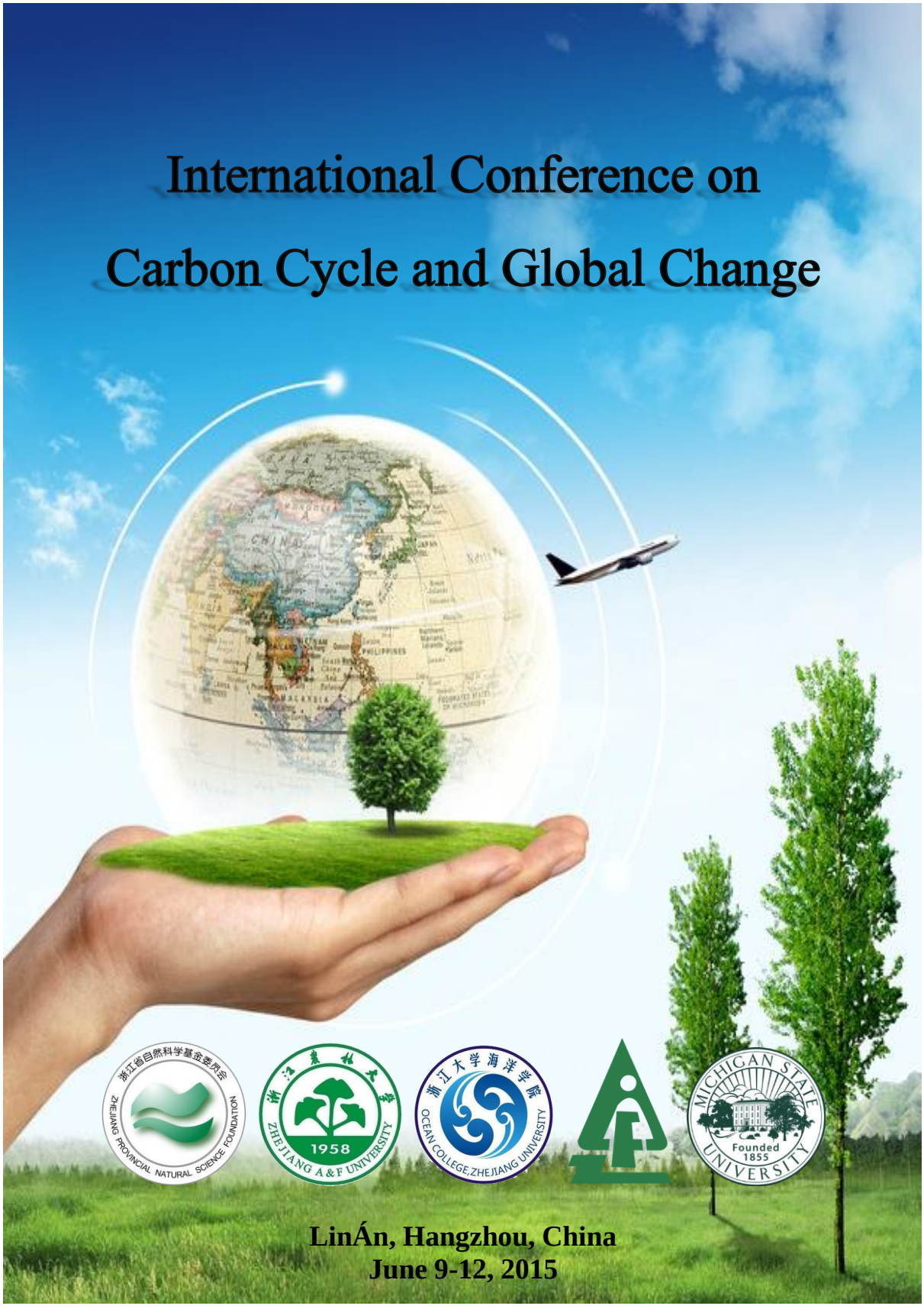
International Conference on Carbon Cycle and Global Change



LinÁn, Hangzhou, China
June 9-12, 2015

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Organizers and Committees

Conference Organizer:

Zhejiang Provincial Natural Science Foundation
School of Environmental & Resource Sciences, Zhejiang A&F University
Ocean College of Zhejiang University
Zhejiang Forestry Academy
Center for Global Change & Earth Observations, Michigan State University

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Co-Chair: Jiaping Wu, Ocean College of Zhejiang University

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Conference Themes

Global change, especially global climate change is driven by carbon emissions. Forest ecosystems are important carbon sinks but undergoing substantial pressures from economic development and agricultural expansions (e.g. Brazil and China cases). Up to date, however, the spatial and temporal dynamics of deforestation, degradation, afforestation, and reforestation are complex and there is a need to accurately document these changes in order to fully understand the carbon cycle of forest ecosystems and their roles in climate change. Therefore, a conference will be held in LinÁn, Hangzhou, China to focus on new and emerging remote sensing technologies, models, and tools that potentially improve the mapping, modeling, and monitoring of forest ecosystems. The overall conference theme is remote sensing of forest ecosystem dynamics. Specifically, the major topics include the following four broad aspects:

(1) Carbon cycle of forest ecosystems

(2) New sensors, methods, and techniques for improving forest biomass/carbon assessment

(3) Land use/cover changes associated with forest ecosystems

(4) Interactions among forest dynamics, carbon cycles, climate change and human impacts

Invited Speakers

- Curtis Woodcock: Boston University, USA
- Dar Roberts: University of California at Santa Barbara, USA
- Eduardo Brondizio: Indiana University, USA
- Emilio Moran: Michigan State University, USA
- Guomo Zhou: Zhejiang A&F University
- Jiaguo Qi: Michigan State University, USA
- Nuyun Li: State Forestry Administration of China
- Prasad S. Thenkabail, USGS Western Geographic Science Center, USA
- Zengyuan Li: Chinese Academy of Forestry

Curtis Woodcock

Boston University

Time series analysis of Landsat data for continuous monitoring of land cover change and condition

Abstract:

After 40+ years of collection of Landsat imagery, we are finally developing methods that make use of all the available data to monitor change in a continuous fashion on the surface of Earth. New methods use all "clear" observations for a pixel. A time series model is fit to each pixel, and change is identified when new observations no longer match "predicted images", which are based on past observations. The use of all available data has led to the following:

- Detection of more subtle disturbance
- More reliable disturbance detection
- Trends in ecosystem health and growth
- Forest phenology – both average and interannual
- Peak greenness – as indications of trends in ecosystem health and climate response

These new methods are made possible by many developments over recent years, including:

- Consistent data formats and outstanding orthorectification
- Improved computing capabilities
- Consolidation of Landsat holding
- Calibration
- Automated atmospheric correction
- Automated detection of clouds, cloud shadows and snow
- Free access to the data

There are many applications that benefit from time series analysis of Landsat. In particular it is becoming easier to monitor land change as it is occurring, which will make the results more helpful for land management. Another important application is support for greenhouse gas inventories and modeling of the carbon cycle.

Brief Biography:

Dr. Curtis Woodcock is currently a professor and the chair of the Department of Earth and Environment at Boston University. He obtained his PhD from the University of California at Santa Barbara in 1985, and has been on the faculty at Boston University since 1984. Prof. Woodcock has been an international leader in environmental monitoring with remote sensing. He has done remote sensing research for over 35 years on a wide range of topics, including urban expansion in Pearl River Delta, China, land use change in the Nile River Delta, Egypt, agricultural expansion in Turkey, Forest Ecosystem Dynamics in the Pacific Northwest, USA, carbon budgets in New England and the Black Sea region, and global land-cover and land-use changes. He maintains an interest in the theory and methods of remote sensing, particularly as they relate to the spatial and temporal dimensions. He received the Outstanding Contribution Award for Remote Sensing from the Association of American Geographers in 2010, numerous Best Science awards for his scientific papers. His current research interests remain focused on environmental monitoring with remote sensing. He has been the Team Leader of the USGS/NASA Landsat Science Team since 2007. He also serves as the Co-Chair of the Land Cover Implementation Team of GOFC-GOLD.

