

Wei Lu

Geographic Information Science and Technology Group
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EDUCATION

- **Aug. 2010 – Dec. 2013**

Ph.D in Transportation Engineering, Department of Civil and Environmental Engineering, with **Minor Degree** in Computational Science, The University of Tennessee, Knoxville, Tennessee.

- **Sep. 2007 – Jun. 2010**

M.Sc. in Pattern Recognition and Intelligent System, Department of Automation, University of Science and Technology of China (USTC), Hefei, China

- **Sep. 2003 – Jun. 2007**

B.Sc. in Electrical Engineering and Automation, Department of Automation, China University of Mining and Technology (CUMT), Xuzhou, China.

RESEARCH INTERESTS

Traffic Simulation and Modeling

High Performance Computing in Traffic Evacuation

Connected Vehicle Technology

Information and Communications Technology (ICT) in ITS

WORK EXPERIENCE

Sep. 2012 – present Research Associate in Geographic Information Science and Technology (GIST) group in Oak Ridge National Laboratory (ORNL)

Jun. 2012 – Aug. 2012 Intern at GIST group in ORNL

Nov. 2010 – May 2012 Research Assistant at Intelligent Transportation Systems Lab in UTK

May 2008 – Jun. 2010 Research Assistant at Global Positioning System Lab in USTC

Jun. 2007 – Apr. 2008 Research Assistant at Intelligent Transportation Systems Lab in USTC

PROFESSIONAL EXPERIENCE

Editor-in-Chief, Journal of Modern Traffic and Transportation Engineering Research

Reviewer, Journal of Civil Engineering and Architecture

Reviewer, International Journal of ITS Research

Reviewer, IEEE transaction on Vehicular Technology

Reviewer, International Journal of Geographic Information Science

Reviewer, 2013 16th International IEEE Conference on Intelligent Transportation Systems

Reviewer, 2013 23rd ITS America Annual Meeting

ITE Member

ASCE Member

AAG Member

PUBLICATIONS AND PRESENTATIONS

18. **Wei Lu**, Lee D. Han, Cheng Liu, Budhendra L. Bhaduri. "A Multiple-Sources-Nearest-Destination Shortest Path Problem in Evacuation Assignments," The 6th ACM SIGSPATIAL International Workshop on Computational Transportation Science, Orlando, FL, USA, Nov. 2013. (under review)
17. **Wei Lu**, Lee D. Han, Cheng Liu, Mark A. Tuttle, Budhendra L. Bhaduri. "Evacuee Compliance Behavior Analysis using High Resolution Demographic Information," 93th Annual Meeting of the Transportation Research Board, Washington D.C., United States, Jan. 2014. (under review)
16. **Wei Lu**, Lee D. Han, Budhendra L. Bhaduri, Mark A. Tuttle, Cheng Liu. "Study of Emergency Evacuation Performance as a Function of Multi-scale Network Configurations and Routing Schemes," 93th Annual Meeting of the Transportation Research Board, Washington D.C., United States, Jan. 2014. (under review)
15. **Wei Lu**, Lee Han, Cheng Liu, Mark Tuttle, Budhendra Bhaduri. "Using High Resolution Demographic Data in Agent-based Evacuation Assignments," Conference on Agent-based Modeling in Transportation Planning and Operations, Blacksburg, VA, United States, Sep. 2013. (Accepted)
14. **Wei Lu**, Cheng Liu, Mark Tuttle, Budhendra Bhaduri. "Agent-based Rapid Traffic Assignment for Emergency Evacuation with High Resolution Data," Poster Presentation on 1st Annual ORNL Postdoc Research Symposium, Oak Ridge, TN, United States, July 2013.
13. **Wei Lu**, Lee D. Han, Christopher R. Cherry. "Evaluation of Vehicular Communication Networks in a Car Sharing System," International Journal of Intelligent Transportation Systems Research, Vol. 11 Issue 3, pp 113-119, 2013.
12. **Wei Lu**. "Daily Population Mobility Prediction based on High Resolution Data and High Performance Computing," Presentation on Association of American Geographers Annual Meeting, Los Angeles, CA, United States, April 2013.
11. **Wei Lu**, Lee D. Han, Cheng Liu. "Where Shall We Install ITS Equipment? Emergency Evacuation Assignment based on Advanced Traveler Information Systems," Poster Presentation on Annual Meeting of ITS Tennessee, Oct. 2012.
10. **Wei Lu**, Lee Han, Christopher Cherry. "Performance Analysis of Vehicular Ad hoc Networks in Taxi Systems," Proceeding of the 18th Intelligent Transportation Systems World Congress, Orlando, FL, United States, 2011.
9. **Wei Lu**. "Geographic Data Analysis for Advanced Traffic System with High Performance Computing," Presentation on University Consortium for Geographic Information Science 2012 Symposium, Washington D.C., United States, May 2012.
8. **Wei Lu**, Yuanlv Bao, Hao Bai. "Performance Analysis of Vehicular Communication in the Internet of Vehicles," Journal of Vehicle Tele-management Technology and Application. Vol. 1 No. 2, 2011.
7. **Wei Lu**, Yuanlv Bao, Hao Bai. "Performance Analysis of Inter-vehicle Communication in a Unidirectional Traffic Flow," Journal of Computer Engineering. Vol. 37 No. 4, 2011.
6. **Wei Lu**, Yuanlv Bao, Xiaoyan Sun, Zhe Wang. "Performance Evaluation of Inter-vehicle Communication in a Unidirectional Dynamic Traffic Flow with Shockwave," International Workshop on Communication Technologies for Vehicles in ICUMT 2009, St.-Petersburg, Russia, 2009.

5. Z. Wang, **W. Lu**, and W. L. Jin, "A Study on Information Throughput of Inter-vehicle Communications in a Unidirectional Traffic Stream," in *WRI International Conference on Communications and Mobile Computing*, C. X. Wang and S. Ouyang, Eds. Kunming, PEOPLES R CHINA, 2009, pp. 396-401.
4. Xiaoyan Sun, Yuanlu Bao, **Wei Lu**, Jun Dai and Zhe Wang, "A study on Performance of Inter-Vehicle Communication in Bidirectional Traffic Streams", The 2nd International Conference on Future Networks (ICFN2010), Sanya, China, 2010.
3. Xiaoyan Sun, Yuanlu Bao, Jun Dai, **Wei Lu**, "Performance Analysis of Inter-vehicle Communication in Multilane Dynamic Traffic Stream", The First IEEE Vehicular Networking Conference, Tokyo, Japan, 2009.
2. Zhenning Wang, **Wei Lu**, Jun Dai, "Saving the calculating time of the TCNN with nonchaotic simulated annealing strategy," *Systems, Man and Cybernetics*, 2009. SMC 2009. IEEE International Conference on, pp.5189-5193, 11-14 Oct. 2009
1. Wenlong Jin, Zhe Wang, **Wei Lu**, "A New Framework for Simulating Inter-vehicle Communication," Third China Annual Conference on Intelligent Transportation, Nanjing, China, 2007.

HONERS AND AWARDS

- Graduate Student Travel Award of the University of Tennessee. 2012.
- Travel Award for the four candidate best papers of UCGIS 2012 Symposium, University Consortium for Geographic Information Science. 2012
- The 4th Place in Tennessee Section ITE Student Paper Competition. 2011.
- Excellent Student of National Graduate Summer School on Transportation Engineering in China. 2009.
- Excellent Student Cadre of Graduate Student Union. 2008
- Extraordinary Undergraduate Thesis. 2007
- Extraordinary Graduate of CUMT. 2007
- Extraordinary Scholarship of Outstanding Students. 2004-2006