尊敬的 _____ 先生/女士，您好！

第17届国际空间数据处理大会将于2016年08月在北京召开。

会议通知

国际空间数据处理大会由国际地理联合会（IGU）下的地理信息科学（IGU-GIScience）委员会和地理系统建模（IGU-CMGS）委员会共同发起的国际会议，是GIS领域最早和最有代表性的国际会议之一。**第17届国际空间数据处理大会（17th International Symposium on Spatial Data Handling）** 将于2016年8月18-20日在北京召开。

主办：

中国科学院地理科学与资源研究所，资源与环境信息系统国家重点实验室

IGU-地理信息科学委员会

IGU-地理系统建模委员会

主题：

Face the Challenges of Big Data within GIS

会议名称：第17届国际空间数据处理大会（17th International Symposium on Spatial Data Handling）

会议时间：2016年18-20日

会议地点：北京

会议日程

Priliminary Programme

Thursday, Aug 18, 2016

Venue: Conference Hall 2602

07:00~09:00	Onsite registration
09:30~10:00	Opening ceremony
10:00~10:15	Tea break
10:15~11:00	Keynote speech

Leveraging big (geospatial) data with (geo) visual analytics.
by Prof. Alan MacEachren.

11:00~11:45	Keynote speech

Error in spatial ecology,.
by Prof. Brian Lees.

Lunch time

Session 1 (Room 2209): Geographic knowledge discovery and data mining(I)

14:00~14:20 Mapping Brazilian regional economic social inequalities using GIS, and principal
component analysis
Joao de Abreu (Pontifical Catholic University of Minas Gerais-Brazil, Brazil),
Jose Paiva (Federal   University of Minas Gerais-Brazil, Brazil).

14:20~14:40 The impacts of temporal sampling intervals on human mobility studies using mobile
phone location data
Zhiyuan Zhao (Wuhan University, China), Ling Yin (Shenzhen Institute of
Advanced Technology,   Chinese Academy of Sciences, China), Zhixiang
Fang (Wuhan University, China), Shaw   (University of
Tennessee, USA), Xiping Yang (Wuhan University, China).

14:40~15:00 Determining the optimal spatial configuration of hospitals in reducing urban traffic
congestion: a case study of Beijing
Yuxai Wang (Peking University, China),Yu Liu (Peking University, China), Di Zhu
(Peking   University, China).

15:00~15:20 Investigating public facility characteristics from a perspective of spatial interaction: a case
study of Beijing hospitals using taxi data
Xiaoqing Kong (Capital Normal University, China),Yu Liu (Peking University,
China).

15:20~15:40 Street perspective: a novel spatial unit in urban social sensing
Di Zhu (Peking University, China),Yu Liu (Peking University, China).

15:40~15:55 Tea break

15:55~16:15 Measuring walkability using distance to public schools in lahore city of Pakistan
Hafiza Tehmina Anwar (University of the Punjab, Pakistan), Sajid Rashid Ahma
(University of the   Punjab, Pakistan), Adeel Ahmad (University of the
Punjab, Pakistan), Shoaib Khalid (University   of the Punjab, Pakistan).

16:15~16:35 An integrated geodatabase for geological disposal of high level radioactive waste in China
Peng Wang (Beijing Research Institute of Uranium Geology, China), Shutao Huang
(Beijing   Research Institute of Uranium Geology, China), Min Gao
(Beijing Research Institute of Uranium   Geology, China), Lun Wu (Peking
University, China).

16:35~16:55 Research and prediction on time-sequence characteristics of group-user access behavior
in public map service
Zhaohui Liu (Wuhan University, China), Rui Li (Wuhan University, China), Huayi Wu
(Wuhan   University, China).

16:55~17:15 Learning geography of urban emotions through sentiment analysis of geo-referenced
tweets
Yeran Sun (Urban Big Data Centre, University of Glasgow, United Kingdom).

Session 2 (Room 2421): Big geographical data storage and data-Intensive Computing

14:00~14:20 Representing interconnected geographical processes for organizing big data and knowledge
discovery: examples in drought and flood risk assessment

Chaoqing Yu (Tsinghua University, China).

14:20~14:40 The progress in computing theory of geosensor networks and its service in monitoring and early warning of the geohazard in mines
Jin Zhang (Taiyuan University of Technology, China).

