Shanyu Zhou

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Education

2014–Present **D.Eng. in Electrical and Electronics Engineering (degree expected May, 2019)**,
Department of Electrical and Computer Engineering,
University of Illinois at Chicago.
GPA: 4.00/4.00

2010–2014 **B.Eng. in Electronic Information (degree obtained July, 2014)**,
*Yingcai Experimental School (**Honors** School, for **talented** undergraduates (2%))*,
University of Electronic Science and Technology of China.
GPA: 3.76/4.00 (88.7/100.0) Major GPA: 3.92/4.00
Ranking: **3**/91

Research Experience

Sept 2014–present **Blocking avoidance in transportation systems**,
Supervised by Prof. Hulya Seferoglu,
Department of Electrical and Computer Engineering, UIC.
Our research is to calculate a shortest delay algorithm to improve traveling efficiency in the traffic network.

- Calculated average waiting time based on queueing theory;
- Developed the shortest delay algorithm using Dijkstra's method;
- Conducted numerical calculation and simulation on the transportation network.

Sept 2014–present **Flow control and scheduling policies for wireless networks with First-in First-out (FIFO) queues**,
Supervised by Prof. Hulya Seferoglu,
Department of Electrical and Computer Engineering, UIC.
Our research is to discuss network control policies for wireless networks with FIFO queues.

- Constructed several network interference models;
- Calculated the stability region for each of the interference model;
- Developed new flow control and scheduling policy and compared it with well-known max-weight policy.

2013–2014 **The possible phase transition diagram for the transverse Ising model with temperature-dependent interaction**,
Supervised by Prof. Baohua Teng,
School of Physical Electronics, UESTC.
Our research is carried out to discuss the transition feature of the transverse Ising model with temperature-dependetn interaction.

Honors and Awards

2015 **Paper presentation (expected on Sept. 30th)**, *Blocking avoidance in transportation systems*, in 53rd Annual Allerton Conference on Communication, Control, and Computing, University of Illinois at Urbana-Champaign.
515 Old Timber Road, Monticello, IL

2015 **Teaching and Research Assistantship**, *Department of Electrical and Computer Engineering*.
University of Illinois at Chicago.

2014 **Teaching and Research Assistantship**, *Department of Electrical and Computer Engineering*.
University of Illinois at Chicago.

2013 **Honorable Mention**, in 2013 Mathematical Contest in Modeling.
MCM/ICM is an international mathematics competition with emphasis on solving real-world problems. We develop an efficient optimization model without constrained condition to seek the sustainable water management strategy for some country, which was awarded the Honorable Mention.
COMAP, sponsored by SIAM, NSA and INFORMS.

Skills

Programming MATLAB, Mathcad, C++, Java

Typesetting LaTeX

Publications

S. Zhou, and H. Seferoglu. Blocking avoidance in transporation systems. *in Proceeding of IEEE Allerton Conference on Communication, Control, and Computing, Urbana, IL*, 2015.

H. Seferoglu, E. Koyuncu, and **S. Zhou**. Flow control and scheduling for shared FIFO queues over wireless networks. *in 53rd Allerton Conference on Communication, Control, and Computing(submitted)*, 2015.

J.S. Bayor, B. Teng, **S. Zhou**, L. Zhou, X. Chen, M. Wu, and H. Fu. The possible phase transition diagrams for the transverse Ising model with temperature-dependent interaction. *Chemical Physics Letters*, 605-606:121–125, 2014.