

Warut Suksompong

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Current Position

- **Department of Computer Science, University of Oxford** Oxford, UK
Research Associate (Supervisor: Prof. Edith Elkind) 2018–2020

Education

- **Stanford University** Stanford, USA
PhD in Computer Science 2014–2018
Thesis title: Resource Allocation and Decision Making for Groups
Advisor: Prof. Tim Roughgarden
- **Stanford University** Stanford, USA
MS in Computer Science 2014–2016
- **Massachusetts Institute of Technology** Cambridge, USA
MEng in Electrical Engineering and Computer Science 2013–2014
Thesis Title: Bounds on Multithreaded Computations by Work Stealing
Advisor: Prof. Charles Leiserson
- **Massachusetts Institute of Technology** Cambridge, USA
BS in Computer Science and Engineering and in Mathematics (double major) 2009–2013
Minor in Economics
GPA: 5.0/5.0

Research Internships & Visits

- **Department of Computer Science, Technical University of Berlin** Berlin, Germany
Host: Prof. Markus Brill 5/2019
- **Division of Mathematical Sciences, Nanyang Technological University** Singapore
Host: Prof. Xiaohui Bei 12/2017, 9/2018
- **Computer Science Department, Carnegie Mellon University** Pittsburgh, USA
Host: Prof. Ariel Procaccia 7/2017–8/2017
- **Microsoft Research Cambridge** Cambridge, UK
Hosts: Dr. Ian Kash and Dr. Peter Key 6/2016–9/2016
- **Institute of Computer Science, Technical University of Munich** Munich, Germany
Host: Prof. Felix Brandt 6–8/2014, 9–11/2017
- **Department of Mathematics, University of Minnesota, Twin Cities** Minneapolis, USA
Hosts: Prof. Victor Reiner and Prof. Dennis Stanton 6/2010–7/2010

Papers in Refereed Journals

1. Warut Suksompong, “On Black-Box Transformations in Downward-Closed Environments”, *Theory of Computing Systems*, Forthcoming.

2. Ian A. Kash, Peter Key, and Warut Suksompong, “Simple Pricing Schemes for the Cloud”, *ACM Transactions on Economics and Computation*, Vol. 7, No. 2, Article 7, May 2019.
3. Warut Suksompong, “Fairly Allocating Contiguous Blocks of Indivisible Items”, *Discrete Applied Mathematics*, Vol. 260, May 2019, pp. 227–236.
4. Pasin Manurangsi and Warut Suksompong, “Computing a Small Agreeable Set of Indivisible Items”, *Artificial Intelligence*, Vol. 268, March 2019, pp. 96–114.
5. Felix Brandt, Markus Brill, Hans Georg Seedig, and Warut Suksompong, “On the Structure of Stable Tournament Solutions”, *Economic Theory*, Vol. 65, No. 2, March 2018, pp. 483–507.
6. Warut Suksompong, “Approximate Maximin Shares for Groups of Agents”, *Mathematical Social Sciences*, Vol. 92, March 2018, pp. 40–47.
7. Michael P. Kim, Warut Suksompong, and Virginia Vassilevska Williams, “Who Can Win a Single-Elimination Tournament?”, *SIAM Journal on Discrete Mathematics*, Vol. 31, No. 3, 2017, pp. 1751–1764.
8. Pasin Manurangsi and Warut Suksompong, “Asymptotic Existence of Fair Divisions for Groups”, *Mathematical Social Sciences*, Vol. 89, September 2017, pp. 100–108.
9. Warut Suksompong, “Asymptotic Existence of Proportionally Fair Allocations”, *Mathematical Social Sciences*, Vol. 81, May 2016, pp. 62–65.
10. Florian Brandl, Felix Brandt, and Warut Suksompong, “The Impossibility of Extending Random Dictatorship to Weak Preferences”, *Economics Letters*, Vol. 141, April 2016, pp. 44–47.
11. Warut Suksompong, Charles E. Leiserson, and Tao B. Schardl, “On the Efficiency of Localized Work Stealing”, *Information Processing Letters*, Vol. 116, No. 2, February 2016, pp. 100–106.
12. Charles E. Leiserson, Tao B. Schardl, and Warut Suksompong, “Upper Bounds on Number of Steals in Rooted Trees”, *Theory of Computing Systems*, Vol. 58, No. 2, February 2016, pp. 223–240.
13. Felix Brandt, Markus Brill, and Warut Suksompong, “An Ordinal Minimax Theorem”, *Games and Economic Behavior*, Vol. 95, January 2016, pp. 107–112.
14. Warut Suksompong, “Scheduling Asynchronous Round-Robin Tournaments”, *Operations Research Letters*, Vol. 44, No. 1, January 2016, pp. 96–100.
15. Warut Suksompong, “Individual and Group Stability in Neutral Restrictions of Hedonic Games”, *Mathematical Social Sciences*, Vol. 78, November 2015, pp. 1–5.
16. Sebastian A. Csar, Rik Sengupta, and Warut Suksompong, “On a Subposet of the Tamari Lattice”, *Order*, Vol. 31, No. 3, March 2014, pp. 337–363.