Dar A. Roberts

Department of Geography at U.C. Santa Barbara

A thirty year history of land-cover change in Rondonia Brazil from standardized mixture models and decision tree classifiers

Abstract:

Deforestation and post-deforestation land-use represent significant carbon sources and sinks in Brazil. I present a standardized methodology for quantifying land-cover change, and post-deforestation land use in Rondonia, Brazil. I describe a general procedure, in which standardized methods for atmospheric correction, image normalization and spectral mixture analysis are used to decompose imagery into measures of vegetated and non-vegetated cover. Landsat TM and ETM+ data are analyzed annually between 1984 and 2010. Spectral fractions for green vegetation, non-photosynthetic vegetation, soil and shade are fed into a decision tree classifier to produce maps of dominant land-cover classes, including mature forest, secondary forest, pasture, bare soil, water and burn scars. Time series analysis is used to reduce classification errors that result in disallowed transitions. Additional corrections are applied to reduce misclassification between second growth and mature forest due to illumination, confusion between old second growth and mature forest and phenology errors. Spatial/temporal dynamics over most of the state are discussed. Transitions between mature forest, pasture and secondary forest are analyzed to evaluate the spatial extent and persistence of second growth and pasture and to quantify carbon fluxes and stocks. I evaluate the potential of this approach to assess current land-cover change using OLI data and discuss the potential of large scale applications across the Amazon basin.

Brief Biography:

Dr. Dar Roberts is a professor in the Department of Geography at U.C. Santa Barbara, where he started in January, 1994. His primary research interests are in remote sensing of vegetation, land-cover change, fire danger, spectroscopy, urban remote sensing, thermal remote sensing and trace gas mapping using imaging spectrometry. He has worked extensively with optical remote sensing in the visible, near-infrared and thermal infrared and active remote sensing, including radar and lidar. He has contributed to a number of NASA sponsored research campaigns including LBA Ecology, the EO1 Science Validation Team and most recently the HyspIRI preparatory program. His study sites include much of North America, the Brazilian Amazon, North Africa, Australia and select locations in Europe and China. He has authored or co-authored over 270 publications including close to 150 in refereed journals. He teaches classes in graduate-level remote sensing, environmental optics, environmental data analysis and historical geography. He has played a lead role in algorithm development, most notably Viper Tools. He served as the Chair of the Department of Geography from 2009 to 2014, is a member of the Editorial Board of Remote Sensing of Environment and served as an Associate Editor for the International Journal of Photogrammetry and Remote Sensing in 2012. He has won several awards including the UCSB Outstanding Graduate Mentor Award (2007-2008), a CSIRO McMasters Research Fellowship (2008-2009), the 2013 Outstanding Contributions Award in Remote Sensing for the Remote Sensing Specialty Group of the AAG and awards for excellence in reviewing in 2013 from IEEE JSTARS and Remote Sensing of Environment.

Eduardo S. Brondizio

Department of Anthropology, Anthropological Center for Training and Research on Global Environmental Change (ACT), and the Ostrom Workshop, Indiana University Bloomington

Land change science in a future earth

Abstract:

Since the 1980s, the establishment of international global environmental change (GEC) programs represented a major catalyst for the development of an international research community studying global environmental change. As part of this process, the Land Use and Cover Change (LUCC) program and later the Global Land Project (GLP) initiatives contributed to the development of comprehensive research agendas to understand drivers, dynamics, modeling and scenarios associated with land change processes. Today, land change science is recognized as one of the most prominent interdisciplinary fields of studies in global change research. This presentation provides an overview of the evolution of land change science and global change research with particular attention to the emerging research agenda under the new Future Earth program, a 10-year international research initiative bringing together the four GEC programs into a new phase of research on global sustainability.

Brief Biography:

Eduardo S. Brondizio is Professor of Anthropology and Adjunct Professor of Environmental Sciences and Geography at Indiana University-Bloomington. He is Faculty Associate with the Anthropological Center for Training and Research on Global Environmental Change (ACT) and the Chair of the Advisory Board of the Vincent and Elinor Ostrom Workshop in Political Theory and Policy Analysis at Indiana University Bloomington. Environmental anthropologist dedicated to longitudinal, field-based and interdisciplinary research among rural populations in the Amazon, Eduardo's work has analyzed the transformation of rural households and communities and their landscapes and surrounding urban areas as they interact with external processes and contribute to regional level change. Eduardo's work integrates ethnographic, survey, institutional analysis, and historical investigation with geospatial analysis of landscape change. Eduardo has been engaged with global changed research programs since the mid-1990s and contributed to several global assessments since 2001. Currently, he serves as co-Editor-in-Chief of Elsevier's *Current Opinion on Environmental Sustainability* (COSUST). He is a member of the inaugural Science Committee of the *Future Earth* program, member of the Science committee of the International Geosphere-Biosphere Programme since 2011 and collaborator of the International Human Dimensions Programme and DIVERSITAS. Eduardo has published extensively on land-use change and agricultural intensification, small-farmers' livelihood, adaptation to environmental change and interactions with commodity chains, and more broadly rural development and poverty, urbanization, ecosystem services, and institutional analysis of resource systems, and integrative methodologies. His current research applies complexity theory to analyze interactions among rural, urban, conservation and indigenous areas in the Amazon. He has active research collaborations in Brazil and the USA, and different parts of Latin America, Europe, and Asia.

Emilio F. Moran

Center for Global Change and Earth Observations and
Department of Geography, Michigan State University

Human drivers of land use and land cover change

Abstract:

The paper will discuss the major drivers of change in land use and land cover over the past 40 years, and how they have changed over that period. These shifts reflect the priorities of the Brazilian government, and the pressures from the international community, and adjustments resulting from the capacity of the government to monitor what is happening in the region, and greater awareness that it is possible to increase production without increasing area deforested. The decreases in deforestation observed reflect these changes, despite the increases in productivity in cattle pastures resulting from improved management.

Brief Biography:

Emilio F. Moran joined MSU in January 2013 as John A. Hannah Distinguished Professor at Michigan State University, associated with the Center for Global Change and Earth Observations, the Center for System Integration and Sustainability, and the Department of Geography. He was until 2012 Distinguished Professor and the James H. Rudy Professor of Anthropology at Indiana University, Professor of Environmental Sciences, Adjunct Professor of Geography, and Director of the Anthropological Center for Training and Research on Global Environmental Change (ACT) at Indiana University. Dr. Moran is the author of ten books, fifteen edited volumes and more than 190 journal articles and book chapters. His research has been supported by NSF, NIH, NOAA and NASA for the past two decades. His three latest books, Environmental Social Science (Wiley/Blackwell 2010), People and Nature (Blackwell 2006) and Human Adaptability, 3rd edition (Westview 2007) address broad issues of human interaction with the environment under conditions of change. His most recent book, Meio Ambiente & Florestas (Editora SENAC Sao Paulo 2010) addresses the value of forests in Brazil and the world. His book Developing the Amazon (Indiana U Press, 1981) was the first book-length study of the human and environmental impacts of the Transamazon Highway. He is a Fellow of the Linnean Society of London, Fellow of the American Anthropological Association and the Society for Applied Anthropology, Fellow of the American Association for the Advancement of Science, and was elected to the National Academy of Sciences in 2010.

Guomo Zhou

Zhejiang Provincial Key Laboratory of Carbon Cycling in Forest Ecosystems and Carbon Sequestration, Zhejiang A&F University

CO_2 sequestration capability of bamboo forest and our action

Abstract:

Bamboo forests are one of the most important and special forest types in China and are extensively distributed in tropical and subtropical parts of the country. Bamboo forests are distinct from other forest types. Because of bamboo's rapid growth rate and its strong capacity for storing carbon, carbon sequestration research on bamboo forests is important. Since 2001, studies on bamboo forest carbon sequestration have been continually carried out by our research group. In this presentation, systematic researches on CO_2 sequestration capability of bamboo forest were introduced. The main topics cover:

(1) The characteristics of bamboo forest resources
(2) Carbon sequestration capability of bamboo forest
(3) Practice and action.

