

Guangxu Yang

Curriculum Vitae

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Education

- 2019.09–2022.06 **M.E. in Information and Communication Engineering**, University of Electronic Science and Technology of China (UESTC), Chengdu, China, GPA: 3.77/4.
- 2015.09–2019.06 **B.E. in Network Engineering**, University of Electronic Science and Technology of China (UESTC), Chengdu, China, GPA: 3.89/4, Ranking: 5/147.

Research Interests

- My research interests lie in computational complexity theory. Previously, I have been worked on communication complexity, such as lifting theorems and information complexity.

Research Experiences

- 2020.04–Current **Research Internship**, University of Southern California , Online in Zoom.
Advisors: Jiapeng Zhang
- Summer 2021 **Research Internship**, Laboratory For Quantum and Theoretical Computer Science, Institute of Computing Technology, Chinese Academy of Sciences.
Advisors: Qian Li
- Summer 2019 **Research Internship**, CS Theory Group, Nanjing University.
Advisors: Penghui Yao

Publications

- Lifting Theorems Meet Information Complexity** (In preparation)
- Jack DePascale, Guangxu Yang, Jiapeng Zhang (alphabetical order)
- We adopt the idea of Raz-McKenzie's simulation [RM99,GPW15] to obtain a simple proof of the $\Omega(n/k)$ deterministic and $\Omega(n/k^2)$ randomized lower bounds on communication complexity of the k -party set disjointness function with the unique intersection promise in the blackboard model.
- Simulation Methods in Communication Lower Bounds, Revisited** (In preparation)
- Jack DePascale, Guangxu Yang, Jiapeng Zhang (alphabetical order)
- We prove a lifting theorem for block sensitivity via a new simulation technique. We show that $\mathbf{P}^{\text{cc}}(f \circ g^n) = \Omega(\log q \cdot \text{bs}(f))$ and $\mathbf{BPP}^{\text{cc}}(f \circ g^n) = \Omega(\log q \cdot \text{bs}(f))$ for any for all gadgets $g : [q] \times [q] \rightarrow \{0, 1\}$ with large constant q that have exponentially-small discrepancy.

Languages

- Chinese:** Mother tongue
- English:** TOEFL iBT: (Reading 26 , Listening 27, Speaking 17, Writing 20)