Papers in Proceedings of Refereed Conferences

1. Xiaohui Bei, Xinhang Lu, Pasin Manurangsi, and Warut Suksompong, “The Price of Fairness for Indivisible Goods”, in *Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI)*, August 2019, Forthcoming.
2. Edith Elkind, Jiarui Gan, Ayumi Igarashi, Warut Suksompong, and Alexandros A. Voudouris, “Schelling Games on Graphs”, in *Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI)*, August 2019, Forthcoming.
3. Maria Kyropoulou, Warut Suksompong, and Alexandros A. Voudouris, “Almost Envy-Freeness in Group Resource Allocation”, in *Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI)*, August 2019, Forthcoming.

4. Pasin Manurangsi and Warut Suksompong, “When Do Envy-Free Allocations Exist?”, in *Proceedings of the 33rd AAAI Conference on Artificial Intelligence (AAAI)*, January–February 2019, Forthcoming.
5. Hoon Oh, Ariel D. Procaccia, and Warut Suksompong, “Fairly Allocating Many Goods with Few Queries”, in *Proceedings of the 33rd AAAI Conference on Artificial Intelligence (AAAI)*, January–February 2019, Forthcoming.
6. Christian Saile and Warut Suksompong, “Robust Bounds on Choosing from Large Tournaments”, in *Proceedings of the 14th Conference on Web and Internet Economics (WINE)*, December 2018, pp. 393–407.
7. Tomer Ezra, Michal Feldman, Tim Roughgarden, and Warut Suksompong, “Pricing Multi-Unit Markets”, in *Proceedings of the 14th Conference on Web and Internet Economics (WINE)*, December 2018, pp. 140–153.
8. Erel Segal-Halevi and Warut Suksompong, “Democratic Fair Allocation of Indivisible Goods”, in *Proceedings of the 27th International Joint Conference on Artificial Intelligence (IJCAI)*, July 2018, pp. 482–488.
9. Xiaohui Bei, Guangda Huzhang, and Warut Suksompong, “Truthful Fair Division without Free Disposal”, in *Proceedings of the 27th International Joint Conference on Artificial Intelligence (IJCAI)*, July 2018, pp. 63–69.
10. Ian A. Kash, Peter Key, and Warut Suksompong, “Simple Pricing Schemes for the Cloud”, in *Proceedings of the 13th Conference on Web and Internet Economics (WINE)*, December 2017, pp. 311–324.
11. Warut Suksompong, “Fairly Allocating Contiguous Blocks of Indivisible Items”, in *Proceedings of the 10th International Symposium on Algorithmic Game Theory (SAGT)*, September 2017, pp. 333–344.
12. Warut Suksompong, “Approximate Maximin Shares for Groups of Agents”, in *Proceedings of the 10th International Symposium on Algorithmic Game Theory (SAGT)*, September 2017, p. XIV.*
13. Warut Suksompong, “On Black-Box Transformations in Downward-Closed Environments”, in *Proceedings of the 10th International Symposium on Algorithmic Game Theory (SAGT)*, September 2017, p. XV.*
14. Pasin Manurangsi and Warut Suksompong, “Asymptotic Existence of Fair Divisions for Groups”, in *Proceedings of the 10th International Symposium on Algorithmic Game Theory (SAGT)*, September 2017, pp. XII–XIII.*
15. Pasin Manurangsi and Warut Suksompong, “Computing an Approximately Optimal Agreeable Set of Items”, in *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI)*, August 2017, pp. 338–344.
16. Warut Suksompong, “Assigning a Small Agreeable Set of Indivisible Items to Multiple Players”, in *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI)*, July 2016, pp. 489–495.
17. Michael P. Kim, Warut Suksompong, and Virginia Vassilevska Williams, “Who Can Win a Single-Elimination Tournament?”, in *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI)*, February 2016, pp. 516–522.
18. Sebastian A. Csar, Rik Sengupta, and Warut Suksompong, “On a Subposet of the Tamari Lattice”, in *Proceedings of the 24th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC)*, July–August 2012, pp. 567–578.

*The paper was accepted to the conference as a full paper but published as an abstract.