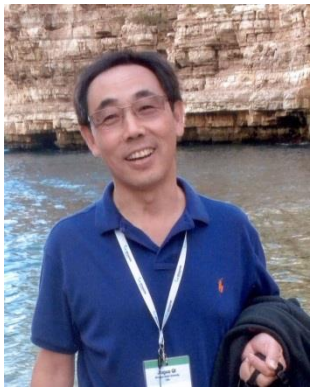
Brief Biography:

Guomo Zhou is Professor of Zhejiang A&F University. He is the supervisor of doctoral students and senior expert in forest carbon cycle, and gains the State Council government special allowances. He is the president of Zhejiang A&F University, and director of Key Laboratory of Carbon Cycling in Forest Ecosystems and Carbon Sequestration of Zhejiang Province. He has long-term devoted to the research and teaching of forest carbon sink and addressing global climate change, forest sustainable management theory and technology. In recent years, he had accomplished to host more than 30 research projects, continuously obtained fund support from National Natural Science Foundation of China and the National Program on Key Basic Research Project of China.

He has published more than 150 academic papers, including 59 in SCI, as well as publishes 4 technology monographs and gains 4 national invention patents. Many papers were published in top journals, such as Agricultural and Forest Meteorology, Forest Ecology and Management, Remote Sensing of Environment, IEEE TGRS, and Science in China. His current research interests are forest carbon monitoring, climate change adaptation and carbon management, and sustainable forest management. He has made important theoretical innovation and technological breakthroughs in the aspect of bamboo carbon sink, climate change, forest degradation and ecological restoration technology. He and his team obtain two State Science and Technology Awards, State Teaching Achievement Award, six Science and Technology Awards of Zhejiang Province.

Jiaguo Qi

Center for Global Change & Earth Observations
Michigan State University, East Lansing, MI 48823, USA



Understanding spatiotemporal variation of vegetation phenology and rainfall seasonality in southeast Asia

Abstract:

The spatio-temporal characteristics of remote sensing are considered to be the primary advantage in environmental studies. With long-term and frequent satellite observations, it is possible to monitor changes in key biophysical attributes such as phenological characteristics, and relate them to climate change by examining their correlations. Although a number of remote sensing methods have been developed to quantify vegetation seasonal cycles using time-series of vegetation indices, these methods were not designed to explore and monitor changes and trends of vegetation phenology in Southeast Asia (SEA), which is adversely affected by changes in the Monsoon Asia climate. The objectives of this research are to determine the spatial characteristics of vegetation phenology and rainfall seasonality, identify significant trends in phenology and rainfall seasonality, and examine the relationships between seasonal rainfall fluctuations and key phenological parameters.

Phenological characteristics in the Monson Asia were extracted from EVI (Enhanced Vegetation Index) time-series data acquired by MODIS sensors over the period of 2001-2010 and analyzed to identify and quantify their spatio-temporal patterns and trends. The spatio-temporal patterns were then statistically related to the rainfall seasonality derived from TRMM daily rainfall data. The results revealed a great regional vegetation variability and inter-annual fluctuation. The phenological patterns varied spatially and are correlated with climate variations and human management differences. The overall regional vegetation growth, indicated by the mean EVI value in the Monsoon Southeast Asia has gradually decreased from 2001 to 2010 and phenological trends appeared to shift towards a later and slightly longer growing season. The rainy season in the region seemed to have started earlier and ended later, resulting in a slightly longer growing season. However, the amount of rainfall in the region decreased from 2001 to 2010. The shifts in vegetation seasonality and trends in growth appeared to be associated with climate events such as El Niño in 2005. It is interesting to note that the relationship between phenology and rainfall differed among ecosystems. Rainfall is a dominant driving force in the phenological changes in naturally vegetated areas and rainfed croplands, whereas human management is a key factor in heavily agricultural areas with irrigated systems. The information gained from this research is useful for local and regional environmental management and for identifying mitigation strategies in the context of climate change and ecosystem dynamics in this region.

Brief Biography:

Dr. Jiaguo Qi is the director of the Center for Global Change & Earth Observations and also professor in the Department of in several technical areas critical to global change science. Over the past decades, he developed geospatial modeling tools to guide rangeland management and crop irrigation scheduling, incorporated satellite-based biophysical attributes to improve climate modeling and predictions, ingested land use and land cover information in biogeochemical models to improve greenhouse gas emissions and nitrogen leaching, applied geospatial technologies to characterize landscape patterns for large scale ecological assessment, developed innovative way of using free satellite images for improved cropland detection and production estimation, and recently developed innovative approaches to integrate human, environment and climate to understand the coupling nature of human and environment for sustainable development in developing countries in Africa, Central Asia and Southeast Asia. Dr. Qi published more than 120 peer reviewed journal articles and more 20 book chapters on remote sensing, geospatial technologies, land use and land cover change, global change, and social dimensions of global change.

Nuyun Li

State Forestry Administration of China

Exploration and practice of China’s forestry carbon management

Abstract:

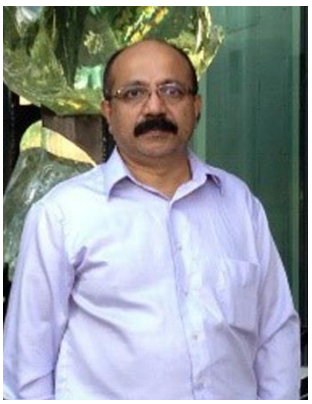
This report introduces the exploration and practice of China’s forestry carbon management through its massive plantation increasing forest carbon sinks, China’s forestry action plan to address climate change and forest carbon trade help enterprises reduce emissions and improve farmers' income. It firstly presents the ambitious changes of Chinese forest cover, volume and its forest system carbon storage due to China’s rapid massive afforestation programs. Secondly, it introduces the Forestry Action Plan to Address Climate Change issued by the State Forestry Administration of China, the issuing background and China’s Forestry Carbon Management System as well. It finally focuses on forest carbon sequestration projects funded by China Green Carbon Foundation those are successful cases taking the lead in the implementation of forestry carbon sequestration and forest voluntary carbon trade and promoting corporate voluntary emissions reduction and rural incomes through forestry practices nationwide.

Brief Biography:

Dr. Nuyun Li, Professor, Secretary-General of China Green Carbon Foundation, Executive Deputy Director of Climate Change Office, State Forestry Administration of China (SFA). Dr. LI graduated from the Forestry Department of Beijing Forestry University in 1982, and further studied at Chinese Academy of Agriculture Science to get Master Degree majored in agricultural economic management and later at Beijing Forestry University to get Doctoral Degree of Forestry Economics and Management. She had worked for Beijing Forestry University, Ministry of Forestry and SFA. She used to be the Chief Engineer and Deputy Director-General of Afforestation Department of SFA. She has deeply explored on the forest carbon sequestration theory and practice over 10 years in China. She has directed the formulation of related policies and series standards of China’s forestry carbon sequestration management and biomass energy etc. She has written more than 50 articles and has compiled and published 8 literatures. She had been a senior Visiting Professor in the United States. She is currently also a member of the Chinese National Committee for the International Human Dimensions Program on Global Environmental Change (CNC-IHDP), the Deputy Director General of Beijing Forestry Society and Vice Director of the State Forest Seedling Standardization Committee.

Prasad S. Thenkabail

U. S. Geological Survey (USGS), 2255, N. Gemini Drive, Flagstaff, AZ 86001, USA



Global food security-support data product at 30 m (GFSAD30)

Abstract:

Monitoring of global croplands (GCs) is imperative for ensuring sustainable water and food security for the people of the world in the Twenty-first Century. However, the currently available cropland products suffer from major limitations such as: (a) Absence of precise spatial location of the cropped areas; (b) Coarse resolution nature of the map products and their significant uncertainties in areas, locations, and detail; (c) Uncertainties in differentiating irrigated areas from rainfed areas; and (d) Absence of crop types and cropping intensities. This research aims overcome the above mentioned limitations through development of a set of GFSAD30 products using multi-resolution time-series remotely sensed data and a suite of automated cropland mapping algorithms (ACMAs). The products include:

1. Cropland extent/area,
2. Crop types with focus on the 8 types that occupy 70% of the global cropland areas,
3. Irrigated *versus* rainfed croplands, and
4. Cropping intensities: single, double, triple, and continuous cropping.

The project is funded by NASA MEaSUREs and makes significant contributions to Earth System Data Records (ESDRs), Group on Earth Observations (GEO) Agriculture and Water Societal Beneficial Areas, and GEO Global Agricultural Monitoring (GEOGLAM). The project products are released through a single window link: http://geography.wr.usgs.gov/science/croplands/.

