results Emanuele Frontoni, Anna Maria Bernardini, Eva Savina Malinverni, Adriano Mancini and Primo Zingaretti
09:50-10:10	302	Image Fusion by Compressive Sensing Atul Divekar and Okan Ersoy
Coffee Break		
10:30-10:50	219	Spatial Pattern Analysis in Urban Surface Based on Elevation Corrected Urban Building Entity Models Yang Tao, Guoan Tang, Shanshan Ge, Shijie Zhu, Xiangxi Dai and Rui Zhu
10:50-11:10	401	Applying Space Syntax in Large Polycentric City - Case Study in Wuhan, China Qingming Zhan, Jingnan Zhou and Yinghui Xiao
11:10-11:30	151	Arbitrary Cut Algorithm Based on 3D Geological Objects Represented by TIN Structure Weihua Hua, Guoliang Chen and Hengjian Tong
11:30-11:50	430	Exchange Files of Geographic Incremental Updating Information Based on XML Shen Ying, Lin Li, Wanzeng Liu, Yurong Gao and Hong Wang
11:50-12:10	446	A computer model to study the variability of gridded Sea Surface Temperature (SST) values derived from AQUA/AMSRE satellite data and its influence on the onset of South West Monsoon near the Kerala coastal region in India Subhas Chakravarty
<b>GS10 Chair: Yuqi Bai, Nigel Waters</b>		<b>Location: Room B</b>
Time	ID	Title & Authors
08:30-08:50	185	Geospatial Data Provenance in Cyberinfrastructure Peng Yue and Lianlian He
08:50-09:10	213	Deploying OpenGIS Catalog Service to Promote Online Geospatial Resources Discovery : Lessons Learned Yuqi Bai, Liping Di and Aijun Chen
09:10-09:30	214	GEOSS Component and Service Registry - Design, Implementation and Maintenance Yuqi Bai, Liping Di, Aijun Chen, Xuanang Cheng and Yaxing Wei
09:30-09:50	460	Providing Public Standardized Data Access Function: Lessons Learned from Accessing USGS LANDSAT Archive Xuanang Cheng, Yuqi Bai, Liping Di and Doug Nerbert
09:50-10:10		
Coffee Break		
10:30-10:50	076	Urban Population Travel Modeling based on Data Fusion of Mobile Phone Positioning Data and FCD Jinxing Hu, Wenjing Cao, Jun Luo and Xiaomin Yu
10:50-11:10	098	The impact of healthy food accessibility on childhood obesity Lauren Rosenshein and Nigel Waters
11:10-11:30	305	A practical route guidance approach based on historical and real-time traffic effects Feng Lu, Yingying Duan and Nianbo Zheng
11:30-11:50	295	Using Geographically Weighted Regression to Explore Socioeconomic Indicators and Impervious

