JIANG HU

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EDUCATION

September 2011 - July 2015
B.S. in Applied Mathematics, Hunan University, Changsha, China

September 2015 - Present
Ph.D. in Computational Mathematics, Peking University, Beijing, China
Advisor: Professor Zaiwen Wen

RESEARCH INTERESTS

My research interests lie on theory and algorithm of manifold optimization and its applications arising from machine learning, statistics and image processing.

PUBLICATION

Book:

1. H. Liu, **J. Hu**, Y. Li, Z. Wen, Computational Methods For Optimization (in Chinese), submitted.

Research articles:

2. **J. Hu**, X. Liu, Z. Wen, Y. Yuan, A Brief Introduction to Manifold Optimization, arXiv:1906.05450.

3. **J. Hu**, B. Jiang, L. Lin, Z. Wen, Y. Yuan (2019), Structured Quasi-Newton Methods for Optimization with Orthogonality Constraints, **SIAM Journal on Scientific Computing**, 41(4), A2239–A2269.

4. **J. Hu**, A. Milzarek, Z. Wen, Y. Yuan (2018). Adaptive Quadratically Regularized Newton Method for Riemannian Optimization. **SIAM Journal on Matrix Analysis and Applications**, 39(3), 1181–1207.

5. **J. Hu**, B. Jiang, X. Liu, Z. Wen (2016). A note on semidefinite programming relaxations for polynomial optimization over a single sphere. **Science China Mathematics**, 59(8), 1543-1560.

PRESENTATIONS

- The 11th International Conference on Numerical Optimization and Numerical Linear Algebra, 2017.08, Yinchuan, China

- The 23nd International Symposium on Mathematical Programming (ISMP 2018), 2018.07, Bordeaux, France

- The 12th International Conference on Numerical Optimization and Numerical Linear Algebra, 2019.04, Shangrao, China

HONORS AND AWARDS

- The Elite Program of Computational and Applied Mathematics for Ph.D. Candidates ($< 10\%$), Peking University, 2016-2020.

- The President Scholarship ($< 20\%$), Peking University, 2016-2017, 2017-2018, 2019-2020.

SOFTWARES

- ARNT: A MATLAB software for solving optimization problems on manifold.
  (`https://github.com/wenstone/ARNT`)

- ASQN: Structured quasi-Newton method for solving optimization with orthogonality constraints.
  (`https://github.com/wenstone/ASQN`)

TEACHING ASSISTANT

- Optimization algorithms for big data analysis, 2016 Spring

- Convex optimization, 2016 Autumn and 2018 Autumn

- Applied partial differential equation, 2017 Autumn

TECHNICAL STRENGTHS

Mathematical Software	Python, Matlab, LaTeX
Languages	Chinese (Native), English (Fluent)