Brief Biography:

Dr. Prasad S. Thenkabail (Prasad) is currently working as a Research Geographer-15 with the U.S. Geological Survey (USGS), USA. He leads a multi-institutional NASA MEaSUREs (Making Earth System Data Records for Use in Research Environments), funded through ROSES solicitation, ~3.5 million dollar 5 years global food security-support analysis data @ 30 m (GFSAD30) project. He is also an Adjunct professor at 3 US Universities: 1. Department of Soil, Water, and Environmental Science (SWES), University of Arizona (UoA), 2. Department of Space Studies, University of North Dakota (UND), and 3. School of Earth Sciences and Environmental Sustainability (SESES), Northern Arizona University (NAU), Flagstaff, AZ. Prasad is (a) Editor-in-Chief, Remote Sensing Open Access Journal; (b) Editorial Board, Remote Sensing of Environment; and (c) Editorial Advisory Board, ISPRS Journal of Photogrammetry and Remote Sensing.

Zengyuan Li

Institute of Forest Resource Information Techniques
Chinese Academy of Forestry, Beijing 100091, China

Lidar data processing and forest parameters estimation

Abstract:

Since last two decades, Lidar technologies got vast development and demonstrated great potential applications in forestry. The paper will introduce the lidar data acquisition and processing. Then forest parameters (including dbh, height, biomass etc.) were estimated at individual tree, plot, local and regional scales. The topics will cover terrestrial laser scanner (TLS), airborne laser scanner (ALS) and spaceborne lidar data. Some recent applications in China will be introduced.

Brief Biography:

Zengyuan Li**,** Professor, Supervisor of PhD student, Deputy director of Institute of Forest Resources Information Technique, Chinese Academy of Forestry. He has engaged in research of remote sensing techniques of vegetation ecology and environment for many years, and has published about 100 research papers in national and international Journals of remote sensing. He is now member of Committee of Experts, Committee of Strategy Research Experts of the National Remote Sensing Centre of China; He is vice chairman of Committee of Core Experts for Spatial information system software testing and evaluation; committee member of National Technical Committee on Remote Sensing of Standardization Administration of China; vice chairman of Association of Remote Sensing of Environment; vice chairman of Beijing Society for Information Technology in Agriculture; associate editor of Journal of Remote Sensing; chief scientist of 973 project "Dynamic analysis and modeling of remote sensing information for complex land surface". He has won one second-class and one third-class National Prize for Progress in Science and Technology, one first-class prize for Progress in Science and Technology issued by the former National Forestry Ministry, and one second-class prize for Progress in Science and Technology issued by the Chinese Academy of Science.

Program

Overview

Date	Time	Contents	Location	Note
June 9	10:00-20:00	Registration	Lin An Xianggeli Hotel	
June 10	8:30-9:00	Opening session	The second conference room at main library	Registration: 8:00 – 12:00, Lobby at main library
	9:00-9:30	Coffee Break		
	9:30-12:10	Plenary session (I)	The second conference room at main library	
	12:10-13:30	Lunch	The third floor of Xijing cafeteria	
	14:00-15:40	Oral session 1, 2 Special session 1	Room 202, 204 Room 205, Campus Activity Center	Registration: 13:30 - 17:00, Campus Activity Center at Zhejiang A&F University
	15:40-16:00	Coffee break		
	16:00-17:20	Oral session 3, 4 Special session 2	Room 204, 205 Room 202, Campus Activity Center	
	18:30-20:30	Welcome dinner	The third floor of Xijing cafeteria	
June 11	8:30-10:30	Plenary session (II)	Room 202, Campus Activity Center	
	10:30-10:50	Coffee Break		
	10:50-12:10	Plenary session (III)	Room 202, Campus Activity Center	
	12:10-13:30	Lunch	The third floor of Xijing cafeteria	
	14:00-15:20	Oral session 5, 6 Special session 3	Room 204, 205 Room 202, Campus Activity Center	Poster session: The First Floor at Campus Activity Center
	15:20-15:40	Coffee break		
	15:40-17:00	Oral session 7 Special session 4	Room 202 Room 204, Campus Activity Center	
	18:00	Dinner	The third floor of Xijing cafeteria	
June 12	8:30-9:10	Plenary session (IV)	Room 202, Campus Activity Center	
	9:10-10:30	Oral session 8	Room 202, Campus Activity Center	
	10:30-10:50	Coffee Break		
	10:50-12:00	Interactive sessions 1 and 2	Room 202, 204, Campus Activity Center	
	12:00-12:20	Closing session	Room 202, Campus Activity Center	
	12:20-13:30:	Lunch	The third floor of Xijing cafeteria	

Note:

(1) Plenary session: 40-minute presentation is arranged for the invited speakers;
(2) Oral session: 20-minute presentation is arranged for each oral presenter;
(3) Interactive session: 10-minute presentation is arranged for each graduate student;
(4) Special session: Integrating social and natural science perspectives: lead by Emilio Moran; Remote sensing-based biomass estimation: Challenges and new directions: lead by Guangxing Wang; Land use/cover studies: Challenges and new directions: lead by Curtis Woodcock; Journal paper preparation and submission: lead by Prasad Thenkabail;
(5) Poster session: this session is arranged in the afternoon of June 11.

Tuesday, June 9, 2015

Registration desk open:

10:00 – 20:00, Location: Lin An Xianggeli Hotel

Wednesday, June 10, 2015

Registration desk open:

8:00 – 12:00

Location: Lobby at main library

13:00 - 17:00

Location: Campus Activity Center at Zhejiang A&F University

Opening session:

8:30 – 9:00, Chair: Dengsheng Lu

Location: The second conference room at main library, Zhejiang A&F University

(1) Welcome speech by depute president of Zhejiang A&F University: **Peihua Jin**
(2) Welcome speech by Zhejiang NSF officer: **Wenge Lu**
(3) Welcome speech by conference Co-Chair： **Jiaguo Qi**
(4) Welcome speech by Academician from USA: **Emilio Moran**
(5) Introduction of conference program by committee chair: **Dengsheng Lu**

9:00 – 9:30: Coffee Break; Picture

Wednesday, June 10, 2015

Plenary session (I): 9:30 – 12:10, Location: The second conference room at main library Chair: Jiaguo Qi		
9:30 – 10:10	Emilio Moran	Human Drivers of Land Use and Land Cover Change
10:10 – 10:50	Zengyuan Li	Extraction of Forest Parameters Using Lidar Data
10:50 – 11:30	Curtis Woodcock	Time Series Analysis of Landsat Data for Continuous Monitoring of Land Cover Change and Condition
11:30 – 12:10	Guomo Zhou	CO_2 Sequestration Capability of Bamboo Forest and Our Action

12:10 – 13:30: Lunch break (The third floor of Xijing cafeteria)

Wednesday, June 10, 2015

Technical Sessions:

14:00 – 15:40, Location: Campus Activity Center at Zhejiang A&F University

Oral session 1: Lidar remote sensing for biomass estimation Room **202**; Chair: Qi Chen; Co-Chair: Yong Pang	
14:00–14:20	Subtropical Forest Aboveground Biomass Estimation Using a Small-Footprint Airborne Scanning Laser. Yong Pang, Bowei Chen, Luxia Liu, Lijuan Liu, Zhiyu Zhang, Haikui Li, Zengyuan Li. Institute of Forest Resource Information Technique, Chinese Academy of Forestry, Beijing, China
14:20–14:40	Remote Sensing Based Forest Aboveground Biomass Estimation in China. Yuan Zeng, Dan Zhao, Bingfang Wu. Key Lab of Digital Earth Science, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China
14:40–15:00	Terrestrial Laser Scanning as an Effective Tool to Retrieve Biomass of Individual Chinese Fir Tree. Luxia Liu, Yong Pang*, Zengyuan Li, Bowei Chen. Institute of Forest Resource Information Techniques, Chinese Academy of Forestry, Beijing, China
15:00–15:20	Study of Above Ground Biomass Estimation Based on Airborne LiDAR and TM Data in South China. Dan Zhao, Zhugeng Duan, Yuan Zeng, Bingfang Wu. Key Lab of Digital Earth Science, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China
15:20–15:40	A Comprehensive Quantification of the Remotely-Sensed Aboveground Biomass Uncertainty Related to Field Data, Remote Sensing Data, Tree Allometry, and Statistical Modeling: an Example in African Tropical Forests. Qi Chen, University of Hawaii at Mānoa, Honolulu, USA

