

Peng ZHANG

CONTACT INFORMATION	Communications and Networks Cluster Institute for Infocomm Research A*STAR, Singapore 138632	Telephone: +65 8113-5841 Email: zhangp@i2r.a-star.edu.sg Website: http://p-zhang.github.io/
RESEARCH INTERESTS	High Dimensional Statistical Signal Processing, Machine Learning, Random Matrix Theory, Lattice, Scheduling Algorithms	
EDUCATION	Imperial College London, UK Ph.D. in Electrical Engineering Aug 2012 – Dec 2016 Thesis topic: Structured Sensing for Estimation of High Dimensional Data Nanyang Technological University, Singapore B.Eng. (First-Class Honors) in Electrical and Electronic Engineering Aug 2007 – Jun 2011 GPA: 4.84/5.00 (Top 5%) KTH Royal Institute of Technology, Sweden School of Information and Communication Technology Sep 2009 – Dec 2009 International Student Exchange Programme	
PROFESSIONAL EXPERIENCE	Scientist I, Institute for Infocomm Research, Singapore, Sep 2016 – Current. <ul style="list-style-type: none">□ Statistical signal processing on network anomaly detection.□ Dynamic scheduling. Graduate Student, Imperial College London, UK Sep 2012 – Sep 2016. <ul style="list-style-type: none">□ Advised by Dr. Cong LING and Dr. Sumei SUN and performed research in sparse signal processing, random matrix theory and lattice sampling. Technical Supervisor, Imperial College London, UK Oct 2013 – Jun 2015. <ul style="list-style-type: none">□ Guided three Masters level projects on structured compressed sensing. Research Attachment, Institute for Infocomm Research, Singapore, Aug 2011 – Aug 2012. <ul style="list-style-type: none">□ Advised by Dr. Sumei SUN and worked on the optimization of ADC quantization width considering energy consumption and system performance. Industrial Attachment, Rockwell Automation, Singapore, Jan 2010 – Jun 2010.	

- Worked on software development (Perl Script) and control system improvement.

NTU President Research Scholar, NTU, Singapore
Undergraduate Research Experience on Campus (URECA) programme.
Aug 2008 – Jun 2009.

- Advised by Prof. Yong Liang GUAN and worked on non-contact human vital sign monitoring by UWB signal.

HONORS AND AWARDS

Agency for Science, Technology and Research (A*STAR) Graduate Scholarship (Overseas), Singapore
2012 – 2016

- Prestigious scholarship including tuition fees and monthly allowance

First Runner-up, Design and Innovation Project Competition, NTU, 2009

Dean's List and NTU President Research Scholar, NTU
2008 – 2011

- Dean's List for 4 years of undergraduate study

Ministry of Education Undergraduate Scholarship, Singapore
2007 – 2011

- Full scholarship including tuition fees and monthly allowance

PROFESSIONAL ACTIVITIES

Reviewer for the following journals and conferences

- IEEE Transactions on Communications
- IEEE Transactions on Vehicular Technology
- IEEE Journal on Selected Areas in Communications
- IEEE Transactions on Signal Processing
- IEEE Transactions on Information Theory
- IEEE International Conference on Communications
- IEEE International Symposium for Information Theory
- IEEE Information Theory Workshop
- IEEE International Conference on Communication Systems

KEY PUBLICATIONS

Peng Zhang, Lu Gan, Cong Ling, and Sumei Sun, "Uniform Recovery Bounds for Structured Random Matrices in Corrupted Compressed Sensing," *IEEE Trans. Signal Process*, *accepted*.

Shudong Liu, Sumei Sun, Peng Hui Tan, Ernest Kurniawan and **Peng Zhang**, "Dynamic Scheduling for Pickup and Delivery with Time Windows," *IEEE World Forum on Internet of Things*, 2018, *accepted*.

Peng Zhang and Sumei Sun, "Decentralized Network Anomaly Detection via A Riemannian Cluster Approach," *IEEE Global Communications Conference (GLOBECOM)*, Singapore, 2017, pp. 1-6.

Shudong Liu, Ernest Kurniawan, Peng Hui Tan, **Peng Zhang**, Sumei Sun and Ye Sarah, "Dynamic Scheduling for Heterogeneous Resources with Time

Windows and Precedence Relation,” *IEEE Region Ten Conference (TEN-CON)*, 2017, *accepted*.

Peng Zhang, Lu Gan, Cong Ling, and Sumei Sun, “Atomic Norm Denoising-Based Joint Channel Estimation and Faulty Antenna Detection for Massive MIMO,” *IEEE Trans. Vehicular Technology*, vol. 67, no. 2, pp. 1389-1403, Feb. 2018.

Peng Zhang, Lu Gan, Sumei Sun, and Cong Ling, “Modulated Unit-Norm Tight Frames for Compressed Sensing,” *IEEE Trans. Signal Process.*, vol. 63, no. 15, pp. 3974-3985, Aug. 2015. (poster presented at UCL-Duke workshop on Sensing and Analysis of High-Dimensional Data 2014.)

Peng Zhang, Lu Gan, Sumei Sun, and Cong Ling, “Atomic Norm Denoising-based Channel Estimation for Massive Multiuser MIMO Systems,” *IEEE International Conference on Communications 2015*.

Peng Zhang, Sumei Sun, and Cong Ling, “Variable-Density Sampling on the Dual Lattice,” *IEEE International Symposium for Information Theory 2014*.

Peng Zhang, Lu Gan, Sumei Sun and Cong Ling, “Deterministic sequences for compressive MIMO channel estimation,” (invited paper) *European Signal Processing Conference 2013*.