

MALLESH M PAI

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| CONTACT INFORMATION | Department of Economics Rice University 6100 Main St, Houston TX 77005 USA. | +1 773 273 9684 mallesh.pai@rice.edu http://www.malleshmpai.com |
| EMPLOYMENT | Department of Economics, Rice University Lay Family Chair Professor Lay Family Chair Associate Professor Associate Professor Assistant Professor | Jul 2025–present Jul 2021–Jun 2025 Jul 2019–Jun 2021 Jul 2016–Jun 2019 |
| | Department of Economics, University of Pennsylvania Janice and Julian Bers Assistant Professor of the Social Sciences Assistant Professor Lecturer | Jul 2014–Jun 2016 Jul 2011–Jun 2014 Jul 2010–Jun 2011 |
| OTHER AFFILIATIONS | CEPR Research Fellow RAND Journal of Economics Associate Editor | Jan 2020–present Oct 2023– present |
| RESEARCH INTERESTS | Mechanism Design, Economic Theory, Decision Theory, Statistical learning/Statistical Decision Theory | |
| EDUCATION | NORTHWESTERN UNIVERSITY, Evanston, IL, USA Ph.D, Managerial Economics and Strategy | Sep 2004–Jun 2010 |
| | INDIAN INSTITUTE OF TECHNOLOGY, New Delhi, India Bachelor of Technology, Computer Science and Engineering | Jul 2000–May 2004 |
| GRANTS | Senior Personnel, NIH Grant R01CA257814, “SCH: Personalized Rescheduling of Adaptive Radiation Therapy for Head & Neck Cancer.” 2021 – 2025, Award Amount: ~ \$1mn. Joint with: Andrew Schaefer (Rice), Clifton Fuller (MDAnderson) | |
| | PI, NSF Grant CCF-1763349, “Foundations of Fair Data Analysis.” 2018 – 2022, Award Amount: ~ \$250,000 (Rice), Joint with: Sampath Kannan, Aaron Roth, Rakesh Vohra (UPenn). | |
| | Co-PI, NSF ICES Grant CCF-1101389, “Economic Foundations of Digital Privacy.” 2011 – 2015, Award amount: ~ \$990,000, Joint with: Sham Kakade, Michael Kearns, Aaron Roth (UPenn). | |
| AWARDS | Retail and Pricing SIG Best Paper (for Algorithmic Collusion), 2023. American Marketing Association | |
| | AEJ:Microeconomics Best Paper (for Discrimination via Symmetric Auctions), 2020. American Economic Association | |
| | Ralph O’Connor Award for Distinction in Teaching and Research in Economics, 2018 (Rice) | |
| | Irving B. Kravis Prize for Distinction in Undergraduate Teaching, 2015 (UPenn) | |
| | Aditya Birla Scholar, 2000 (IIT Delhi) | |