Oral session 2: Land use/cover classification Room **204**; Chair: Luciano Dutra; Co-Chair: Peijun Du	
14:00–14:20	Advances in Per-Pixel Land Cover Classification via Multi-Source Remote Sensing Images. Peijun Du, Junshi Xia, Alim Samat, Kun Tan, Zhaohui Xue. Key Laboratory for Satellite Mapping Technology and Applications of State Administration of Surveying, Mapping and Geoinformation of China, Nanjing University, Nanjing, China.
14:20–14:40	Stacked Denoising Auto-encoders Neural Network Applying in the Hyper-spectral Remote Sensing Image Classification. Xiaoai Dai, Shouheng Guo, Zhiying Xiang, Zhe Wang, Xiaoxue Zhang. Chengdu University of Technology, Chengdu, China
14:40–15:00	The Improved Sample Pre-selection Method Using in Semi-supervised Classification of Hyper-spectral Image. Ying Zhang, Xiaoxia Yang, Zhengwen Chen. College of Earth Sciences, Chengdu University of Technology, Chengdu,China
15:00–15:20	Wetland Plants Classification Using High Resolution Optical and SAR Images in Hong Kong. Hongsheng Zhang, Mingfeng Liu, Hui Lin. Institute of Space and Earth Information Science,The Chinese University of Hong Kong, Hong Kong, China
15:20–15:40	A decision-level fusion methodology for combination of multi-source land use and land cover maps. Luciano Dutra, Rogerio Negri, Eliana Pantaleao, Dengsheng Lu. National Space Research Institute – INPE, São José dos Campos, São Paulo, Brazil

Special session 1:

Integrating social and natural science perspectives

14:00 – 15:40, Location: Campus Activity Center at Zhejiang A&F University, Room **205**

Chair: Emilio Moran

Co-Chairs: Jiaguo Qi, Dar Roberts, Eduardo Brondizio, Xiangzheng Deng

15:40 – 16:00: Coffee Break

Wednesday, June 10, 2015

Technical sessions:

16:00 – 17:20, Location: Campus Activity Center at Zhejiang A&F University

Oral Session 3: Interactions of land use/cover change and ecosystem services Room **204**; Chair: Xiangzheng Deng; Co-Chair: Jinliang Huang	
16:00–16:20	Land-use Changes Reinforce the Impacts of Climate Change on Annual Runoff Dynamics in a Southeast China Coastal Watershed. Ayu Ervinia, Jinliang Huang, Zhenyu Zhang. Coastal and Ocean Management Institute, Xiamen University, Xiamen, China
16:20–16:40	Landscape Pattern Changes and Ecological Effects in Dali City, Yunnan Province. Huan Yu, Tiancai Zhou, Ainong Li, Guangbin Lei. College of Earth Sciences, Chengdu University of Technology, Chengdu, Sichuan, China.
16:40–17:00	A Simulation Study on the Hydrothermal Characteristics of the Agroforestry Ectones in Northeast China. Tingxiang Liu. Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun, China
17:00–17:20	Conserving Forest Ecosystems by Improving Land Use Management in China. Xiangzheng Deng, Zhan Wang, Qian Zhang, Gui Jin, Jiancheng Chen. Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China.

Oral session 4: Land use/cover change Room **205**; Chair: Peijun Du; Co-Chair: Hongsheng Zhang	
16:00–16:16	A New Method for Monitoring Forest Disturbance in Boreal Forest Using Landsat Time Series. Lingxue Yu. Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun, China
16:16–16:32	A Comparison of Three Algorithms for Change Detection in an Forest Environment. Fengqin Yan, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun, China
16:32–16:48	Monitoring Subalpine Rangeland Degradation: a Case Study on Seda County, Southeast Qinghai-Tibetan Plateau. Zhiying Xiang, Qiurong Li, Huaiyong Shao, Chengying Li, Zhiying Xiang. Chengdu University of Technology, College of earth sciences, Department of spatial technology, Chengdu, China
16:48–17:04	Using CA-MARKOV Model to Analyze Prediction of Beijing Wetland Resources Change. Chengxing Ling, Huaiqing Zhang, Hongbo Ju, Hua Sun, Hui Lin, Hua Liu. Chinese Academy of Forestry, Beijing, China.
17:04–17:20	On the Urban Growth of Jiangsu province from 1985-2014 Based on Impervious Surface Information from Remote Sensing Imagery. Peijun Du, Xinyu Li. Key Laboratory for Satellite Mapping Technology and Applications of State Administration of Surveying, Mapping and Geoinformation of China, Nanjing University, Nanjing City, Jiangsu Province 210023, China

Special session 2:

Remote sensing-based biomass estimation: Challenges and new directions

16:00 – 17:20, Location: Campus Activity Center at Zhejiang A&F University, Room **202**

Chair: Guangxing Wang

Co-Chair: Qi Chen, Chengquan Huang, Yong Pang, Xiaoli Zhang

18:30 – 20:30: Welcome dinner (**The third floor of Xijing cafeteria)**

Thursday, June 11, 2015

Plenary Session (II): 8:30 – 10:30, Location: Campus Activity Center at Zhejiang A&F University. Room **202** Chair: Conghe Song		
8:30–9:10	Dar Roberts	A Thirty Year History of Land-Cover Change in Rondonia Brazil From Standardized Mixture Models and Decision Tree Classifiers
9:10–9:50	Prasad Thenkabail	Global Food Security-Support Data Product at 30 m (GFSAD30)
9:50–10:30	Jiaguo Qi	Understanding Spatial-temporal Variation of Vegetation Phenology and Rainfall Seasonality in Southeast Asia

10:30 – 10:50: Coffee Break

Plenary Session (III): 10:50 – 12:10, Location: Campus Activity Center at Zhejiang A&F University. Room **202** Chair: Dar Roberts		
10:50–11:30	Eduardo Brondizio	Land Use and the Future Earth Strategic Research Agenda
11:30–12:10	Zhiliang Zhu (Chengquan Huang)	Protecting and Increasing Ecosystem Carbon Resources on Public Lands as An Ecosystem Service to the Society

12:10 – 13:30: Lunch break (The third floor of Xijing cafeteria)

Thursday, June 11, 2015

Technical Sessions:

14:00 – 15:20, Location: Campus Activity Center at Zhejiang A&F University

Oral Session 5: Interactions of land use/cover change and ecosystem services Room **204**; Chair: Conghe Song; Co-Chair: Jinliang Huang	
14:00–14:20	Interactions Among Forest Dynamics, Carbon Sequestration, Climate Change and Human Disturbance in the Upper Reaches of Heihe River. Zhihui Li, Xiangzheng Deng, Feng Wu, Xiaoli Geng, Zhanqi Wang. Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China
14:20–14:40	Land-use Change Detection and the Subsequent Dynamics of Ecosystem Services in a Coastal City, Southeast China. Boqiang Huang, Jinliang Huang, Hirwa Maurice, Xun Li. Coastal and Ocean Management Institute, Xiamen University, China
14:40–15:00	Study on Effect of Different Forest Type on Water Quality in Zhoushan, Zhejiang. Chuping Wu, Jihua Ye, Yujie Huang, Jinru Zhu, Aihua Shen, Weigao Yuan, Bo Jiang. Zhejiang Forestry Academy, Hangzhou, China
15:00–15:20	Effects of Land use/land cover and Climate Changes on Terrestrial Net Primary Productivity in the Yangtze River Basin, China, from 2001 to 2010. Conghe Song, Yulong Zhang. Department of Geography, University of North Carolina, Chapel Hill, USA

Oral session 6: Algorithms Room **205**; Chair: Guangxing Wang; Co-Chair: Weiliang Fan	
14:00–14:20	Topographic Effect on the Canopy Reflectance. Weiliang Fan, Gaofei Yin, Yelu Zeng, Baodong Xu. State Key Laboratory of Remote Sensing Science, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China
14:20–14:40	A Changing-Weight Iterative BRDF Inversion Algorithm to Generate High-Quality Nadir-View NDVI by Evaluating Observations Quality. Yelu Zeng, Baodong Xu, Geofei Yin. State Key Laboratory of Remote Sensing Science, Jointly Sponsored by Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences and Beijing Normal University, Beijing, China
14:40–15:00	Assessment of MODIS Data to Track the Variability in Ecosystem Water-Use Efficiency of Temperate Deciduous Forests. Xuguang Tang, Hengpeng Li, Xibao Xu, Li Yao. Key Laboratory of Watershed Geographic Sciences, Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences, Nanjing, China
15:00–15:20	Application of Photochemical Reflectance Index as a Proxy of Light Use Efficiency Based on a Multi-Angle Hyperspectra Observation System for a Sub-Tropic Planted Coniferous Forest. Qian Zhang, Weimin Ju, Fengting Yang, Yongkang Feng, Qing Huang. International Institute for Earth System Sciences, Nanjing University, Nanjing, China

