Yiling Chen

CONTACT INFORMATION

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Harvard University, SEAS
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RESEARCH INTERESTS

Artificial Intelligence and Economics and Computation, including topics such as Information elicitation, machine learning in strategic environments, fairness of computational systems, behavioral experiments, and algorithmic game theory.

EDUCATION

The Pennsylvania State University, University Park, PA — Aug. 2001 – Dec. 2005
Ph.D., Information Sciences and Technology

Iowa State University, Ames, IA — Aug. 2000 – Jul. 2001
Doctoral student in Economics

Tsinghua University, Beijing, China — Sep. 1996 – Jul. 1999
Master of Economics, majored in Finance

Renmin University of China, Beijing, China — Sep. 1992 – Jul. 1996
Bachelor of Economics, majored in Commodity Science

APPOINTMENTS

Gordon McKay Professor of Computer Science — Jul. 2015 – present
Harvard University, Paulson School of Engineering and Applied Sciences, Boston, MA

Director of Graduate Studies in Applied Mathematics — Jul. 2018 – Jun. 2023
Harvard University, Paulson School of Engineering and Applied Sciences, Boston, MA

Visiting Researcher — Jan. 2017 – Jun. 2017
Microsoft Research New England, Cambridge, MA

Director of Undergraduate Studies in Applied Mathematics — Jul. 2015 – Jun. 2016, Fall 2011
Harvard University, Paulson School of Engineering and Applied Sciences, Boston, MA

John L. Loeb Associate Professor of Natural Sciences — Jul. 2013 – Jun. 2015
Harvard University, Paulson School of Engineering and Applied Sciences, Boston, MA

Visiting Researcher — Jul. 2013 – Dec. 2013
Microsoft Research, New York, NY

Associate Professor of Computer Science — Jul. 2012 – Jun. 2015
Harvard University, Paulson School of Engineering and Applied Sciences, Boston, MA

Assistant Professor of Computer Science — Jul. 2008 – Jun. 2012
Harvard University, Paulson School of Engineering and Applied Sciences, Boston, MA

Postdoctoral Research Scientist — Feb. 2006 – Jun. 2008
Yahoo! Research, Microeconomics and Social Systems group, New York, NY

Assistant Professor — Sep. 2005 – Dec. 2005

Framingham State College, Department of Economics and Business Administration, Framingham, MA

Research Intern Jun. 2005 – Aug. 2005
Yahoo! Research, Pasadena, CA

Professional Auditor Aug. 1999 – Jun. 2000
PriceWaterhouseCoopers, Beijing, China

Honors and Awards

Best Paper Award, ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW), 2019.

Best Technical + Interdisciplinary Paper, ACM Conference on Fairness, Accountability, and Transparency (ACM FAT*), 2019.

Research Paper Honorable Mention, The Web Conference (WWW), 2018.

Shortlisted paper for the Best Paper Award, The 19th ACM Conference on Economics and Computation (EC), 2018.

The Penn State Alumni Association Early Career Award, 2016.

Advised Bo Waggoner's Ph.D. thesis, which received Honorable Mention for the 2016 ACM SIGecom Doctoral Dissertation Award.

Advised Xi (Alice) Gao's Ph.D. thesis, which received Honorable Mention for both the IFAAMAS-14 Victor Lesser Distinguished Dissertation Award and the 2014 ACM SIGecom Doctoral Dissertation Award.

Best Paper Award, International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2012.

AI's 10 to Watch, IEEE Intelligent Systems (Jan./Feb. 2011 issue).

NSF Early Career Development Award, 2010 - 2015.

Advised three Thomas Temple Hoopes Prize winning senior theses, 2008 - present.

Outstanding Paper Award, ACM Conference on Electronic Commerce (EC), 2008.

Honorable Mention, Decision Science Institute Doctoral Dissertation Competition, 2006.

Winner of the eBRC Doctoral Support Award Competition, 2004.