		Surface Across Massachusetts Yelena Ogneva-Himmelberger, Charlyn Pearsall and Rahul Rakshit
11:50-12:10		
<b>GS11 Chair: Andrew Frank, Huiping Liu</b>		<b>Location: Room C</b>
Time	ID	Title & Authors
08:30-08:50	167	Employing United Delaunay Triangulation in Contour Lines Generalization Xu Zhang, Xinyan Zhu and Yingwei Yang
08:50-09:10	203	The Alternate Hierarchical Decomposition of Nonconvex Polytopes: Generalization of a Convex Polytope Based Spatial Data Model Rizwan Bulbul and Andrew Frank
09:10-09:30	116	Urban Expansion Simulation based on Constrained Artificial Neural Network Cellular Automata Model Wenli Huang, Huiping Liu and Mu Bai
09:30-09:50	398	Extending the Map Cube Operator with Multiple Spatial Aggregate Functions and Map Overlay Francisco Moreno, Fernando Arango, and Renato Fileto
09:50-10:10	441	Validation of Surface Radiation Data Provided by the CERES Over the Tibetan Plateau Sheng Gui, Shunlin Liang and Lin Li
Coffee Break		
10:30-10:50	034	3D Remote Sensing Images Online Refining Hengjian Tong, Yun Zhang and Zhenfeng Shao
10:50-11:10	111	GeoInt Integration for Persistent Surveillance Zohra Hemani, Ray Renner, George Tjoumas, Kimberly Turley, Craig Callender, Becky Elstad and Paul Smith
11:10-11:30	447	Finding Cold Wakes of Hurricanes Gustav, Hanna, and Ike (August – September, 2008) and Katrina (August 2005) using three-day composites of Sea Surface Temperature from TRMM's TMI Sinclair Sheers
11:30-11:50	453	Parameter Estimation in Geographically weighted regression Juan Luo
11:50-12:10		
<b>GS12 Chair: Dirk Cattrysse, Sinclair Sheers</b>		<b>Location: Room D</b>
Time	ID	Title & Authors
08:30-08:50	110	GeoProfiling Zohra Hemani, Ray Renner, George Tjoumas, Kimberly Turley, Craig Callender, Becky Elstad and Paul Smith
08:50-09:10	144	Hierarchical Route Planning Based on Taxi GPS-Trajectories Qingquan Li and Zhe Zeng
09:10-09:30	179	Road Densities and Species Abundance Yi-Fang Chen and Walter Chen
09:30-09:50	210	Dasymetric Estimation of Census Population Density: A Geostatistical Approach Zongyi He
09:50-10:10	443	Kernel Density Estimation with Geographically Masked Points Xun Shi, Jennifer Alford-Teaster and Tracy Onega
Coffee Break		
10:30-10:50	134	Integer Programming (IP) formulation for minimizing sediment delivery in a watershed by reforestation of optimal sites Pablo Vanegas, Dirk Cattrysse and Jos Van Orshoven
10:50-11:10	255	Mining time-dependent attractive areas and travel patterns from taxi trajectory data Yang Yue, Yan Zhuang and Qingquan Li
11:10-11:30	451	Integration of Grid and OGC Compliant Services to Implement the Sharing and Interoperability of Multi-Source and Heterogeneous Geospatial Data Hong Fan, Hao Feng and Xinyan Zhu

**Poster Session**  
**Aug. 12<sup>th</sup> afternoon – Aug. 14<sup>th</sup> morning**  
**Location: Dewberry Hall**

Poster Session (Aug. 12 <sup>th</sup> afternoon – Aug. 14 <sup>th</sup> morning)		Location: Dewberry Hall
Time	ID	Title & Authors
08:30-12:10 13:30-15:10	007	Effect of spatial scale on regional land-use pattern analysis in different classification system and different data source: An empirical study at Province and County levels of China Bingwen Qiu, Chongcheng Chen and Xiaozhu Wu
	011	Geospatial Information Semantic Retrieval Algorithm Research Based on Geo-ontology Wei Liu, Yunyan Du, Hairong Zhang and Rulin Xiao
	016	An Intelligent Bay Geo-Information Retrieval Approach based on Geo-ontology Rulin Xiao, Yunyan Du, Wei Liu and Yawen He
	024	Improving Accessibility to Geospatial Data Using Geographic Search Lee Allison, Jess Kozman and Jonathan Williams
	030	Model of Incremental Changes of Geographical Object Based on Multi-States Huaji Zhu, Huarui Wu, Xiang Sun and Shaojuan Ma
	037	Modifying MOD16 algorithm for improving evapotranspiration estimation using MODIS data Wen Wang
	038	Land Cover Change Detection Based On MODIS 250m Vegetation Index Time Series Data Wen Wang.
	044	Wavelet Texture Extraction and Image Classification of Hyperspectral Data Based on Support Vector Machines Jin-Tsong Hwang
	045	Onboard Real-Time Cloud Detection Using Reconfigurable FPGAs for Remote Sensing Na Shan, Tianyao Zheng and Zhensong Wang
	056	Building Depth Images from Scattered Point Cloud Shuangfeng Wei and Hong Chen
	058	A Dynamic Schema Matching Approach for Multi-Version Web Feature Service Retrieve Jie He, Nengcheng Chen and Wei Wang
	064	Resource Oriented Architecture for Heterogeneous Geo-Processing Workflow Integration Nengcheng Chen, Liping Di, Peisheng Zhao and Genong Yu.
	078	Remote Sensing Drought Monitoring Under Dense Vegetation Cover Condition Based on Perpendicular Drought Index Zhe Li, Debao Tan, Yuanlai Cui and Sui Zhang
	080	A New R-tree Node Splitting Algorithm Using MBR Partition Policy Yan Liu, Jinyun Fang and Chengde Han
	097	One rasterization approach algorithm for high performance map overlay Hui Dong, Zhenlin Cheng and Jinyun Fang
	229	Study on Risk assessment model of urban Drought in Hilly Area of Central Sichuan Basin – A Case Study of Nanchong City Liangqun Jiang, Youlong Zhai, Bin Zhang, Chengqiang Shu and Lili Wang.
	118	Simulation on the effects of non-point source pollution in Qingjiang River Basin based on SWAT model and GIS Zhaohui Wang, Dengzhong Zhao, Bo Cao and Qingyun Du.
	127	Temporal and Spatial Variation of Urban Airborne Inhalable Particle and It's Influence Factor Analysis using GIS & RS Wenhui Zhao, Huili Gong, Wenji Zhao, Tao Tang, Lin Zhu and Jian Lian
	140	The design of intelligent expert classifier for featured crop mapping combining spectral library Hongli Li, Ligang Fang and Shuisen Chen
	147	Classification of urban remote sensing image based on support vector machines Hongmei Zhu, Xiaojun Yang and Yu Luo