Special session 3:

Land use/cover studies: Challenges and new directions

14:00 – 15:20, Location: Campus Activity Center at Zhejiang A&F University, Room **202**

Chair: Curtis Woodcock

Co-Chair: Dar Roberts, Jiaguo Qi, Eduardo Brondizio, Chengquan Huang, Peijun Du, Luciano Dutra,

15:20 –15:40: Coffee Break

Technical sessions:

15:40 – 17:00, Location: Campus Activity Center at Zhejiang A&F University

Oral Session 7: Impacts of urbanization on environmental conditions Room **204**; Chair: Chi Zhang; Co-Chair: Wenhui Kuang	
15:40–15:56	Impacts of Urban Impervious Surface Areas and Greenness on Surface Heat Regulation in Urban Ecosystem. Wenhui Kuang, Wenfeng Chi, Chi Zhang, Dengsheng Lu, Yinyin Dou, Ailin Liu, Tianrong Yang. Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China
15:56–16:12	A Quantitative Analysis of The Relationship Between Fine-Scale Urban Fabrics and Their Thermal Performance: the Case of Shanghai. Hao Zhang, Xinming Jin, Jiayu Chen, Juanjuan Li, Ben Schwegler. Department of Environment Science and Engineering, Fudan University, Shanghai, China
16:12–16:28	The Impact of Greenery on Air Temperature and Thermal Comfort in a Dwelling District. Yingbao Yang, Lijuan Cao, Ningning Zhang. School of Earth Sciences and Engineering, Hohai University, Nanjing, China
16:28–16:44	Dynamic Changes of a City's Carbon Balance and Its Influencing Factors: a Case Study in Xiamen, China. Tao Lin, Rubing Ge, Qianjun Zhao, Guoqin Zhang, Xinhu Li, Hong Ye, Kai Yin. Key Lab of Urban Environment and Health, Institute of Urban Environment, Chinese Academy of Sciences, Xiamen, China
16:44–17:00	Governance of Urban Ecosystems: an Integrated Approach to Assessing and Managing Coastal Rapid Urbanization. Yangfan Li, Jianhui Qiu, College of the Environment &Ecology, Xiamen University, Xiamen, China

Special session 4:

Journal paper preparation and submission

15:40 – 17:00, Location: Campus Activity Center at Zhejiang A&F University, Room **202**

Chair: Prasad Thenkabail

Co-Chair: Dar Roberts, Conghe Song, Xin Zhao, Chunfeng Liu, Xuanxuan Guan

Thursday, June 11, 2015

Poster Session: 14:00 – 17:00, The First Floor at Campus Activity Center at Zhejiang A&F University Chair: Maozhen Zhang; Co-Chair: Hongsheng Zhang	
P1	How to Quantify the Uncertainty of Model Structure in Spatial and Temporal Up-Scaling Processes? Yin Ren. Key Laboratory of Urban Environment and Health, Key Laboratory of Urban Metabolism of Xiamen, Institute of Urban Environment, Chinese Academy of Sciences, Xiamen, China
P2	Remote-sensing Estimate and Spatiotemporal Analysis on The Carbon Storage of Subtropical Pinus Massoniana Forest in County Changting, China. Shaolin Huang, Hanqiu Xu. College of Environment and Resources, Fuzhou University, Fuzhou, China
P3	Classification of Remote Sensing Image Based on the Combination of Multiple Classifiers. Chaokui Li, Wen Fang, Ting Wang. National-Local Joint Engineering Laboratory of Geo-Spatial Information Technology, Hunan University of Science and Technology, Xiangtan, China.
P4	Leaf Area Index Retrieval Based on Remote Sensing: the Role of Radiative Transfer Model Selection. Gaofei Yin. State Key Laboratory of Remote Sensing Science, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China.
P5	Assessing Performance of ALOS-2 PALSAR-2 Quad-polarization Data in Boreal Forest AGB Estimation. Lei Zhao, Erxue Chen*, Zengyuan Li, Qi Feng, Lan Li. The Research Institute of Forest Resources Information Technique, Chinese Academy of Forestry, Beijing, China
P6	Using Tree Ring Data and Vegetation Index to Reconstruct Regional Forest Aboveground Net Primary Productivity. Wenwu Fan, Xin Tian, Feilong Ling. Key Laboratory of Spatial Data Mining & Information Sharing of Ministry Education, Fuzhou University, Fuzhou, China
P7	Forest Leaf Area Index and Crown Closure Retrieval Using an Inverted 4-Scale Geometric-Optical Model in the Greater Kjingan Range Region of China. Chengyana Gu, Institute of Forest Resource Information Techniques, Chinese Academy of Forestry, Beijing, China
P8	A Quantitative Analysis of Urban Water Landscape Pattern Changes and Their Impacts on Surface Temperatures. Lei Wang, Shuwen Zhang. Heilongjiang University of Science and Technology, China
P9	Remote Sensing Estimation Study According to the Worldview-2 the Main Tree Species of the Urban Forest Park. Chao Yu, Nanjing Forestry University, Nanjing, China
P10	Linear Regression between Cielab Color Parameters and Soil Organic Matter in Tea Plantations. Yonggen Chen, Min Zhang, Zhiqiang Pan, Luyan Ji, Xiaochang Wang. College of Environmental and Resource Sciences Zhejiang A & F University, Lin`an, Zhejiang, China
P11	Analysis of Urban Impervious Surface Dynamic Change in Hangzhou Metropolitan Area with Multitemporal Landsat Imagery. Longwei Li, Dengsheng Lu, Wenhui Kuang. Zhejiang A&F University, Lin'an, China
P12	Mapping of Hickory Plantation Distribution and Monitoring of Drought-Induced Disturbance with Landsat TM Imagery. Zhenyuan Xi, Dengsheng Lu, Lijuan Liu, Hongli Ge. Zhejiang A&F University, Lin'an, China
P13	An Efficient Dimension Reduction Method for Hyperspectral image Band Selection. Yunyun Feng, Lijuan Liu, Dengsheng Lu, Yong Pang. Zhejiang A&F University, Lin'an, China
P14	Research on the Process of Death for Coniferous Tree Species Based on Hyperspectral Data. Renfei Song, Hui Lin*, Enping Yan. Central South University of Forestry & Technology, Changsha, China
P15	Comparative analysis of topographic correction approaches suitable for low illumination conditions. Lijuan Liu, Dengsheng Lu, Zhejiang A&F University, Lin'an, China.
P16	Development of the Biome-BGC model for the simulation of managed Moso bamboo forest ecosystems. Fangjie Mao, Pingheng Li, Guomo Zhou, Huaqiang Du, Xiaojun Xu, Yongjun Shi, Lufeng Mo, Yufeng Zhou, Guoqing Tu. Zhejiang A&F University, Lin'an, China
P17	Carbon and water fluxes variation characteristics and the relationship with its environment factors of Phyllostachys edulis forest in Anji. Yuli Liu, Hong Jiang, Guomo Zhou. Zhejiang A&F University, Lin'an, China

18:30 – 20:30: Dinner (The third floor of Xijing cafeteria)

Friday, June 12, 2015

Plenary Session (IV) 8:30 – 9:10, Location: Campus Activity Center at Zhejiang A&F University. Room **202** Chair: Dengsheng Lu		
8:30 – 9:10	Nuyun Li	Exploration and Practice of China's Forest Carbon Management

Technical session:

