

Yibo Zhang | Curriculum Vitae

Email: zyb233@mail.ustc.edu.cn

Tel: +86-13823317556

Web: <http://home.ustc.edu.cn/~zyb233/>

Mail: Room 104 Building 203, University of Science and Technology of China, Hefei Anhui 230026, P.R.China

EDUCATION

- **University of Science and Technology of China**
Bachelor of Computer Science and Technology 09/2015 – present
Overall GPA: 3.83/4.3 Ranking: 2/132
- **City University of Hong Kong**
Exchange Student – Department of Computer Science 09/2017 – 12/2017
Overall GPA: 3.93/4.3

RESEARCH INTERESTS

- Optimization: combinatorial optimization, non-convex optimization, etc.
- Evolutionary Algorithms
- Machine Learning

PUBLICATIONS

- Chao Qian, **Yibo Zhang**, Ke Tang, and Xin Yao. On Multiset Selection with Size Constraints.
– In *Proceedings of the 32nd AAAI Conference on Artificial Intelligence (AAAI'18)*, New Orleans, LA, 2018
- **Yibo Zhang**, Chao Qian, and Ke Tang. Maximizing Monotone DR-submodular Continuous Functions by Derivative-free Optimization.
– *arXiv: 1810.06833*, 2018.

RESEARCH EXPERIENCE

- **Submodular Maximization** 01/2017 – Present
University of Science and Technology of China, Anhui, China
Advisor: Dr. Chao Qian
 - **Maximizing monotone submodular functions over integer lattice**
 - Considered the multiset selection problem with cardinality constraints, and generalized it to general monotone submodular functions on integer lattice.
 - Proposed a randomized algorithm that has strong theoretical guarantee and practical effectiveness.
 - C. Qian, **Y. Zhang**, K. Tang, and X. Yao. On multiset selection with size constraints. In *AAAI*, 2018
 - **Maximizing continuous submodular functions over convex polytope constraints**
 - Proposed the first derivative-free algorithm with the same best approximation guarantee for continuous DR-submodular maximization problem over convex polytope constraints.
 - **Y. Zhang**, C. Qian, K. Tang. Maximizing Monotone DR-submodular Continuous Functions by Derivative-free Optimization. *arXiv: 1810.06833*.
- **Distribution Iterative Hard Thresholding** 07/2018 – Present
University of Illinois Urbana-Champaign, Illinois, USA
Advisor: Prof. Sanmi Koyejo
 - Design and analysis IHT-style optimization algorithms in a Bayesian setting, which is essentially a non-convex optimization problem.

- Preliminary theoretical and numerical results have been obtained and refinements are being worked on.
- **Intelligent PC File System** **03/2017 – 07/2017**
Advisor: Prof. Kai Xing
Course project for Operating Systems
 - Designed a smart Graph Database File System that interacts with users more intelligently. (**Me as team leader**)
 - Used Markov Model and Variable Order Markov Model based on LZ78 algorithm to design the prediction algorithm.
 - Used FUSE (File System in User Space), Neo4j (a leading graph database) and MongoDB to implement our file system.
- **Transmission Line Losses Analysis and Correction** **03/2016 – 06/2016**
Individual Project
 - Learned about Transmission Line Model and gave its analysis.
 - Designed an algorithm that can correct losses in high frequency signal transmission.
 - Received second prize in USTC Research Competition on Electromagnetism.

RELEVANT COURSES

• Data Structure and Database System	95/100
• Linear Algebra	99/100
• Graph Theory	91/100
• Operations Research	92/100
• Equations of Mathematical Physics	90/100
• Foundations of Artificial Intelligence	95/100
• Parallel Computing (Graduate Level)	95/100
• Introduction to Stochastic Process	A+

HONORS AND AWARDS

• Guo Moruo Scholarship (Top 1%)	2018
• Outstanding Student Scholarship Golden Award (Top 3%)	2017
• Member of Talent Program in Computer and Information Science and Technology, USTC	2016 - present
• Outstanding Student Scholarship Golden Award (Top 3%)	2016
• Second Prize in USTC Research Competition on Electromagnetism	2016

PROGRAMMING SKILLS

- C++, Python, MATLAB, LaTeX, Linux

EXTRACURRICULAR ACTIVITIES

- Soccer:
 - Goalkeeper in soccer team of department of Physics.
 - Goalkeeper in team that entered top 16 in USTC 8-player soccer competition.
- Volunteering
 - Volunteer in Publicity Outreach Office of Fangcao Young Volunteers Association of USTC.