Clayton Thomas

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Education and Employment

2023–2025 **Postdoctoral Researcher**, *Microsoft Research (New England), Economics and Computation Group*

2018–2023 **Ph.D. & M.S. in Computer Science**, *Princeton University*, GPA: *3.95*

2014–2017 **B.S. in Mathematics & in Computer Science**, *Purdue University*, GPA: *4.00*

Papers

[1] Yannai Gonczarowski, Ori Heffetz, and Clayton Thomas. "Strategyproofness-Exposing Descriptions of Matching Mechanisms". Reject and Resubmit at the American Economic Review. New version of "Strategyproofness-Exposing Mechanism Descriptions" (below). 2024. URL: https://clathomasprime.github.io/papers/SeDoMM.pdf.

[2] Aadityan Ganesh, Clayton Thomas, and S. Matthew Weinberg. "Revisiting the Primitives of Transaction Fee Mechanism Design". In: *Proceedings of the 25th ACM Conference on Economics and Computation (EC)*. 2024. URL: https://arxiv.org/abs/2409.18166.

[3] Yannai Gonczarowski and Clayton Thomas. "Structural Complexities of Matching Mechanisms". In: *Proceedings of the 56th Annual ACM SIGACT Symposium on Theory of Computing (STOC)*. 2024. URL: https://arxiv.org/abs/2212.08709.

[4] Yannai A. Gonczarowski, Ori Heffetz, Guy Ishai, and Clayton Thomas. "Describing Deferred Acceptance and Strategyproofness to Participants: Experimental Analysis". In: *Proceedings of the 25rd ACM Conference on Economics and Computation (EC)*. In Review at Econometrica. 2024. URL: https://arxiv.org/abs/2410.07566.

[5] Shiri Ron, Clayton Thomas, S. Matthew Weinberg, and Qianfan Zhang. "Communication Separations for Truthful Auctions: Breaking the Two-Player Barrier". In: *65th IEEE Symposium on Foundations of Computer Science (FOCS)*. 2024. URL: https://arxiv.org/abs/2409.08241.

[6] Clayton Thomas. "Priority-Neutral Matching Lattices Are Not Distributive". Working Paper. 2024. URL: https://arxiv.org/abs/2404.02142.

[7] Yannai Gonczarowski, Ori Heffetz, and Clayton Thomas. "Strategyproofness-Exposing Mechanism Descriptions". In: *Proceedings of the 24rd ACM Conference on Economics and Computation (EC)*. 2023. URL: https://arxiv.org/abs/2209.13148.

[8] Linda Cai and Clayton Thomas. "The short-side advantage in random matching markets". In: *Proceedings of the 5th SIAM Symposium on Simplicity in Algorithms (SOSA)*. 2022. URL: https://arxiv.org/abs/1910.04406.

[9] Itai Ashlagi, Mark Braverman, Amin Saberi, Clayton Thomas, and Geng Zhao. "Tiered Random Matching Markets: Rank Is Proportional to Popularity". In: *12th Innovations in Theoretical Computer Science Conference (ITCS)*. 2021. URL: https://arxiv.org/abs/2009.05124.

[10] Aviad Rubinstein, Raghuvansh R Saxena, Clayton Thomas, S Matthew Weinberg, and Junyao Zhao. "Exponential communication separations between notions of selfishness". In: *Proceedings of the 53rd Annual ACM SIGACT Symposium on Theory of Computing (STOC)*. 2021. URL: https://arxiv.org/abs/2012.14898.

[11] Clayton Thomas. "Classification of Priorities Such That Deferred Acceptance is OSP Implementable". In: *Proceedings of the 22nd ACM Conference on Economics and Computation (EC)*. 2021. URL: https://arxiv.org/abs/2011.12367.

[12] Linda Cai, Clayton Thomas, and S. Matthew Weinberg. "Implementation in Advised Strategies: Welfare Guarantees from Posted-Price Mechanisms When Demand Queries Are NP-Hard". In: *11th Innovations in Theoretical Computer Science Conference (ITCS)*. 2020. URL: https://arxiv.org/abs/1910.04342.

[13] Linda Cai and Clayton Thomas. "Representing All Stable Matchings by Walking a Maximal Chain". Mimeo. 2019. URL: https://arxiv.org/abs/1910.04401.

[14] Venkata Gandikota, Elena Grigorescu, Clayton Thomas, and Minshen Zhu. "Maximally recoverable codes: The bounded case". In: *In Allerton Conference on Communication, Control, and Computing*. 2017. URL: https://ieeexplore.ieee.org/document/8262862.

Leadership and Service

2023-2024 **Microsoft Research New England Econ Seminar Co-Organizer**

2023 & 2024 **SIGecom EC Program Committee Member**

2022-2024 **Journal Referee**
ACM TEAC (x 3), Management Science, International Journal of Game Theory, Experimental Economics, Games and Economic Behavior

2019-2024 **Subreviewer for theoretical CS conferences**
WINE'19, ESA'20, SODA'20, WINE'20, ITCS'21, SODA'21, ICALP'21, WINE'21, ITCS'22, ESA'22, SODA'22, STOC'22, FOCS'23, SODA'23, STOC'24, ICALP '24, SODA'24

2022 **SIGecom Seminar Series Co-organizer**

2022 **SIGecom EC'22 Website Chair / Student General Chair**
Updated website for 2022 ACM Conference on Economics and Computation. Screen-recorded conference tutorials.

March 2021 **Co-Organized Princeton TCS Student Theory Day**

2019-2020 **Princeton CS Department Preceptor**
For "Reasoning about Computation" and "Economics and Computation". Lectured in precept, graded homework, answered online forum questions. Assisted in the transition to online instruction during Spring 2020.

2019-2020 **Gems of TCS Reading Group Organizer**

Invited Talks

October 2024 **DIMACS Workshop on Simplicity in Mechanism Design and Preference Elicitation**

November 2023 **Harvard University: CS Theory Seminar**

January 2023 **Northwestern/TTIC CS: 2022 Chicago Junior Theorists Workshop**

December 2022 **Harvard University: EconCS Seminar**

December 2022 **University of Tokeyo Market Design Center: Rising Stars in Market Design**

Non-Academic Work Experience

Summer 2016 and 2017 **Facebook Software Engineering Intern**, *Menlo Park, CA*
Worked on Haskell code quality, debugging, and efficiency in Facebook's Sigma infrastructure. Worked on Retrie, a Haskell refactoring tool.

Summer 2015 **Salesforce Software Engineering Intern**, *Indianapolis, IN*
Created a Google Chrome developer extension for debugging installation of Predictive Intelligence embedded Javascript.

Awards and Honors

2022-2023 **Wallace Memorial Fellowship in Engineering**
Awarded to 3 students across Princeton School of Engineering.

2023 **Siebel Scholar award**
Thomas and Stacey Siebel Foundation.

2021 **Princeton University School of Engineering and Applied Science Award for Excellence**

2018 & 2020 **NSF GRFP Honorable Mention**

2018 **CRA Outstanding Undergraduate Researcher Award Honorable Mention**

2014–2017 **Purdue University Dean's List and Semester Honors**

2015 **Neel Scholarship**
Awarded by the computer science department for performance in coursework.

2014–2017 **National Merit Corporate Scholarship**
Provided by Dow AgroSciences.