9:10 – 10:30, Location: Campus Activity Center at Zhejiang A&F University

Oral session 8 Biomass estimation Room **202**; Chair: Guangxing Wang; Co-Chair: Tao Cheng	
9:10–9:25	Retrieving the Fractional Coverage and Biomass of the Desert Vegetation in the Northwestern China from the MODIS Images. Chi Zhang, Yuanmin Zhang. State Key Laboratory of Desert and Oasis Ecology, Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, Urumqi, China
9:25–9:40	Estimating Forest Aboveground Carbon Stock by Combing Landsat TM/ETM+ and Forest Continuous Survey Plots data at County level: A Case Study in Xixia County, Henan, China. Mingyang Li, Seyed OmidReza Shobairi, Chao Yu. College of Forestry, Nanjing Forestry University, Nanjing, China
9:40–9:55	Improvement of City Vegetation Carbon Mapping by Combining Spectral Unmixing Analysis and Regression Modeling. Hua Sun, Guangping Qie, Guangxing Wang, Yifan Tan, Yougui Peng, Zhonggang Ma, Chaoqin Luo. Central South University of Forestry & Technology, Changsha, China
9:55–10:10	Simulation and sensitivity analysis for stand biomass of four main forest types in Zhejiang Province using TRIPLEX model. Jun Zhang, Zhejiang Forestry Academy, Hangzhou, China
10:10–10:25	Estimation of Forest Carbon Distribution for Xianju County Based on Spatial Simulation. Maozhen Zhang, Guangxing Wang, Hongli Ge, Lihua Xu. School of Environmental & Resource Sciences, Zhejiang A & F University, Lin An, China
10:25 –10:40	Estimation of biomass for different canopy components of rice crops using chlorophyll and dry matter indices. Tao Cheng, Renzhong Song, Hengbiao Zheng, Xinqiang Deng, Xiang Zhou, Xia Yao, Yongchao Tian, Yan Zhu, Weixing Cao. Nanjing Agricultural University, Nanjing, Jiangsu 210095, China

10:40 – 10:50: Coffee Break

Technical session:

10:50 – 12:00, Location: Campus Activity Center at Zhejiang A&F University

Interactive session 1: Room **204**, Chair: Luciano Dutra; Co-Chair: Weiliang Fan	
10:50–11:00	Estimating Urbanization Impact on Ecosystem Carbon Storage in a Desert City Based on Linear Spectral Mixture Analysis Model. Yan Yan, Chi Zhang. State Key Laboratory of Desert and Oasis Ecology, Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, Urumqi, Xinjiang, China
11:00–11:10	An Application of Remote Sensing Method to the Urban Green Lands Above-ground Biomass Estimation Based on the Pixel Decomposition. Lihua Xu, Jiecun Zhang, Bubu Qiu, Bo Liu, Wanqiu Zh. School of Environment and Resource, Zhejiang A&F University, Lin'an, China
11:10–11:20	Reponses of PM2.5 and PM10 Dynamic to the Urban Green Space During the Extreme Air Pollution Event in Hangzhou. Lihua Xu, Jiae Xiang, Fangfang Zhang, Bubu Qiu. School of Environment and Resource, Zhejiang A&F University, Lin'an, China
11:20–11:30	Eco-geological Environmental Security Process Analysis and Early Warning of Regional Mineral Resources Exploitation-A Case Study on Panxi Area. Xiaofei Sun, Shiqi Tao, Huaiyong Shao. Chengdu University of Technology, College of earth sciences, Department of spatial technology, Chengdu, China
11:30–11:40	Research on Forest Canopy Closure Inversion Based on Landsat-8 OLI data. Ning Zhang, Xiaoli Zhang, Shilei Wu. Beijing Forestry University, Beijing, China
11:40–11:50	Estimation and Mapping of Forest Structural Parameters Based on Stand Structure Response and PALSAR Data. Mingyao Zhao, Xiaoli Zhang; Jinting Bai. Beijing Forestry University, Beijing, China
11:50–12:00	Land Cover Classification in the Typical Loess Plateau Area Based on Multi-Feature and Multiple Classifier Combination. Dongchen Wang, Peijun Du. Key Laboratory for Satellite Mapping Technology and Applications of State Administration of Surveying, Mapping and Geoinformation of China, Nanjing University, Nanjing, China

Interactive session 2: Room **205**; Chair: Maozhen Zhang; Co-Chair: Yaoliang Chen	
10:50–11:00	Simulating Net Ecosystem CO_2 Exchange of Bamboo Moso with modified Biome-BGC model. Xibao Xu, Guishan Yang, Kaiyan Zhao, Xuguang Tang. Key Laboratory of Watershed Geographic Sciences, Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences, Nanjing, China
11:00–11:10	Biomass Estimation Based on TLidar Data and High-spatial resolution Remote Sensing Image. Shuhan Wang, Xiaoli Zhang*, Beijing Forestry University, Beijing, China
11:10–11:20	Multi-scale Mapping and Accuracy Assessment of Forest Carbon by Developing an Effective Sampling Design. Enping Yan, Hui Lin*, Guangxing Wang*, Hua Sun. Research Center of Forest Remote Sensing & Information Engineering, Central South University of Forestry & Technology, Changsha, China
11:20–11:30	Simulation of Regional Forest Carbon Storage under Different Sampling Densities. Hanru Guo, Maozhen Zhang, Lihua Xu, Zhenhua Yuan, Tian'ge Chen, Zhejiang A&F University, Lin'an, China
11:30–11:40	Response Simulations of Water Environment to the Changes of Landscape Pattern in Urban Watersheds at Multiple Scales. Shuo Huang, Qinghai Guo, Institute of Urban Environment, Chinese Academy of Sciences. Xiamen, China
11:40–11:50	Spatial-Temporal Variation of PM2.5 Concentrations and Its Reason Analysis Using Multi-Source Data. Jieqiong Luo, Peijun Du, Alim Samat. Key Laboratory for Satellite Mapping Technology and Applications of State Administration of Surveying, Mapping and Geoinformation of China, Nanjing University, Nanjing, China
11:50–12:00	Accuracy assessment of crop mapping and area estimation based on different spatial heterogeneity using MODIS 250 m data. Yaoliang Chen, Jingfeng Huang, Shusen Wang, Dengsheng Lu. Department of Land Management, Zhejiang University, Hangzhou, China

12:00 – 12:20: Closing session

Location: Campus Activity Center at Zhejiang A&F University, Room 202
Chair: Dengsheng Lu

12:20 – 13:30: Lunch (The third floor of Xijing cafeteria)

Exhibition

Thursday, June 11, 2015

14:00 – 17:00, The First Floor at Campus Activity Center at Zhejiang A&F University

武汉适普软件有限公司简介

武汉适普软件有限公司(Supresoft Inc.)成立于 1996 年 7 月，是由著名摄影测量与遥感学家、中国工程院院士、武汉大学张祖勋教授创办，由美国 IDG 公司、美国 INTEL 公司、日本 SOFTBANK 公司联合投资成立的世界领先的全数字摄影测量技术及解决方案提供商。

基于具有完全自主知识产权的核心技术，适普公司致力于以数字摄影测量为核心，以地理信息系统（GIS）、遥感（RS）和全球定位系统（GPS）技术为支撑，集数据获取、编辑处理、建库和开发应用为一体，能规模化生产数字线划图（DLG）、数字正射影像图（DOM）、数字高程模型（DEM）、数字栅格地形图（DRG）产品的完整测绘生产体系，帮助用户实现从传统测绘向现代地理信息服务的战略转型，更好的为数字城市、数字中国以及数字地球的相关应用和建设服务。

目前，适普公司完全自主研发的产品包括全数字摄影测量系统（VirtuoZo），三维可视化地理信息系统（IMAGIS）和新一代数字摄影测量网格（DPGRID）等。其中 VirtuoZo 已被国际摄影测量界公认为三大实用的数字摄影测量系统之一。除拥有领先的数字摄影测量核心技术外，适普公司还与国内三大测绘局及其他测绘机构通过合资或其他紧密的合作方式，建立了世界上最为强大的空间数据生产基地，可以高精度、高效率、大规模地完成各种比例尺的 4D 产品生产，满足不同用户的建设需求。

适普公司汇集了一批富有创新意识、勤于思考、勇于实践、锐意改革的优秀人才。目前公司的员工人数已达 116 人，其中硕士、博士和博士后以上的员工已超过 40%。尤其重要的是，有著名的摄影测量与遥感专家张祖勋院士（中国工程院院士、欧亚院士）作为公司核心技术的领头人，公司不但在高新前沿技术拓展、遥感数据获取、信息提取和各种解决方案的设计等方面有了学科带头人，而且在软件研发的各个环节上培养出了大批的技术骨干，为公司的可持续发展创造了良好的研发环境。