Teaching

AM 121: Introduction to Optimization Spring '09, '10, '11, '13, '14, Fall '15, '17, '18, '19, '20
– Undergraduate course

CS 128: Convex Optimization and Applications in Machine Learing Spring '22, '23, '24
– Undergraduate course
– The Spring'22 offering was under course number AM 122

CS 286R/236R: Topics at the Interface between CS and Economics Fall '08, '10, '11, '12, '22, '23, Spring '16, '18, '19, '20
– Graduate course, rotating topics

Research Advising

Postdoc Mentoring/Collaboration

Siddarth Srinivasan Sep. 2023 – present

Jessie Finocchiaro	Sep. 2022 – present
Gali Noti	Dec. 2020 – Dec. 2022
Fang-Yi Yu	Jun. 2020 – Aug. 2022
Alon Eldon	Sep. 2019 – Aug. 2021
Haifeng Xu	Sep. 2018 – Aug. 2019
Nisarg Shah	Sep. 2016 – Aug. 2017
Yang Liu	Jan. 2016 – Dec. 2018
Rafael Frongillo	Sep. 2014 – Jun. 2015
Or Sheffet (CRCS Fellow)	Jan. 2014 – Jun. 2015
Tanmoy Chakraborty (CRCS Fellow)	Jul. 2011 – Dec. 2012
Thomas Pfeiffer (FQEB Fellow)	Oct. 2010 – May 2012
Ariel Procaccia (CRCS Fellow & Rothschild Postdoctoral Fellow)	Sep. 2009 – Jul. 2011
Ian Kash (CRCS Fellow)	Sep. 2009 – Jul. 2011
Jennifer Wortman Vaughan (CI Fellow)	Sep. 2009 – Aug. 2010

Ph.D. Thesis Advising

Michael Ruberry 2009 – 2013
- Dissertation: *Prediction Markets: Theory and Applications*

Xi (Alice) Gao 2008 – 2014
- Dissertation: *Eliciting and Aggregating Truthful and Noisy Information*
- The dissertation received Honorable Mention for both the IFAAMAS-14 Victor Lesser Distinguished Dissertation Award and the 2014 SIGecom Doctoral Dissertation Award.

Qiushi (Andrew) Mao 2009 – 2015
- Dissertation: *Experimental Studies of Human Behavior in Social Computing Systems*

Bo Waggoner 2011 – 2016
- Dissertation: *Acquiring and Aggregating Information from Strategic Sources*

Ming Yin 2011 – 2017
- Dissertation: *Peeking into the On-Demand Economy: Crowd Behavior and Incentive Design*

Ben Green 2017 – 2020
- Dissertation: *Risky Reforms: A Sociotechnical Analysis of Algorithms as Tools for Social Change*

Lily Hu 2016 – 2022
- Dissertation in Applied Math: *Dynamics of Algorithmic Fairness*
- Dissertation in Philosophy: *Causation in the Social World*

Chara Podimata 2016 – 2022
- Dissertation: *Incentive-Aware Machine Learning for Decision Making*

Juntao Wang 2017 – 2022
- Dissertation: *Information Elicitation and Aggregation: Theory, Behavior, and Application*

Shuran Zheng 2017 – 2022
- Dissertation: *Pricing Information and Data*

Tao Lin 2020 – present

Safwan Hossain	2022 – present
Jeff Jiang	co-advised by David Parkes, 2023 – present
Shi Feng	2023 – present
Sadie Zhao	2023 – present

Visiting Graduate Student Advising

Xiang Yan, Shanghai Jiaotong University	September 2019 – August 2020
Siri Isaksson, Stockholm School of Economics	September 2016 – June 2017
Emma Heikensten, Stockholm School of Economics	September 2015 – June 2016
Chien-Ju Ho, University of California, Los Angelas	Sep. 2012 – Sep. 2015
Jie Zhang, City University of Hong Kong	Jan. 2011 – Jun. 2011
Pingzhong Tang, Hong Kong University of Science and Technology	Dec. 2009 – Jan. 2010
Qianya Lin, City University of Hong Kong	Feb. 2009 – Jun. 2009

Visiting Undergraduate Student Advising

Jiayuan Liu, Tsinghua University	February 2022 – August 2022
Shi Feng, Tsinghua University	February 2022 – August 2022
Yiheng Shen, Tsinghua University	February 2020 – August 2020
Yuanyuan Yang, Shanghai Jiaotong University	September 2017 – March 2018
Shuran Zheng, Tsinghua University,	February 2016 – July 2016