14:40~15:00 Using an open source platform for performance evaluation of geospatial big data processing
Mudabber Ashfaq (National University of Sciences and Technology, Pakistan), Ali Tahir (National University of Sciences and Technology, Pakistan), Gavin McArdle (University College Dublin, Ireland), Michela Bertolotto (University College Dublin, Ireland).

15:00~15:20 Research on geo-information data model for pre-selected areas of geological disposal of high-level radioactive waste
Min Gao (Beijing Research Institute of Uranium Geology, China), Shutao Huang (Beijing Research Institute of Uranium Geology, China).

15:20~15:40 Develo ent of a dataset of supply relationship between glaciers and lakes on Tibetan Plateau
Beibei Ai (Institute of Geographic Sciences and Natural Resources Research, CAS, China), Chengzhi Qin (Institute of Geographic Sciences and Natural Resources Research, CAS, China), Qinghua Ye (Institute of Tibetan Plateau Research, CAS, China).

15:40~15:55 Tea break

15:55~16:15 Application patterns research of the pipeline detection project based the construction of big geological data platform
Zhiqi Qian (Geological Exploration Technology Institute of Jiangsu Province, China), Guohua Wu(Ke Du Technology Co., Ltd. of Hangzhou, China), Zicheng Fen (Geological Exploration T echnology Institute of Jiangsu Province, China), Yingying Fang (Geological Exploration Technology Institute of Jiangsu Province, China).

16:15~16:35 An innovative parallel ant colony algorithm and its application in redistricting problems
Kai Cao (National University of Singapore, Singapore).

16:35~16:55 Big Geodata and watershed flood hazard-impact-response interaction modeling
Shanzhen Yi (Huazhong University of Science and Technology, China), Zhongqian Tang (Huazhong University of Science and Technology China).

16:55~17:15 Rethinking big data: A review on the data quality and usage issues
Jianzheng Liu (The University of Hong Kong, China) , Jie Li (The University of Hong Kong, China), Weifeng Li (The University of Hong Kong, China), Jiansheng Wu (Peking University, China).

Friday, Aug 19, 2016

Session 3 (Room 2209): Geographic knowledge discovery and data mining(II)

08:30~08:50 The exploration about the realationship between data quality of OpenStreetMap and road density
Li Yu (China University of Geosices, China), Qi Zhou (China University of Geosices, China).

08:50~09:10 Spatial variations in self-containment of employment based on mobile phone location data
Xingang Zhou (The University of Hong Kong, China), Anthony Gar-On Yeh (The University of Hong Kong, China), Yang Yue (Shenzhen University, China).

09:10~9:30 Evaluate uniqueness from social ties and locations using mobile phone data
Shi Li (Peking university, China), Yu Liu (Peking university, China).
09:30~09:50 Mining vehicle traces for validation and update of OpenStreetMap road network
Xiang Zhang (Wuhan University, China), Chuanxiuyue He (Wuhan University, China),
Zhendong   Yuan (Wuhan University, China), Zhenyu Hu (Wuhan University, China).

09:50~10:10 Analysis of node locations in OSM: A spatio-temporal accuracy approach

Talia Dror (The Technion, Israel), Yerach Doytsher (The Technion, Israel),Sagi Dalyot (The
 Technion, Israel).

10:10~10:25 Tea break

10:25~10:45 The Detection and Update of Transport Land-use Data Using Crowdsourcing Movement
Trajectory
Wei Yang (WuHan University, China),Tinghua Ai (WuHan University, China).
10:45~11:05 A framework for event information extraction from Chinese news online
Shuang Wang (Information Engineering University, China), Yecheng Yuan
(Institute of Geographical   Sciences and Natural Resources Research, CAS,
China), Tao Pei (Institute of Geographical   Sciences and Natural
Resources Research,CAS, China), Yufen Chen (Information
    Engineering University, China).

11:05~11:25 Influential factors of building footprint location and predictions of office shape in a city-
block in   Tokyo commercial zones
Masahiro Taima (The University of Tokyo, Japan), Yasushi Asami (The University of
Tokyo,   Japan), Kimihiro Hino (The University of Tokyo, Japan).

11:25~11:45 Detection of user route deviation from navigational instructions
Lijuan Zhang (The Technion Israel Institute of Technology, Israel), Sagi Dalyot
(The Technion Israel   Institute of Technology, Israel).