此外，适普公司还一直关注国际化发展，目前已经在 10 余个国家和地区建立了软件销售和技术服务网络。今后公司还将与更多的国外著名厂商开展不同形式的合作，为用户提供更加完善的解决方案。

适普公司以其可持续发展的产业前景和良好的研究开发环境，以发展民族软件产业为己任，本着"开拓、创新"的宗旨， 将立志持续成为全球数字摄影测量领域的领导者。

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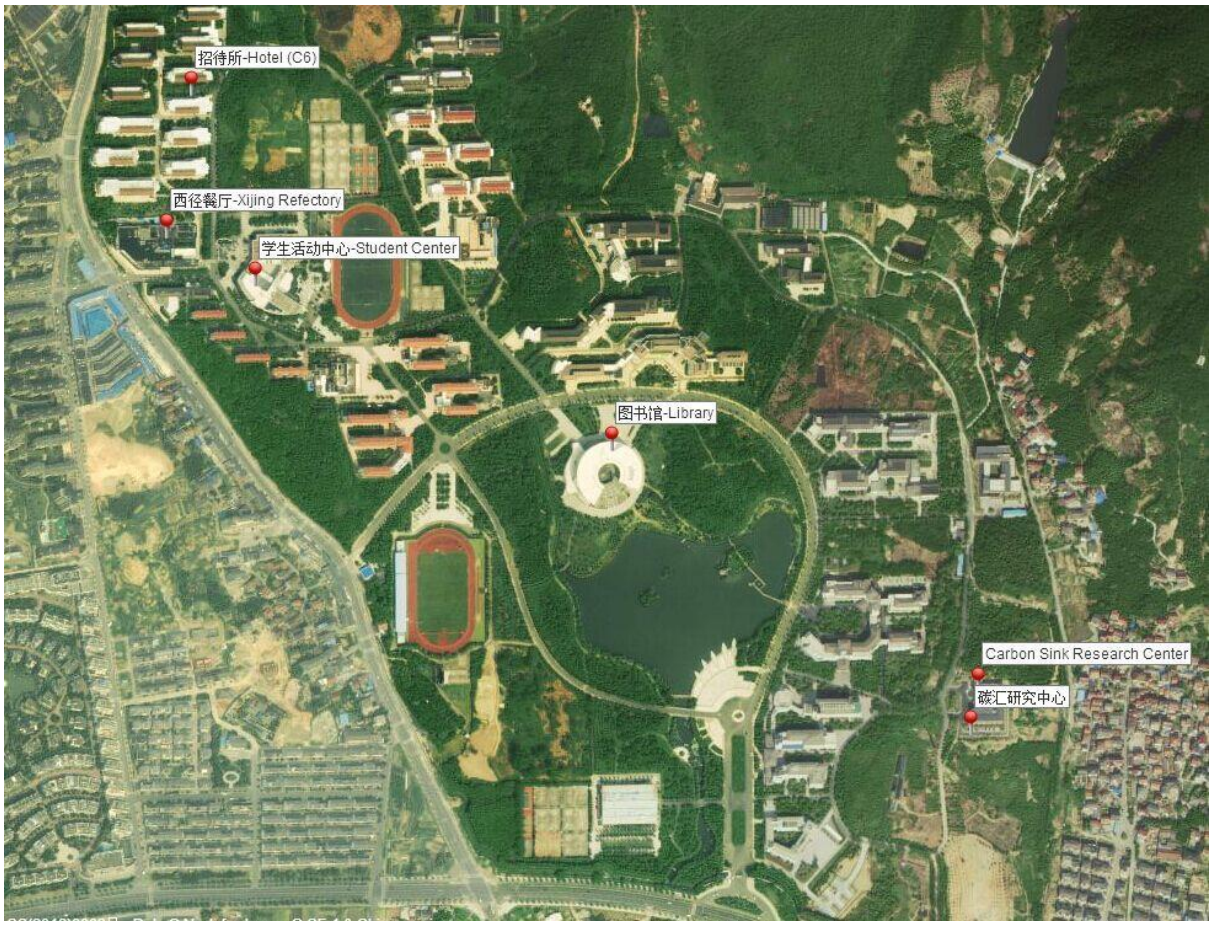
Publication

Post-conference publication

Each selected participant, based on the result of abstract reviewing by the technical committee, will have an opportunity to develop a full paper for further review. The selected papers will be recommended to publish in a special issue in **Remote Sensing** (http://www.mdpi.com/journal/remotesensing/special_issues/carboncycle). The papers will be peer-reviewed in accordance with the journal's established policies and procedures. The due date for submitting the full manuscript to Remote Sensing is on September 30, 2015.

General Information

Venue:
Zhejiang A&F University, LinÁn, Hangzhou, Zhejiang Province, China.



会议与就餐地点：西径餐厅-学生活动中心-图书馆-碳汇研究中心位置图
Campus of the Zhejiang A&F University, highlighting the locations of Xijing Cafeteria, Campus Activity Center, Library and Carbon Sink Research Center

会议地址：

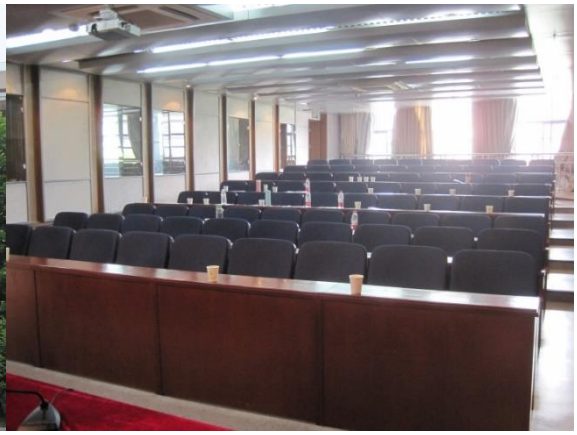
6 月 10 日上午，会议开幕式在**图书馆第二报告厅**举办，学校图书馆位于学校中心，紧接东湖北面，第二报告厅位于学校图书馆一楼。

图书馆

图书馆第二报告厅室内

6 月 10 日下午至 6 月 12 日，会议各分会在**活动中心视听室 B202、204 和 205** 举办，活动中心位于学校西北部，由学校西门进入直行 150 米，视听室位于活动中心二楼。

活动中心正大门



活动中心视听室室内

How to Get to Zhejiang A&F University?

（1）杭州萧山国际机场-浙江农林大学

路线 1：乘坐机场大巴到蒋村公交中心站，乘坐 599 路，在浙江农林大学南门站下车（24 站）

路线 2：乘坐机场大巴临安市汽车东站，每天两班，时间为：11：10 和 17：30，从临安东站可乘坐 K6 路至浙江农林大学南门（农大南门站）下车。（图略）

（2）杭州城站火车站-浙江农林大学

路线 1：乘坐 B3 路，在菜市桥（brt）站下车（1 站），乘坐 B2 区间，在蒋村公交中心站下车，乘坐 599 路，在浙江农林大学南站下车（24 站）。

路线 2：乘坐 290 路，在府新花园北站下车（21 站），乘坐 599 路，在浙江农林大学南门站下车（23 站）。

（3）杭州火车东站-浙江农林大学

路线 1：乘坐 43 路，在蒋村公交中心站下车（20 站），乘坐 599 路，在浙江农林大学南门站下车（24 站）。

路线 2：乘坐地铁 1 号线(湘湖方向)，在凤起路站下车(C2 口出，5 站)，步行至孩儿巷站（约 300 米），乘坐 290 路，在府新花园北站下车（15 站），乘坐 599 路，在浙江农林大学南门站下车（23 站）。（图略）

住宿信息：

香格里大酒店

临安香格里大酒店是一家按四星级标准兴建的高档商旅酒店，座落于临安市繁华的钱王街和临东路口，交通便捷，停车方便，且毗邻临安功臣名山，风光旖旎，酒店集会议、度假、餐饮、娱乐、商务休闲于一体。
价格：270-330 元/天
地址：临安市钱王街 255 号（临安汽车东站旁），联系电话：0571-58688888

香格里大酒店概况 General Information of Xianggeli Hotel

香格里大酒店与浙江农林大学位置略图

Location of the Xianggeli Hotel and Zhejiang A&F University

Contact information

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