Ph.D. Committee Membership

Kai Wang (Harvard University, Dissertation Committee, defense in May 2023)
Wei Tang (Washington University St. Louis, Dissertation Committee, defense in May 2022)
Yingying Li (Harvard University, Dissertation Committee, defense in July 2021)
Xueru Zhang (University of Michigan, Dissertation Committee, defense in July 2021)
Chao Huang (City University of Hong Kong, Dissertation Committee, defense in June 2021)
Tara Sowriraja (Harvard University, Dissertation Committee, defense in April 2021)
Zhe Feng (Harvard University, Dissertation Committee, defense in April 2021)
Adam Breuer (Harvard University, Dissertation Committee, defense in October 2020)
Noman Goel (EPFL, Dissertation Committee, defense in August 2020)
Yexun Zhang (Shanghai Jiaotong University, Dissertation Committee, defense in May 2020)
Bo Li (Stony Brook University, Dissertation Committee, defense in July 2019)
Debmalya Mandal (Harvard University, Dissertation Committee, defense in May 2019)
Hongyao Ma (Harvard University, Dissertation Committee, defense in April 2019)
Masoud Badiel (Harvard University, Dissertation Committee, defense in May 2018)
Mithun Chakraborty (Washington University St. Louis, Dissertation Committee, defense in April 2017)
Debarun Kar (USC, Dissertation Committee, defense in April 2017)
Malvika Rao (Harvard University, Dissertation Committee, defense in September 2015)
John K. Lai (Harvard University, Dissertation Committee, defense in April 2013)
Haoqi Zhang (Harvard University, Dissertation Committee, defense in September 2012)
Sven Seuken (Harvard University, Dissertation Committee, defense in April 2011)
Shaili Jain (Harvard University, Dissertation Committee, defense in September 2010)
Florin Constantin (Harvard University, Dissertation Committee, defense in June 2009)
Susobhan Ghosh (Harvard University, Qualifying Exam Committee, December 2023)

Gary Ma (Harvard University, Qualifying Exam Committee, April 2023)
Jamie Tucker-Foltz (Harvard University, Qualifying Exam Committee, May 2022)
Daniel Halpern (Harvard University, Qualifying Exam Committee, May 2022)
Sai Srivatsa (Harvard University, Qualifying Exam Committee, May 2022)
Jamelle Watson-Daniels (Harvard University, Qualifying Exam Committee, July 2021)
Weiying Wang (Harvard University, Qualifying Exam Committee, May 2021)
Mark York (Harvard University, Qualifying Exam Committee, Feburary 2021)
Aditya Mate (Harvard University, Qualifying Exam Committee, November 2020)
Lily Xu (Harvard University, Qualifying Exam Committee, May 2020)
Jackson Killian (Harvard University, Qualifying Exam Committee, May 2020)
Yonadav Shavit (Harvard University, Qualifying Exam Committee, April 2020)
Eric Mibuari (Harvard University, Qualifying Exam Committee, December 2019)
Sharon Qian (Harvard University, Qualifying Exam Committe, October 2019) Daniel Moroz (Harvard University, Qualifying Exam Committe, June 2019)
Sophie Hilgard (Harvard University, Qualifying Exam Committee, May 2019)
Rohit Agrawal (Harvard University, Qualifying Exam Committee, October 2018)
Zhe Feng (Harvard University, Qualifying Exam Committee,May 2018)
Yingying Li (Harvard University, Qualifying Exam Committee, February 2017)
Paul Tylkin (Harvard University, Qualifying Exam Committee, May 2016)
Masoud Badiel (Harvard University, Qualifying Exam Committee, April 2016)
Thibaut Horel (Harvard University, Qualifying Exam Committee, April 2016)
Eric Balkanski (Harvard University, Qualifying Exam Committee, April 2016)
Andrew Miller (Harvard University, Qualifying Exam Committee, April 2014)
Steve Komarov (Harvard University, Qualifying Exam Committee, May 2013)
Kanya Siangliulue (Harvard University, Qualifying Exam Committee, May 2013)
Kenneth Arnold (Harvard University, Qualifying Exam Committee, May 2013)
Thomas Steinke (Harvard University, Qualifying Exam Committee, March 2013)
Wei Pan (Massachusetts Institute of Technology, General Exam Committee, 2011 – 2012)
John Lai (Harvard University, Qualifying Exam Committee, May 2011)
Justin Thaler (Harvard University, Qualifying Exam Committee, May 2011)
Varun Kanade (Harvard University, Qualifying Exam Committee, May 2011)
Haoqi Zhang (Harvard University, Qualifying Exam Committee, August 2009)
Zhenming Liu (Harvard University, Qualifying Exam Committee, May 2009)
Vijay Janapa Reddi (Harvard University, Qualifying Exam Committee, February 2009)