Session 4 (Room 2421): Geo-visualization and data representation

08:30~08:50 A hybrid WD-SVR-MA model for the short-term prediction of service-time
GuangSheng Dong (Wuhan University, China), Rui Li (Wuhan University, China),
Huayi Wu   (Wuhan University, China).
08:50~09:10 Improving giscience visualization: ideas for a new methodology
Francis Harvey (Leibniz Institute for Regional Geography, Germany).
09:10~09:30 A simplification of residential feature based on shape cognition and template matching
Xiongfeng Yan (Wuhan University, China), Tinghua Ai (Wuhan University, China),
Min Yang (Wuhan   University, China).
09:30~09:50 Research on 3D modeling of great wild goose pagoda based on massive point cloud data
Xiaohu Lin (Xi'an University of Science and Technology, China).
09:50~10:10 Datahandling for evaluating neighborhood environment and daily walking behavior
Hao Hou (University of Tsukuba, Japan), Yuji Murayama (University of Tsukuba,
Japan).
10:10~10:25 Tea break

10:25~10:45   A space-time GIS for visualizing and analysing clusters in large tracking datasets
Hongbo Yu (Oklahoma State University, USA).

10:45~11:05 Coverage degree-based fuzzy topological relationships for fuzzy regions

Anderson Chaves Carniel (University of São Paulo, Brazil), Markus Schneider (University of
Florida, USA).

11:05~11:25   Scientific paradigm of cartography
Xianyong Gong (Zhengzhou Institute of Surveying and Mapping, China), Fang
Wu (Zhengzhou   Institute of Surveying and Mapping, China), Jinghan Li

(Zhengzhou Institute of Surveying and Mapping,China), Ruixing Xing (Zhengzhou Institute of Surveying and Mapping, China).

11:25~11:45 Classifying natural-language spatial relation terms with random forest algorithm
Xiaonan Wang (Peking University, China), Shihong Du (Peking University, China).

Lunch time

Session 5 (Room 2209): Multi-scale spatial data model and allgorithm

14:00~14:20 Analyzing the uncertainties of ground validation for remote sensing land cover mapping in the era of big geographic data
Bo Sun (Center for Geo-spatial Information, Shenzhen Institutes of Advanced Technology (SIAT), Chinese Academy of Sciences, China), Xi Chen (Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, China), Qiming Zhou (Hong Kong Baptist University, China).

14:20~14:40 Accurate computatation on dem visibility by ray casting
Jieqing Yu (China University of Mining & Technology, China), Lixin Wu (China University of Mining & Technology, China).

14:40~15:00 A comparative study of various properties to measure the road rank in road network
Xun Wu (SouthWest Jiaotong University/Faculty of Geosciences & Environmental Engineering, China), Hong Zhang (SouthWest Jiaotong University, China), Yunhui Xu (SouthWest Jiaotong University, China).

15:00~15:20 Finding parameter-specific distance metrics for geographically weighted regression
Binbin Lu (Wuhan University, China), Huabo Sun (China Academy of Civil Aviation Science and Technology, China),Chris Brunsdon (National Centre for Geocomputation, Maynooth University, Ireland), Martin Charlton (National Centre for Geocomputation, Maynooth University, Ireland), Paul Harris (Roth sted Research, United Kingdom).

15:20~15:40 Detail resolution: a new model to describe level of detail information of vector GIS data

Xiaoqiang Cheng (Wuhan University, China), Huayi Wu (Wuhan University, China), Tinghua Ai (Wuhan University, China), Min Yang (Wuhan University, China).

15:40~15:55   Tea break

15:55~16:15 The potential of proactive role of citizens. Geo-information and communication technology in crisis management.
Elena Pede (Politecnico di Torino, Italy), Åke Sivertun (Swedish Defence University, Sweden), Aida Alvinus (Swedish Defence University, Sweden).

16:15~16:35 Implementation of levels of detail dem model based on error control
Qingguo Wang (Wuhan University of Science and Technology, China).

16:35~16:55 Automatic generation of lane~level ribbon road network from road marking data

Teng Zhong (The University of Hong Kong, China), Xiaohu Zhang (Faculty of Architecture, The University of Hong Kong,China), Anthony Gar~On Yeh (The University of Hong Kong, China).

16:55~17:15 A design of uav multi-lens camera system for 3d reconstruction during emergency response
Junhui Wu (Graduate School at Shenzhen, Tsinghua University, China), Fei Wang (Graduate School at Shenzhen, Tsinghua University, China), Xiaocui Zheng (Graduate School at Shenzhen, Tsinghua University, China).