1. Indirect Persuasion (with Rahul Deb and Maher Said). Forthcoming, *Journal of Political Economy*.
2. Strategy Investments in Matrix Games (with Raul Garcia, Seyedmohammadhossein Hosseinian and Andrew J. Schaefer). *Optimization Letters*, 18, June 2024, 1771–1789.
3. Competing Models (with Jose Montiel-Olea, Pietro Ortoleva, Andrea Prat). *Quarterly Journal of Economics*, 137(4), November 2022, 2419–2457.
4. Continuous Implementation with Direct Revelation Mechanisms (with Yi-Chun Chen and Manuel Mueller-Frank). *Journal Of Economic Theory*, 201, April 2022, 105422.
5. Testing Alone is Insufficient (with Rahul Deb, Akhil Vohra, Rakesh Vohra). *Review of Economic Design*, 26, 2022, 1–21.
6. (Bad) Reputation in Relational Contracting (with Rahul Deb and Matt Mitchell). *Theoretical Economics*, 17(2), 2022, 763–800.
7. Algorithmic Collusion: Supra-competitive Prices via Independent Algorithms (with Karsten Hansen and Kanishka Misra). *Marketing Science: Frontiers*, 40(1), January 2021, 1–12.
8. Evaluating Strategic Forecasters (with Rahul Deb and Maher Said). *American Economic Review*. 108(10), October 2018, 3057–3103.
9. Mental Health Stigma (with Prashant Bharadwaj and Agne Suziedelyte). *Economics Letters*. 159, October 2017, 57–60.
10. Discrimination via Symmetric Auctions (with Rahul Deb). *American Economic Journal: Microeconomics*. 9(1), February 2017, 275–314.
11. An Anti-Folk Theorem for Large Repeated Games with Imperfect Monitoring (with Aaron Roth and Jon Ullman). *ACM Transactions in Economics and Computation*, 5(2), October 2016.
12. Social Learning with Costly Search (with Manuel Mueller-Frank). *American Economic Journal: Microeconomics*, 8(1), February 2016, 83–109.
13. Optimal Auctions for Financially Constrained Bidders (with Rakesh Vohra), *Journal of Economic Theory*, 150, March 2014, 383–425.
14. Coarse Decision Making and Overfitting (with Nabil Al-Najjar), *Journal of Economic Theory*, 150, March 2014, 467–486.
15. The Geometry of Revealed Preference (with Rahul Deb), *Journal of Mathematical Economics*, 50, January 2014, 203–207.
16. Optimal Dynamic Auctions and Simple Index Rules (with Rakesh Vohra), *Mathematics of Operations Research*, 38(4), November 2013, 682–697.

1. Measuring CEX-DEX Extracted Value and Searcher Profitability: The Darkest of the MEV Dark Forest (with Fei Wu, Danning Sui and Thomas Thiery). In Proceedings, *7th Conference on Advances in Financial Technologies (AFT)* 2025.
2. How Much Should You Pay for Restaking Security? (with Tarun Chitra). In Proceedings, *Workshop in Internet Economics (WINE)* 2024.
3. Optimizing Exit Queues for Proof-of-Stake Blockchains: A Mechanism Design Approach (with Michael Neuder and Max Resnick). In Proceedings, *6th Conference on Advances in Financial Technologies (AFT)* 2024.
4. Censorship Resistance in On-chain Auctions (with Elijah Fox and Max Resnick). In Proceedings of *5th Conference on Advances in Financial Technologies (AFT)* 2023.
5. The Centralizing Effects of Private Order Flow on Proposer Builder Separation (with Tivas Gupta and Max Resnick). In Proceedings of *5th Conference on Advances in Financial Technologies (AFT)* 2023.
6. Taxing Externalities without Hurting the Poor (with Philipp Strack). In Proceedings of *24th ACM Conference on Electronic Commerce (EC)* 2023.
7. The Wisdom of the Crowd and Higher-Order Beliefs (with Yi-Chun Chen and Manuel Mueller-Frank). Proceedings of *24th ACM Conference on Electronic Commerce (EC)* 2023.
8. Online Minimax Multiobjective Optimization: Multicalibrating and Other Applications (with Daniel Lee, Georgy Noarov, Aaron Roth). In Proceedings of *NEURIPS*, 2022
9. Online Multivalid Learning: Means, Moments, and Prediction Intervals (with Varun Gupta, Christopher Jung, Georgy Noarov and Aaron Roth). In Proceedings of *Innovations in Theoretical Computer Science (ITCS)*, 2022.