Undergraduate Thesis Advising

Katherine Zhang. Exploring the Impact of Unilateral Affirmative Action on the School Choice Problem. *Undergraduate thesis*, Computer Science, Harvard College, Fall 2023.

Haneul Shin. A Market for Impact. *Undergraduate thesis*, Computer Science and Mathematics, Harvard College, Fall 2023.

Jane Ahn. Data Markets with Competing Data Intermediaries. *Undergraduate thesis*, Computer Science and Mathematics, Harvard College, Fall 2020.

Nicholas Beasley. The Relative Accuracy of LMSR and CDA Prediction Markets. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2020.

Paul Nebres. The Effect of Priming Activities on Algorithm-in-the-Loop Decision Making.

Undergraduate thesis, Applied Mathematics, Harvard College, 2020.

Luke Minton. A Formulation of Algorithmic Procedural Fairness through Affirmative Action Jurisprudence. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2020.

Micheal Tai. Exploring Avenues Toward Improving Prediction Markets as Tools to Forecast Paper Replication Probability. *Undergraduate thesis*, Computer Science and Physics, Harvard College, 2020.

Kyler Chase. Pushing the Team Together: Using Intergroup Competition to Counteract the Free-Riding Effect. *Undergraduate thesis*, Computer Science and Mind Brain Behavior, Harvard College, 2019.

McKenzie Parks. Learning Strategies for Bidding in Online Advertisement Auctions with Noisy Feedback. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2019.

Jerry Anunrojwong. Structure and Design of Informational Substitutes. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2018.

Adam Su. Data Procurement for Shortest Paths on Random Graphs. *Undergraduate thesis*, Computer Science, Harvard College, 2016.

Perry Green. Good Advice Costs Nothing and it's Worth the Price: Incentive Compatible Recommendation Mechanisms for Exploring Unknown Options. *Undergraduate thesis*, Computer Science, Harvard College, 2014.

Peter Zhang. Beyond the Bayesian Truth Serum: The Knowledge Free Peer Prediction Mechanism. *Undergraduate thesis*, Computer Science and Mathematics, Harvard College, 2013.

– Work led to paper "Elicitability and Knowledge-Free Elicitation with Peer Prediction" in in *The 13th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2014.

Spencer de Mars. Crowdsourcing Education: A Game-Theoretic Analysis of Contribution and Learning in Peer to Peer Education Platforms. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2013.

Swara Kopparty. Modeling Task Allocation with Time Using Auction Mechanisms. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2012.

Evan T.R. Rosenman. Retweets — but Not Just Retweets: Quantifying and Predicting Influence on Twitter. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2012.

Ashin D. Shah. On Coordinating Electricity Markets: Smart Power Scheduling for Demand Side Management and Economic Dispatch. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2012. (Thomas Temple Hoopes Prize winner.)

Beatrice Liem. Designing a Transcription Game. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2011.

– Work led to paper "An Iterative Dual Pathway Structure for Speech-to-Text Transcription" in *AAAI Human Computation Workshop (HCOMP)*, 2011.

Pramod Thammaiah. Applying Rank-Dependent Expected Utility Theory. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2011.

Brett A. Harrison. Move Prediction in the Game of Go. *Undergraduate thesis*, Computer Science, Harvard College, 2010. (Thomas Temple Hoopes Prize winner.)

Jeff Nanney. Entertainment Shopping: An Analysis of Profit and Strategy in a New Auction Format. *Undergraduate thesis*, Applied Mathematics, Harvard College, 2010. (Thomas Temple Hoopes Prize winner.)

S. Travis May. Understanding Elections: Measuring Electoral Determinants with Electronic Prediction Markets. *Undergraduate thesis*, Department of Economics, Harvard College, 2009.

