Guangxu Yang

Curriculum Vitae

✉ yanggx187@gmail.com
⌂ https://guangxu-yang.github.io

Education

2019.09– **M.E. in Information and Communication Engineering**, University of Electronic Science
2022.06 and Technology of China (UESTC), Chengdu, China, GPA: 3.77/4.

2015.09– **B.E. in Network Engineering**, University of Electronic Science and Technology of China
2019.06 (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– **Research Internship**, University of Southern California , Online in Zoom.
Current 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 $\Omega(n/k)$ derministic 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 $\mathbf{P}^{\mathrm{cc}}(f \circ g^n) = \Omega(\log q \cdot \mathrm{bs}(f))$ and $\mathbf{BPP}^{\mathrm{cc}}(f \circ g^n) = \Omega(\log q \cdot \mathrm{bs}(f))$ for any for all gadgets $g : [q] \times [q] \to \{0,1\}$ with $q > 2$ that have exponentially-small discrepancy.

Languages

○ **Chinese:** Mother tongue

○ **English:** TOEFL iBT: (Reading 26 , Listening 27, Speaking 17, Writing 20)