Papers in Informal Proceedings of Refereed Workshops

1. Erel Segal-Halevi and Warut Suksompong, “Democratic Fair Allocation of Indivisible Goods”, in *Proceedings of the 7th International Workshop on Computational Social Choice (COMSOC)*, June 2018.
2. Christian Saile and Warut Suksompong, “Robust Bounds on Choosing from Large Tournaments ”, in *Proceedings of the 7th International Workshop on Computational Social Choice (COMSOC)*, June 2018.
3. Ian A. Kash, Peter Key, and Warut Suksompong, “Simple Pricing Schemes for the Cloud”, in *Proceedings of the 12th Workshop on the Economics of Networks, Systems and Computation (NetEcon)*, June 2017.
4. Michael P. Kim, Warut Suksompong, and Virginia Vassilevska Williams, “Who Can Win a Single-Elimination Tournament?”, in *Proceedings of the 6th International Workshop on Computational Social Choice (COMSOC)*, June 2016.

Theses

1. Warut Suksompong, “Resource Allocation and Decision Making for Groups,” PhD Thesis, *Stanford University*, August 2018.
2. Warut Suksompong, “Bounds on Multithreaded Computations by Work Stealing,” Master’s Thesis, *Massachusetts Institute of Technology*, June 2014.

Honors and Awards

- **Stanford Graduate Fellowship** 2014–2017
Full scholarship for three years of PhD study to support exceptional incoming and continuing doctoral students at Stanford
- **Siebel Scholar** 2013–2014
Awarded annually for academic excellence and demonstrated leadership to 85 top students from the world’s leading graduate schools
- **King’s Scholarship** 2008–2013
Full scholarship awarded annually to 9 students in Thailand for undergraduate study abroad
- **International Mathematical Olympiad (IMO)** 2007–2008
Gold medal, 2008, Bronze medal, 2007

Teaching

- **Class Tutor**, University of Oxford
 - Computational Game Theory: Michaelmas 2018
- **Teaching Assistant**, Stanford University
 - The Modern Algorithmic Toolbox (CS 168): Spring 2017, Spring 2018
 - Incentives in Computer Science (CS 269I): Fall 2016

Services

- **Program Committee Member**
 - International Joint Conference on Artificial Intelligence (IJCAI): 2019 (Macao, China), 2018 (Stockholm, Sweden)[†]

[†]Recognized as a distinguished program committee member

- AAAI Conference on Artificial Intelligence (AAAI): 2019 (Honolulu, USA)
- ACM Conference on Economics and Computation (EC): 2019 (Phoenix, USA)
- International Symposium on Algorithmic Game Theory (SAGT): 2018 (Beijing, China)
- Workshop on Theoretical Aspects of Fairness (WTAF): 2019 (Patras, Greece)
- **Journal Reviewer:** ACM Transactions on Economics and Computation, Artificial Intelligence, Autonomous Agents and Multi-Agent Systems, Computers & Operations Research, Economic Theory, Journal of Combinatorial Optimization, Mathematical Social Sciences, SIAM Journal on Computing, Social Choice and Welfare, Theoretical Computer Science, Theory and Decision
- **Conference Reviewer:** 22nd International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2019), 12th International Symposium on Algorithmic Game Theory (SAGT 2019), 19th ACM Conference on Economics and Computation (EC 2018), 26th Annual European Symposium on Algorithms (ESA 2018), 26th International Joint Conference on Artificial Intelligence (IJCAI 2017), 25th International Joint Conference on Artificial Intelligence (IJCAI 2016)
- **Problem Selection Committee Member & Coordinator**, International Mathematical Olympiad, 2015
- **Grader**, USA Mathematical Olympiad, 2010–11, 2013–15, 2018

Selected Talks

- “Fair Division of Indivisible Items: Asymptotics and Graph-Theoretic Approaches”, Tutorial, *28th International Joint Conference on Artificial Intelligence (IJCAI)*, Macao, China, August 2019 (with Ayumi Igarashi).
- “Schelling Games on Graphs”, *Algorithm Engineering Research Seminar*, Hasso Plattner Institute, Potsdam, Germany, May 2019.
- “Almost Envy-Freeness in Group Resource Allocation”, *Research Colloquium on Economics and Computation*, Technical University of Berlin, Germany, May 2019.
- “Asymptotic Results in Fair Division”, *Kolloquium Mathematische Informatik*, Goethe University Frankfurt, Germany, February 2019.
- “Fairly Allocating Many Goods with Few Queries”, *6th Day on Computational Game Theory*, Hasso Plattner Institute, Potsdam, Germany, February 2019.
- “Simple Pricing Schemes for the Cloud”, *Google Techtalk*, Google Mountain View, USA, January 2018.
- “Computing a Small Agreeable Set of Indivisible Items”, *Division of Mathematical Sciences Seminar*, Nanyang Technological University, Singapore, December 2017.
- “On the Structure of Stable Tournament Solutions”, *Theory Lunch*, Stanford University, USA, March 2017.
- “An Ordinal Minimax Theorem”, *5th World Congress of the Game Theory Society (GAMES)*, Maastricht, Netherlands, July 2016.

Skills

- **Programming:** Python, Java, C/C++, HTML, CSS, JavaScript, \LaTeX , MATLAB
- **Languages:** Thai (native), English, French, German