Other Undergraduate Research Advising

Sundar Solai Sep. 2018 – March 2019

– Supervised research on *machine learning and human behavior models.*

Rick Goldstein Jun. 2010 – May 2012

– Supervised research on *Market Manipulation.*

– Work led to a conference paper "Market Manipulation with Outside Incentives" in *The 25th AAAI Conference on Artificial Intelligence (AAAI)*, 2011, and later a journal paper of the same title in *Journal of Autonomous Agents and Multi-Agent Systems*, 2015.

Jerry Kung Jul. 2009 – May. 2010

– Involved in supervising research on *Incentive Design for Adaptive Agents.*

– Work led to paper "Incentive Design for Adaptive Agents" in *The 10th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2011.

Terry Ding Jun. 2010 – Aug. 2010

-Supervised research on *Analyzing the Strategic User Behavior in Yahoo! Answers.*

Eric Huang Jul. 2009 – Apr. 2010

– Involved in supervising research on *computational environment design.*

– Work led to paper "Toward Automatic Task Design: A Progress Report" in *The KDD Human Computation Workshop (HCOMP)*, 2010.

Publications

Book Chapter

Y. Chen. Mechanisms for Prediction Markets. In *Prediction Markets: Theory and Applications*, Leighton Vaughan Williams (editor). Routledge, 2011.

Journal Articles

Y. Liu, J. Wang and Y. Chen. Surrogate Scoring Rules. *ACM Transactions on Economics*

and Computation, October 2022.

M. Gordon, M. Bishop, Y. Chen, A. Dreber, B. Goldfedder, F. Holzmeister, M. Johannesson, Y. Liu, L. Tran, C. Twardy, J. Wang and T. Pfeiffer. Forecasting the Publication and Citation Outcomes of COVID-19 Preprints. *Royal Society Open Science (RSOS)*, 2022.

M. Gordon, D. Viganola, M. Bishop, Y. Chen, A. Dreber, B. Goldfedder, F. Holzmeister, M. Johannesson, Y. Liu, C. Twardy, J. Wang and T. Pfeiffer. Are Replication Rates the Same across Academic Fields? Community Forecasts from the DARPA SCORE Program. *Royal Society Open Science (RSOS)*, 2020.

Ebersole, C. R., Mathur, M. B., Baranski, E., Bart-Plange, D., Buttrick, N. R., Chartier, C. R., Corker, K. S., Corley, M., Hartshorne, J. K., IJzerman, H., Lazarevic, L. B., Rabagliati, H., Ropovik, I., Aczel, B., Aeschbach, L. F., Andrighetto, L., Arnal, J. D., Arrow, H., Babincak, P., Bakos, B. E., Baník, G., Baskin, E., Belopavlović, R., Bernstein, M. H., Białek, M., Bloxsom, N. G., Bodroža, B., Bonfiglio, D. B. V., Boucher, L., Br ́uhlmann, F., Brumbaugh, C., Casini, E., Chen, Y., Chiorri, C., Chopik, W. J., Christ, O., Ciunci, A. M., Claypool, H. M., Coary, S., Čolić, M. V., Collins, W. M., Curran, P. G., Day, C. R., Dering, B., Dreber, A., Edlund, J. E., Falcão, F., Fedor, A., Feinberg, L., Ferguson, I. R., Ford, M., Frank, M. C., Fryberger, E., Garinther, A., Gawryluk, K., Gerken, K., Giacomantonio, M., Giessner, S. R., Grahe, J. E., Guadagno, R. E., Hałasa, E., Hancock, P. J. B., Hilliard, R. A., Hüffmeier, J., Hughes, S., Idzikowska, K., Inzlicht, M., Jern, A., Jiménez-Leal, W., Johannesson, M., Joy-Gaba, J. A., Kauff, M., Kellier, D. J., Kessinger, G., Kidwell, M. C., Kimbrough, A. M., King, J. P. J., Kolb, V. S., Kołodziej, S., Kovacs, M., Krasuska, K., Kraus, S., Krueger, L. E., Kuchno, K., Lage, C. A., Langford, E. V., Levitan, C. A., de Lima, T. J. S., Lin, H., Lins, S., Loy, J. E., Manfredi, D., Markiewicz, Ł., Menon, M., Mercier, B., Metzger, M., Meyet, V., Millen, A. E., Miller, J. K., Moore, D. A., Muda, R., Nave, G., Nichols, A. L., Novak, S. A., Nunnally, C., Orlić, A., Palinkas, A., Panno, A., Parks, K. P., Pedovic, I., Pękala, E., Penner, M. R., Pessers, S., Petrović, B., Pfeiffer, T., Pieńkosz, D., Preti, E., Purić, D., Ramos, T., Ravid, J., Razza, T. S., Rentzsch, K., Richetin, J., Rife, S. C., Rosa, A. D., Rudy, K. H., Salamon, J., Saunders, B., Sawicki, P., Schmidt, K., Schuepfer, K., Schultze, T., Schulz-Hardt, S., Schütz, A., Shabazian, A., Shubella, R. L., Siegel, A., Silva, R., Sioma, B., Skorb, L., de Souza, L. E. C., Steegen, S., Stein, LAR, Sternglanz, R. W., Stojilović, D., Storage, D., Sullivan, G. B., Szaszi, B., Szecsi, P., Szoke, O., Szuts, A., Thomae, M., Tidwell, N. D., Tocco, C., Torka, A., Tuerlinckx, F., Vanpaemel, W., Vaughn, L. A., Vianello, M., Viganola, D., Vlachou, M., Walker, R. J., Weissgerber, S. C., Wichman, A. L., Wiggins, B. J., Wolf, D., Wood, M. J., Zealley, D., Žeželj, I., Zrubka, M., and Nosek, B. A. Many Labs 5: Testing pre-data collection peer review as an intervention to increase replicability. *Advances in Methods and Practices in Psychological Science*. 2020.

