

Junqi Tang

Researcher in Machine Learning and Optimization

Education

- 9/2015 – **PhD**, *University of Edinburgh*, UK.
present Thesis: Randomized Structure-Adaptive Optimization
Advisor : Prof. Mike Davies
Fields: Large-scale Optimization, Machine Learning, Computational Imaging
- 9/2014 – **Master of Science**, *University of Edinburgh*, UK, with Distinction (Top 1/35).
8/2015 Thesis : The Non-Uniform Fast Fourier Transform in Computed Tomography
Advisor : Prof. Mike Davies
Fields : Signal and Image Processing,
- 9/2010 – **Bachelor of Engineering**, *Sichuan University*, China, First Honour.
8/2014 Major : Communication Engineering
Thesis: The Design of a Remote Detection System for Hazardous Landslips (In Chinese)
Advisor : Dr. Yan Liu
Fields : Signal Processing, Software Engineering

Experiences

- 05/2018 – **Research Intern**, *Noiseless Imaging Ltd, Finland*.
06/2018 Host : Prof. Karen Egiazarian
○ Project 1 : Fast Stochastic Primal-Dual Three-Operator Splitting Algorithms for Imaging Inverse Problems
○ Project 2 : The Fundamental Limitation of Stochastic Gradient Methods in Imaging Inverse Problems
- 09/2017 – **Research Intern**, *SIERRA project team, INRIA, France*.
11/2017 Host : Prof. Francis Bach
○ Project 1 : Structure-Adaptive and Variance-Reduced Stochastic Optimization
○ Project 2 : Structure-Adaptive Accelerated Coordinate Descent

Teaching

- 9/2016 – **Tutor**, *University of Edinburgh*.
12/2016 Course : Digital Signal Processing Laboratory
Level: Masters
- 1/2016 – **Tutor**, *University of Edinburgh*.
5/2016 Course : Advanced Concepts in Signal Processing
Level: Masters

Awards, Scholarships and Funding

- 2012 , *Chinese National Scholarship (undergraduate)*.
- 2013 , *Sichuan University Scholarship for Excellent Undergrads*.
- 2014 , *Eric Liddell China Saltire Scholarship*.
– For Chinese postgraduate students in the University of Edinburgh
- 2014 , *Scotland Saltire Scholarship*.
- 2015 , *Marie-Curie Action Fellowship for Early Stage Researchers*.
– Full-Scholarship for PhD students
– H2020-MSCA-ITN (MacSeNet), European Union project 642685
- 2018 , *NeurIPS conference Student Travel Award*.

Selected Publications

Gradient Projection Iterative Sketch for Large-Scale Constrained Least-Squares

Junqi Tang, Mohammad Golbabaee, Mike Davies
International Conference on Machine Learning (ICML) , 2017

Rest-Katyusha: Exploiting the Solution's Structure via Scheduled Restart Schemes

Junqi Tang, Mohammad Golbabaee, Francis Bach, Mike Davies
Advances in Neural Information Processing Systems (NeurIPS), 2018

The Limitation and Practical Acceleration of Stochastic Gradient Algorithms in Inverse Problems

Junqi Tang, Karen Egiazarian, Mike Davies
International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2019

Professional Services

- 2019 **Conference Reviewer**.
Neural Information Processing Systems (NeurIPS)
- 2018 **Journal Reviewer**.
IEEE Transactions on Neural Networks and Learning Systems

References

Available upon request.