

## Jie Dai

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### EDUCATION

**San Diego State University/University of California Department of Geography** (San Diego/Santa Barbara, CA)

- **Ph.D. precandidate**, Joint program in Geography, August 2013-present
- Advisors: Dr. Li An/Dr. Dar Roberts

**University of Michigan School of Natural Resources and Environment** (Ann Arbor, MI)

- **Master of Science**, Natural Resources and Environment: Environmental Informatics, August 2013
- GPA: 7(out of 9)/3.6(out of 4)
- Thesis: Landsat Spectral Responses to Grassland Biophysical Conditions Across a Gradient in Inner Mongolia, China
- Committee Members: Dr. Dan G. Brown, Dr. Kathleen M. Bergen
- Courses: geographic information systems (GIS), remote sensing (RS), GIS and landscape modeling, GIS and natural resource applications, natural resource statistics, wetland ecosystems, biology of fishes, ecology, environmental policy and governance, environmental assessment

**Wuhan University School of Software** (Wuhan, Hubei, China)

- **Bachelor of Engineering**, Spatial Informatics and Digitized Technology, June 2011
- GPA: 3.50(out of 4)
- Courses: spatial modeling and data analysis, spatial database, digital engineering, digital image analysis and processing, data structure and algorithm, object-oriented programming, software engineering, discrete mathematics, advanced mathematics, linear algebra, probability theory and statistics

## **RESEARCH INTERESTS AND EXPERIENCE**

**Research Interests:** GIS and remote sensing; environmental spatial analysis; land cover and land use change; anthropogenic impacts on environment including climate change, habitat fragmentation, introduced species; human-environment interaction

### **Thesis Research** (Ann Arbor, MI) June-December 2012

- Research focus: relationships among grassland biophysical conditions, Landsat image and in-situ hyperspectral data in Inner Mongolia, China
- Link above/under-ground grass biomass and biodiversity to vegetation indexes
- Clean ecological sampling data, calculating biomass and biodiversity
- Extract Landsat derived indexes through ERDAS IMAGINE
- Extract in-situ hyperspectral indexes with MatLab
- Perform spatial statistics in Geoda on preprocessed data
- Will generate biomass and biodiversity map with best-fitted vegetation indexes

### **NASA Land-Cover and Land-Use Change (LCLUC) Program, Field Assistant/Research Assistant**

(Inner Mongolia, China/Ann Arbor, MI) July-August 2010/September 2011-May 2012

- Research project focus: grassland ecosystems and societal adaptations under changing grazing intensity and climate change on the Mongolian Plateau
- Conducted field observations and measurements of vegetation types, grass biomass and species
- Collected *in-situ* hyperspectral data with Analytical Spectral Devices (ASD) FieldSpec 3 spectrometer
- Collaborated with Eastern Michigan University and Chinese Academy of Science faculty
- Assisted with PhD thesis research on societal adaptations and climate change in the University of Michigan Environmental Spatial Analysis Lab
- Cleaned and performed spatial analysis on household survey and ecological sampling data in MatLab, ArcGIS and ERDAS IMAGINE

## TEACHING EXPERIENCE

**University of Michigan, Graduate Student Instructor (GSI)** (Ann Arbor, MI) January-April 2013

- Hired to teach graduate-level principles of GIS course
- Develop lesson plans to engage students from diverse backgrounds in scientific learning
- Cover fundamental concepts and applications of GIS
- Assumed responsibility for lab preparation and instruction, lecturing, designing practical problem sets and exams, grading, maintaining regular office hours

**Wuhan University, Teaching Assistant** (Wuhan, Hubei, China) September 2010-January 2011

- Taught a freshman-level Introduction to Information Systems course
- Developed lesson plans to engage students with little or none academic backgrounds
- Cover topics from computer structures, webpage making to basic programming skills
- Responsible for lab preparation and instruction, lecturing, grading, maintaining the course website and regular office hours

## POSITIONS HELD

**University of Michigan, School of Natural Resources and Environment, Environmental Informatics, Track Leader** (Ann Arbor, MI) September 2012-April 2013

- Linkage between Office of Academic Programs(OAP) and the Field of Study
- Welcomed the new students and lead Scavenger Hunt in the orientation at the University of Michigan Biological Station
- Maintain the Field of Study email group
- Answer academic and common questions from OAP, current and prospective students
- Will represent the track on the Visit Day next March

**Wuhan University, Chinese Calligraphy and Painting Association, Minister** (Wuhan, Hubei, China)  
September 2008-June 2010

- Took in charge of the artistic creation department
- Displayed and improved Chinese calligraphy and painting on campus
- Communicated with similar associations in the province
- Developed lessons for dozens of novice students
- Held the annual Hubei Province College Students Chinese Calligraphy and Painting Contest

#### **ACADEMIC AWARDS AND FELLOWSHIPS**

- Graduate Student Instructor, University of Michigan, Tuition waiver & \$2200 monthly stipend (2013 winter semester)
- National Encouragement Scholarship, P. R. China Ministry of Education, ¥5,000 (2010)
- Second Prize Scholarship, Wuhan University, ¥1,200 (2009)
- Third Prize Scholarship, Wuhan University, ¥700 (2008)

#### **TECHNICAL SKILLS**

- Microsoft Certificated Technology Specialist for .NET Framework 2.0 Web Applications
- Computer Skills: Microsoft Office (Word, Excel, Power Point), ArcGIS, ERDAS, R, MatLab, GeoDa, STELLA Modeling and Simulation Software

#### **LANGUAGE**

- Mandarin Chinese (native)