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| | <ol style="list-style-type: none"> 11. Fair Prediction with Endogenous Behavior (with Changwa Lee, Christopher Jung, Sampath Kannan, Aaron Roth and Rakesh Vohra), In Proceedings of the <i>21st ACM Conference on Electronic Commerce (EC)</i>, 2020. 12. Fairness Incentives for Myopic Agents (with Sampath Kannan, Michael Kearns, Jaimie Morgenstern, Aaron Roth, Rakesh Vohra and Zhiwei Hu), In Proceedings of the <i>18th ACM Conference on Electronic Commerce (EC)</i>, 2017. 13. The Strange Case of Privacy in Equilibrium Models (with Rachel Cummings, Katrina Liggett and Aaron Roth), In Proceedings of the <i>17th ACM Conference on Electronic Commerce (EC)</i>, 2016. 14. Mechanism Design in Large Games: Incentives and Privacy (with Michael Kearns, Aaron Roth and Jon Ullman), in Proceedings of <i>Innovations in Theoretical Computer Science (ITCS)</i>, 2014. 15. Ironing in Dynamic Revenue Management: Posted Prices and Biased Auctions (with Rahul Deb), In Proceedings of the <i>Symposium on Discrete Algorithms (SODA)</i>, 2013. 16. Auctions on a Supply Chain (with Jon Feldman, Vahab Mirrokni and S. Muthukrishnan). In Proceedings of the <i>11th ACM Conference on Electronic Commerce (EC)</i>, 2010. |
| OTHER PUBLICATIONS | <ol style="list-style-type: none"> 1. Economist’s Note: Collusive Outcomes via Pricing Algorithms (with Karsten Hansen and Kanishka Misra), <i>Journal of European Competition Law and Practice</i>, 2021. 2. Mechanism Design in Large Games: Incentives and Privacy (with Michael Kearns, Aaron Roth and Jon Ullman), <i>American Economic Review: Papers & Proceedings</i>, May 2014. 3. Privacy and Mechanism Design, <i>SIGecom Exchanges</i>, 13(1), June 2013. 4. Competition in Mechanisms, <i>SIGecom Exchanges</i>, 9(1), June 2010. |
| WORKING PAPERS | <ol style="list-style-type: none"> 1. The Wisdom of the Crowd and Higher-Order Beliefs (with Yi-Chun Chen and Manuel Mueller-Frank). Revise and Resubmit, <i>Review of Economic Studies</i> 2. Signaling Design (with Matteo Camboni, Mingzi Niu and Rakesh Vohra). Submitted. 3. Dynamic Incentives for Buy-Side Analysts (with Rahul Deb and Maher Said). 4. Taxing Externalities without Hurting the Poor (with Philipp Strack). 5. Strategic Advantages for Integrated Builders in MEV-Boost (with Max Resnick). 6. How Informed Do You Want Your Principal To Be? (with Rahul Deb and Anne-Katrin Roesler). 7. Dynamic Transaction Fee Mechanism Design (with Max Resnick). 8. An Analysis of Intent-Based Markets (with Tarun Chitra, Theo Diamandis, Kshitij Kulkarni). |
| PATENTS | Fair Discounting Auction (US Patent #7778869) |
| PROFESSIONAL EXPERIENCE | <div> <div>TEMPO INC., San Francisco, CA USA</div> <div>Chief Economist</div> <div>Aug 2025– present</div> </div> <div> <div>PARADIGM OPERATIONS, San Francisco, CA USA</div> <div>Research Advisor</div> <div>Feb 2025– present</div> </div> <div> <div>CONSENSYS INC., New York City, NY USA</div> <div>Principal Researcher</div> <div>Oct 2023– August 2025</div> </div> <div> <div>GOOGLE INC., New York City, NY, USA</div> <div>Intern, Google Research</div> <div>Jun 2009–Sep 2009</div> </div> <div> <div>MICROSOFT CORP., Redmond, WA, USA</div> <div>Research Intern, Theory Group, Microsoft Research</div> <div>Jun 2006–Sep 2006</div> </div> <div> <div>INDIAN STATISTICAL INSTITUTE, Delhi, India</div> <div>Visitor, Planning Department</div> <div>May 2004–Aug 2004</div> </div> |

