Jian Yang, Dr.-Ing.

Assistant Professor, Zhengzhou Institute of Surveying and Mapping

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Research Interests

- Machine learning techniques for modeling and analyzing large-scale geospatial data.
- Mining spatial trajectories in road network.
- Undirected graphical model, Bayesian inference, and their real world applications.
- Robotic Mapping

Employment

- Assistant Professor, Zhengzhou Institute of Surveying and Mapping, 2016.1 – present

Education

- Technische Universität München (TUM) 2011.1 – 2016.6

  Dr.-Ing. (Supervisor: Prof. Dr.-Ing Liqiu Meng)
- National University of Defense Technology, China (NUDT) 2010.1 – 2010.12

  Research Assistant
- National University of Defense Technology, China (NUDT) 2007.7 – 2009.12

  M. Eng. Information and Communication Engineering (Supervisor: Prof. Jun Li).
- National University of Defense Technology, China (NUDT) 2003.7 – 2007.6

  B. Eng. Information Engineering.

Scholarship

- China Scholarship Council (CSC) Scholarship for oversea Ph.D. study, 2011.1 – 2015.1
- DAAD-STIBET Doctoral Completion Grant 2015

Professional Skills

- Plenty of experience working on major operating systems: Microsoft Windows, Linux.

- Programming
    - Strong ability in C#, Matlab, Python, SQL, PL/pgSQL
    - Experience of using R, Bash, JavaScript in research-oriented development
    - Rich experience of using PostgreSQL, ArcGIS
- Strong skills in academic writing and presentation
- Rich experience in research-oriented team management and inter-department coordination

Research Projects

- Probabilistic Modeling of Spatial Trajecories in Road Network for Localizaiton and Behaviral Classification (TUM) 2011 – 2015
    - Ph.D. thesis research topic.
- ProZeit. (TUM, third-party funded by Bauindustrie Bayern) 2011 – 2013
- Imaging Satellite Scheduling System (NUDT) 2007 – 2010

Academic Service

- Oral presentations in IPK Summer School 2011, LBS11, SenseML14 and LBS14.
- Involved in the organization of 9th International Symposium on Location-Based Services (LBS) 2012 in Munich, Germany.

Teaching Assistance and Supervision

- TUM 240856543. Visualization of Geodata (GuG)

  Lecturer: Mathias Jahnke 2013 WS, 2014 WS
- TUM 0000002373. Visualization of Geodata (MSc Cartography)

  Lecturer: Mathias Jahnke 2013 WS, 2014 WS

  Lecturer: Jukka Krisp 2011 WS, 2012 WS
- TUM Master Thesis. Fast HMM for Map Matching. Luyi Han. 2014
- TUM Carto-Project. Railway Route Data Validation. Zlatan Dobrosavljevic. 2012

Publication

Journal and Book Chapter

1. **Jian Yang**, Liqiu Meng. Feature Selection in Conditional Random Fields for Map Matching of GPS Trajectories. In G. Gartner & H. Huang, eds. Progress in Location-Based Services 2014, Lecture Notes in Geoinformation and Cartography. Springer International Publishing, pp. 121–135.

2. Hao Chen, Ning Jing, Yu Tang, Jun Li, **Jian Yang**. Design and Implementation of a High-extensible Satellite Scheduling System. Computer Science. 2009, 11, p44. (Chinese)
3. Mathias Jahnke, **Jian Yang,** et al. Geovisualization for Railway Infrastructure Planning – Case study in ProZeit. Kartographische Nachrichten. (in prep)

Conference and Workshop

4. **Jian Yang**, Liqiu Meng. Feature Engineering for Low-sampling-rate GPS Trajectories in Road Network. ECML/PKDD14 workshop on Machine Learning for Urban Sensor Data (SenseML). Nancy, France, 15 - 19 Sept, 2014.
5. **Jian Yang**, Liqiu Meng. Railway Alignment Optimization for Specified Travel Timesaving. 8th International Symposium on Location-Based Services. Vienna, Austria, 21–23 Nov, 2011.
6. **Jian Yang**, Alexander Nottbeck, Christian Murphy, Mathias Jahnke, Liqiu Meng and Stephan Freudenstein. ProZeit: An Automated Workflow of Optimizing the Geometric Design of Railway Alignment for Travel Time Saving. ICC 2015 - 27th International Cartographic Conference. Brazil, 2015. (accepted)
7. Linfang Ding, **Jian Yang**, Liqiu Meng. Visual Analytics for Understanding Traffic Flows of Transportation Hub from Movement Data. ICC 2015 - 27th International Cartographic Conference. Brazil, 2015. (accepted)

Technical Report

8. **Jian Yang**, Alexander Nottbeck, Christian Murphy, Mathias Jahnke, Liqiu Meng, Stephan Freudenstein. ProZeit: Programm zur Fahrzeitoptimierung von Eisenbahn-Infrastruktur (German). Technical Report. TU Munich, 2013. (access on request)