17:15~17:35 Order classification of watershed divide lines with dem
                          Boris Gartsman (Water Problems Institute RAS, Russian),   Eugenii Shekman
(Pacific Geographical   Institute FEB RAS, Russian).

Session 6 (Room 2421): Geospatial analysis

14:00~14:20 Simulation of urban expansion and encroachment using cellular automata and multi~agent
                          system model : a case study of tianjin metropolitan region, China
                    Guangjin Tian (School of Environment Beijing Normal University, China).
14:20~14:40 Modelling urban growth evolution using sleuth model the case of wuhan city, China
                          Wenyou Fan (China University of geoscience, China), Yueju Shen (China
University of   geoscience, China).
14:40~15:00 The space distribution research on the bushwood in sichuan province
                    Wuxue Cheng (Sichuan Normal University, China).
15:00~15:20 Urban growth evaluation: a new approach using neighborhood characteristics of remotely
                          sensed land use/cover
                    Shyamantha Subasinghe (University of Tsukuba, Japan), Yuji Murayama
(University of Tsukuba,   Japan).
15:20~15:40 Research of comparative analysis of clustering algorithm based on raster data
                          Jingyi Liu (China University of Petroleum (East of China), China), Cunjin Xue
(Institute of Remote   Sensing and Digital Earth, Chinese Academy of
Sciences, China), Xiaoli Zheng (Institute of   Remote Sensing and
Digital Earth, Chinese Academy of Sciences, China), Yue Li (China
  University of Petroleum (East of China), China).

15:40~15:55 Tea break

15:55~16:15 A measure of spatial stratified heterogeneity
                          Jinfeng Wang (CAS, China).
16:15~16:35 The spatial analysis of pedestrian shed under the high risk of road Traffic accidents in
                          faisalabad city of Pakistan
                          Muhammad Sajjad (Coastal and Ocean Management Institute, College of
Environment and   Ecology, Xia'en University, China), Fariha
Shoaib (Government College University,   Faisalabad,
Pakistan /Nanjing University, China), Tianlu Qian (Nanjing University, Nanjing,
          China), Huang Huang (Nanjing University,Nanjing,China), Shoaib Khalid (Government
                          College University, Faisalabad, Pakistan /Nanjing University, Nanjing,
China).

16:35~16:55 Bayesian inference for spatial point process with nonparametric intensity based on fourier
                          series
                          Huifang Zeng (Hunan University of Science and Technology, China).
16:55~17:15 Geospatial characterization of fractures in rock based on GIS technology
                          Peng Wang (Beijing Research Institute of Uranium Geology, China), Xiyong
Wang (Beijing   Research Institute of Uranium Geology, China),
Xiaozhao Li (Nanjing University, China).

Saturday, Aug 20, 2016

Venue: Conference Hall 2602

08:30~09:10   Keynote speech
                          GIScience beyond conventional spatial data handling
                  by Prof. Shih-Lung Shaw.
09:10~09:50   Keynote speech
                    by Prof. Chenghu Zhou.
09:50~10:05   Tea break

会议嘉宾

Leveraging big (geospatial) data with (geo) visual analytics

Alan MacEachren, The Pennsylvania State University, USA
Abstract: It has been nearly a decade since the term "Big Data" gained prominence as a popular label for the challenge / opportunity that our instrumented world is prompting / providing. Big Data is a somewhat misleading term, since the concept is often characterized as being about more than just data size (Volume). It is also about Velocity (the speed at which new data arrives) and Variety (the heterogeneity in type, quality, and other characteristics); and some argue for even more components.

Government agencies, businesses, and other organizations are gearing up to meet the Big Data challenge / opportunity with strategies to both generate and leverage Big Data; and science funding organizations have initiated a range of calls for Big Data research. For Geo/Spatial Information Science and Technology, the challenges and opportunities require a fundamentally new perspective on geospatial data, one that treats geospatial data as an integral component of an information ecosystem in which geospatial may still be special, but in which geospatial cannot be considered independently from other kinds of data, or from the context of use, or from the knowledge and needs of users. This presentation will present an argument for a "human-in-the-loop" approach to leveraging big (geospatial) data. The approach contrasts with those that rely exclusively on computational methods to produce information and generate answers. To support this approach, (geo)Visual Analytics is presented as both a science and set of methods/tools that are focused specifically on support of human analytical reasoning with big, heterogeneous, and often 'messy' data that include geospatial components. Attention will be given to both progress thus far and challenges for future research.