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| PHD COMMITTEES | <p>Fei Li (2013, first job: University of North Carolina at Chapel Hill), Rudolph Henkel (co-chair, 2015, first job: Ursinus College), Yunan Li (2017, first job: City University of Hong Kong), Mustafa Dogan (2017, first job: Carnegie Mellon University (post-doc)), Nishant Ravi (2019, first job: Indian School of Business), Atara Oliver (co-chair, 2020, first job: ESMT Berlin (post-doc)), Kirill Evdokimov (2022, first job: Princeton Postdoc), Maksat Abasov (chair, 2022, first job: VISA), Mingzi Niu (chair, 2024 expected, first job: Hebrew University Postdoc, CUHK Business School AP).</p> | |
| REFeree SERVICES | <p>American Economic Review, American Economic Journal: Microeconomics, BE Journal of Theoretical Economics, Econometrica, Economic Theory, Economics Bulletin, European Journal of Operations Research, Games and Economic Behavior, International Economic Review, International Journal of Game Theory, International Journal of Industrial Organization, Journal of Economic Theory, Journal of Economics and Management Strategy, Journal of the European Economic Association, Journal of Mathematical Economics, Journal of Public Economics, Management Science, Mathematics of Operations Research, Operations Research, Review of Economic Design, Review of Economic Studies, Theoretical Economics, and Transactions on Economics and Computation.</p> <p>Reviewer for NSF, Israel Science Foundation and Chilean National Science and Technology Commission.</p> | |
| ORGANIZING COMMITTEE | <p>ESSET Gerzensee 2024, 24th ACM Conference on Economics and Computation (EC 2023), Texas Theory Camp (2022, 2016), 14th ACM Conference on Electronic Commerce (2013), New York Computer Science and Economics Day (2011), Ad Auctions Workshop (2012).</p> | |
| PROGRAM COMMITTEE | <p>EC 2024 SPC, TLDR 24 PC, WINE 2023 SPC, EC 2023 SPC, WINE 2022, SPC, WINE 2021, 19th ACM Conference on Economics and Computation (2018), 16th ACM Conference on Electronic Commerce (2015) (Senior PC), Workshop on Internet Economics, 14th ACM Conference on Electronic Commerce (2013) (Senior PC), 22nd International World Wide Web Conference (2013), 13th ACM Conference on Electronic Commerce (2012), 12th ACM Conference on Electronic Commerce (2011), 20th International World Wide Web Conference (2011), Workshop on Bayesian Mechanism Design (2011), Ad Auctions Workshop (2010).</p> | |
| DEPARTMENT AND UNIVERSITY SERVICE | Director of Undergraduate Studies, Economics | 2021–2024 |
| | Director of Managerial Studies Major | 2018–2021 |
| | Fellowships and Awards Committee | 2020–2024 |
| | Presidential Ad hoc Childcare Committee | 2023–2025 |

RECENT
SEMINARS AND
PRESENTATIONS

- 2025 Johns Hopkins University, Cornell University
- 2024 ASSA Meetings, Boston College, VSET, University of St Gallen Conference, UIUC, Brown University, ASU, Columbia CCE
- 2023 INSPER Brazil, FGV Brazil, CETC Vancouver, University of Chicago, ACM-EC London, Choice Symposium INSEAD, University of Southern California, Arizona State University, University of Arizona, Columbia GSB Digital Finance Workshop
- 2022 Paris Workshop on Reputation, ESSET Gerzensee, a16z Crypto Research, Southern Methodist University, Johns Hopkins University, NYU Stern, The Intersection of Eliciting and Evaluating Predictions at Northwestern University.
- 2021 Ashoka University, Wharton Business School, Caltech, London School of Economics, University of Bonn.
- 2020 UC Riverside Economic Theory Workshop, Shiv Nadar University, Queen Mary University of London, European University Institute.
- 2019 Royal Holloway, University College London, CETC Montreal, CCC Workshop on Fairness, D-TEA Paris, SITE Stanford, BFI Conference UChicago, Yale, Workshop in honor of Arunava Sen's 60th.
- 2018 University of North Carolina at Chapel Hill, IMS Singapore, SAET Taiwan, ESSET, 2nd Workshop on Information and Social Economics.
- 2017 University of British Columbia, Canadian Economic Theory Conference, Workshop on Networks and Information at JHU, PUC Chile, Texas Theory Camp, CIREQ Montreal Microeconomic Theory Conference, Law and Economic Theory Workshop at Rice (Discussant)
- 2016 Cornell University, Yale University, Google NYC, Texas A&M, Workshop on Information and Social Economics at Caltech, 2nd Occasional Workshop on Economic Theory at University of Graz, UPenn, UIowa, Workshop on the Economics of Privacy at Cambridge University.
- 2015 Columbia University, Duke University, Caltech, UC Berkeley, Workshop on Complexity and Simplicity in Economics at Simons Institute, Boston University, UCLA, Northwestern University.

August 2025