Dingli Yu

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About Me

I am a first year PhD student in Department of Computer Science at Princeton University. I am broadly interested in Theoretical Computer Science. Previously, I finished my bachelor's degree of computer science in Institute for Interdisciplinary Information Sciences at Tsinghua University.

Education

2014–2018 Bachelor of Computer Science, *Tsinghua University*, Beijing
Yao Class, Institute for Interdisciplinary Information Sciences
GPA: 92/100 *Rank*: 2/30

2018–Present PhD of Computer Science, *Princeton University*, Princeton
Department of Computer Science

Research Experience

Spring 2018 Student Intern, *Tsinghua University*
Supervised by **Prof. Pingzhong Tang**

Group-Strategyproof mechanisms for facility location with Euclidean distance

- Characterized group-strategyproof mechanisms in facility location game under Euclidean distance.

Optimize Revenue in Auction Design with Guidance from Neural Networks

- Used neural networks to generate menus for multi-item multi-buyer auction.
- The menus are functions of the other players' valuations.

Spring 2017 Student Intern, *Carnegie Mellon University*
Supervised by **Prof. Ariel Procaccia**

Fair Rent Division on a Budget

- Designed a polynomial-time algorithm to determine whether there exist envy-free allocations in rent division under a budget.
- The algorithm gives a polynomial-time implementation of the budget-constrained maximin solution.

A Partisan Districting Protocol with Provably Nonpartisan Outcomes

- Analyzed a protocol that leverages competition between two political entities to create a reasonable districting.
- Defined a measurement for protocols, and then proved the properties of our protocol in idealized settings.

Fall 2016 Economics and Computation Course Project, *Tsinghua University*
Supervised by **Prof. Pingzhong Tang**

Balanced Outcomes in Wage Bargaining

- Generalized the seminal works on modeling and computing balanced outcomes in unit-capacity trading networks.
- Defined and computed the balanced outcome concept in the so-called wage bargaining network where agents on one side (the employers side) may have multiple capacity.

Publication

- **Fair Rent Division on a Budget.**
  Ariel D. Procaccia, Rodrigo A. Velez, and Dingli Yu.
  AAAI-18: *Proc. 32nd AAAI Conference on Artificial Intelligence*, Feb 2018.

Working papers

- **Group-Strategyproof mechanisms for facility location with Euclidean distance.**
  Pingzhong Tang, Dingli Yu, and Shengyu Zhao.
- **A Partisan Districting Protocol with Provably Nonpartisan Outcomes.**
  Wesley Pegden, Ariel D. Procaccia, and Dingli Yu.
  Press coverage: The Washington Post (op-ed), Slate, Pittsburgh Post-Gazette, New Scientist, Axios, WDET, Wisconsin Public Radio.
- **Balanced Outcomes in Wage Bargaining.**
  Pingzhong Tang, and Dingli Yu.

Awards

July 2018	Beijing Area Outstanding Graduate Award.
Sept. 2017	**Yao Award, Second Prize**
Jan. 2017	Tsinghua-Qualcomm Scholarship
Dec. 2016	Tsinghua-CASC Scholarship, Second Prize
Dec. 2015	Tsinghua-Evergrande Scholarship
May 2015	**The 39$^{\text{th}}$ Annual ACM-ICPC World Finals, Gold Medal**
Sept. 2014	Tsinghua University Scholarship for Freshman, First Prize
Aug. 2014	**The 26$^{\text{th}}$ International Olympiad in Informatics, Gold Medal**
July. 2013	**The 30$^{\text{th}}$ CCF National Olympiad in Informatics, First Place**