152	Identification of Sand dredges in Yangtze River Based on ASAR Remote Sensing Data Xuejun Cheng, Youchuan Wan and Bo Cao
176	A Real-time Calculating Method of Channel Reservoir Backwater Storage Yunfeng Lu, Debao Tan, Xiaoling Chen and Hui Li
184	A Scalable Web GP Monitoring System based on AJAX Push Pattern Lei Shen, Lei Wu, Chongjun Yang, Fuqing Zhang, Yingchao Ren and Lin Zhu
188	Semantic Discovery of OGC WPS-based Remote Sensing Image Processing Xu Chen and Xinyan Zhu
191	VegaMinerPOI: A Spatial Data Mining System for POI Datasets Peng Sun, Jinyun Fang, Chengde Han and Zhenlin Cheng
194	Impact analysis and appraisal of Tangjiashan Barrier Lake by spatial information technology Yu Zhang and Pengxiao Chen
197	The research of interoperability in spatial catalogue service between CSW and THREDDS Chengfang Hu, Liping Di and Wenli Yang
223	Proactive delivery strategy of spatial information Yu Xia, Xinyan Zhu and Deren Li
235	Research on the Geometry Rectification Model of Infrared Image of HJ-1B Satellite with Sparse Ground Control Points Jingbo Chen, Zhongming Zhao and Chengyi Wang
264	A Study of Points Object Generalization Based on Rough Set Technology Wenjing Li, Hong Wang, Zhiyong Lin and Xiaotong Zhang
269	Object-oriented Multi-feature Fusion Change Detection Method for High Resolution Remote Sensing Image. Wenjie Wang, Zhongming Zhao and Haiqing Zhu
270	An Accelerated Approach to Create 3D Web Cities Lifeng Liu and Jinyun Fang
271	Urban Expansion and its Effect on City Hot Land Effect of Chuxiong City Over the Past 30 Years in Yunnan, China Yunyuan Yang, Zhengtao Shi, Ping He, Shaoyu Tong and Chengdong Xu
277	Vector Distance Algorithm for Optimal Segmentation Scale Selection of Object-oriented Remote Sensing Imagery Classification Huan Yu, Shuqing Zhang and Bo Kong
280	Improvement and Optimization of Thiessen Polygon Method Boundary Treatment Program Qing Zhou, Gang Liu and Zhiting Zhang
288	Approach for Interoperability of Multi-source Geological Hazard Data Based on Ontology and GeoSciML Gang Liu, Chonglong Wu, Xiaogang Ma, Yanni Wang and Fei Tian
294	Improvement of an Aerodynamic Roughness Model With Meteorological Measurements and TM Image Yanlian Zhou, Xiaomin Sun and Weimin Ju
296	A Transit Path Planning Model Based on the Heterogeneous Road Network Ting Zhao and Jinyun Fang
301	Towards of The Parallel Triangular Geometric Correction Algorithm of Remote Sensing Image Tongjun Qi, Haojun Liao, Jinyun Fang and Chende Han
317	The Analysis of Economy Spatial Characteristics of Beijing-Tianjin-Hebei Metropolitan Region Based on GIS Jian Lian, Huili Gong, Xiaojuan Li, Yonghua Sun, Wenhui Zhao, Lin Zhu and Jing Zhang
362	A parallel remote sensing images fusion algorithm based on intensity-hue-saturation and nonsubsampling contourlet transform Tongjun Qi, Haojun Liao, Jinyun Fang and Chende Han
391	A Novel Fast Acquisition Algorithm For GPS C/A Signals Xiangzhen Yao, Xinxian Qin and Jinyun Fang
414	The Design, Development and Application of Geographical Knowledge Service Grid Portal Xiaozhu Wu and Chongcheng Chen