Error in Spatial Ecology

Brian Lees, University of New South Wales, Australia

Abstract: Error and uncertainty are ubiquitous in geographical applications. There are two main types of error, inherent and operational. Inherent error is an error of input data, while operational error is the error accumulated through the modelling process. All kinds of spatial data, whether they are paper maps or digital layers, in vector or raster format, having categorical or numerical values, contain errors to some extent. This is due to not only instrument and human errors, but also the age of the data and the inherent complexity of the real world. Models, on the other hand, are simulations of the real world. They often simplify the complexity of the real world using assumptions and the cost of this simplification is increased error and uncertainty. More importantly, input data error can be propagated through the modelling process and become manifest in the final products. Different models may propagate error in different ways. The exact error propagation modes for most models are unclear.

Even if we can successfully identify the error sources, model the error propagation through the modelling process, measure the error magnitude with suitable error indices, and visually display the error measurements to the users, suitable strategies need to be adopted to manage and reduce the error if possible.

This presentation looks at sources of error in predictive vegetation mapping although the principles are more generally applicable. It looks at the various sources of error, attempts to reduce their effect and how they are propagated through various types of model. It concludes with the observation that error is the inevitable cost of almost all attempts to simplify representation.

GIScience Beyond Conventional Spatial Data Handling

Shih-Lung Shaw, The University of Tennessee, USA

Abstract:Geographic information science (GIScience) has traditionally focused on spatial data of physical entities with absolute locations. This focus has served GIScience well in the past few decades to tackle a variety of spatial problems. However, this conventional view of spatial data is becoming insufficient to study human activities and interactions in today's world. With the advancements in information and communication technology and location-aware technology, many human activities and interactions are increasingly taking place in virtual space that has very different characteristics from the conventional approach of handling spatial data in geographic information systems. For example, what is the location associated with an online purchase at amazon.com? Where are you in Facebook? What are the locations associated with a WeChat group message? Should GIScience be concerned with such data that are beyond the conventional view of spatial data? What are the challenges of handling "spatial" data beyond the physical entities with absolute locations? This presentation will discuss examples of "spatial" data beyond the conventional locational data in physical space and propose some directions of developing GIScience beyond conventional spatial data handling.

Improving GIscience Visualization: Ideas for a New Methodology

Francis Harvey, Leibniz Institute for Regional Geography

Abstract: In almost every GIScience research activity, data and analysis results have to be visualized. The available means and potential choices for the creation of cartographic visualization are extremely rich, but also very complex. Successful visualization is often limited by abilities to address the complexity of symbolization and adequately connect cartographic representation to geographic representation. Fundamentally, patterns and processes cannot be easily represented by 2D representation. In this paper, I present a new methodology for GIScience visualization centered on a transformational approach to geospatial visualization. It directly addresses theoretical and representational limits. The approach organized around a series of systematic steps that begin with fundamental questions about phenomena, semantics, motivations and transformations then progresses to questions related to data, accuracy, geographical representation, semiotics, and map elements. Finally, details of symbolization are iteratively tested. This approach rests on a pragmatic linkage of Tobler's transformation concept, Sinton's forms of geographical representation, Börner's visualization framework and MacEachren's visualization variables. The systematic approach supports scientific communication and discovery in today's research

institutions. The paper provides an overview of the foundations and framework at a conceptual level.

Pan-spatial Information System

Chenghu Zhou, The Chinese Academy of Science

会议门票

Student rates are available only to full time students enrolled in a recognized higher education course at

university.

Category	by Mar.31, 2016	by July 15, 2016	after July 15, 2016
Regular	2500 RMB	2800 RMB	3000 RMB
Student	1800 RMB	2000 RMB	2200 RMB

Cancellation and Refund Policy:

To cancle your registration and get the refund of the registration fee, send an email stating your intent to sdh2016@lreis.ac.cn. If notice of cancellation is received by May 1, 2016, 25% cancellation fee will be charged. If notice of cancellation is received by July 31, 2016, 50% cancellation fee will be charged. No refunds are available for cancellations notified after July 31, 2016.

成都云数海量智能科技有限公司
2016年8月9日