419	Parallel Map Rendering System for Massive Geospatial Data in Distributed Environment Yingchao Ren, Lin Zhu, Chongjun Yang and Lei Shen
421	Remote sensing for monitoring on the health of artificial Robinia Pseudoacacia Forests in the Yellow River Delta Ling Yao, Qingsheng Liu, Gaohuan Liu, Lifan Fei and Sheng Gui.
423	Voronoi Diagram and GIS-based 3D Path Planning Lifeng Liu and Shuqing Zhang
431	New Logic for Large-scale Land Cover Classification Based on Remote Sensing Quanfang Wang, Haiwen Zhang, Hangzhou Sun and Jiayong Li
433	Quick Computation Program of Fractal Dimension for 2D Vector Data Qian Wang, Quanfang Wang, Xin Mei, Haiwen Zhang and Hangzhou Sun
450	Visualize, Analyze and Mine Satellite Imagery Using a Single Tool Rahul Ramachandran, Sara Graves, Todd Berendes, Manil Maskey, Chocka Chidambaram, Sundar Christopher, Patrick Hogan and Tom Gaskins.
457	Fractal Study on Infrared Thermal-Imaging Ying Wu, Mingqing Sun and Zhuoqiu Li
458	A Segmentation Method of Ultrasonic CT Image Based on Wavelet Neural Network Ying Wu, Mingqing Sun and Zhuoqiu Li
459	Application of GPS/GIS Technologies in the Pre-hospital First Aid: Case study of Suzhou City Yulong Bai
461	Technical Architecture for Land Monitoring Portal using Google Maps API and Open Source GIS Kiwon Lee
136	Organization and Schedule of Multi-resolution Pyramid Based on Wavelet Transform Longgang Xiang and Xinyan Zhu
150	A multi-level comprehensive evaluation method for quality of wms based on fuzzy mathematics Shengyu Shen, Wei Liu, Yumin Chen and Huayi Wu
321	Spatial distribution of litter storage in China Yuandan Ma, Xiuying Zhang, Qian Zhu, Bin Wang, Hong Jiang, Xiaohui Xia and Meiling Huang

### List of Special Sessions:

SS-SPC: Students Paper Competition

SS01: Virtual globes and sub-meter resolution mapping for integration of social and ecological sciences Virtual globes and sub-meter resolution mapping

SS02: Geographical Knowledge: Representation and Manipulation

SS03: Agricultural Geoinformatics & Its Applications

SS04: Data Mining for Geoinformatics

SS05: High-Resolution Remote Sensed Image Understanding

SS06: High Performance Geo-Computation

SS07: Remote Sensing of Environment and Climate

SS08: Disaster Monitoring and Management

SS09: Geospatial Web Services and Workflow

SS10: Service Oriented Architecture in Geoscience

SS11: OGC Standards and their applications