E. Forsell, D. Viganola, T. Pfeiffer, J. Almenberg, B. Wilson, Y. Chen, B. A. Nosek, M. Johannesson and A. Dreber. Predicting Replication Outcomes in the Many Labs 2 Study. *Journal of Economic Psychology*, Volume 75, Part A, December 2019.

C. F. Camerer, A. Dreber, F. Holzmeister, T.-H. Ho, J. Huber, M. Johannesson, M. Kirchler, G. Nave, B. A. Nosek, T. Pfeiffer, A. Altmejd, N. Buttrick, T. Chan, Y. Chen, E. Forsell, A. Gampa, E. Heikensten, L. Hummer, T. Imai, S. Isaksson, D. Manfredi, J. Rose, E.-J. Wagenmakers and H. Wu. Evaluating the replicability of social science experiments in

Nature and Science between 2010 and 2015. *Nature Human Behaviour*, vol. 2 (9), pp. 637-644, 2018.

Y. Chen, C. Podimata, A. D. Procaccia, and N. Shah. Strategyproof Linear Regression in High Dimensions: An Overview. *ACM SIGecom Exchanges*, volume 17, issue 1, November 2018. (Research letter.)

Y. Chen and B. Waggoner. Intro to Informational Substitutes. *ACM SIGecom Exchanges*, volume 16, issue 1, August 2017. (Research letter.)

Y. Chen, A. Ghosh, M. Kearns, T. Roughgarden, and J.W. Vaughan. Mathematical Foundations for Social Computing. *Communications of ACM*, vol. 59, no. 12, pages 102-108, December 2016.

A. Drebera, T. Pfeiffer, J. Almenberg, S. Isakssona, B. Wilsone, Y. Chen, B.A. Nosek, and M. Johannesson. Using Prediction Markets to Estimate the Reproducibility of Scientific Research. *PNAS*, vol. 112, no. 50, pages 15343-15347, 2015.

M.R. Munafo, T. Pfeiffer, A. Altmejd, E. Heikensten, J. Almenberg, A. Bird, Y. Chen, B. Wilson, M. Johannesson and A. Dreber. Using Prediction Markets to Forecast Research Evaluations. *Royal Society Open Science*, 2: 150287, 2015.

N.S. Lambert, J. Langford, J.W. Vaughan, Y. Chen, D.M. Reeves, Y. Shoham, and D.M. Pennock. An Axiomatic Characterization of Wagering Mechanisms. *Journal of Economic Theory*, vol. 156, pp. 389–416, March 2015.

Y. Chen, X.A. Gao, R. Goldstein, and I.A. Kash. Market Manipulation with Outside Incentives. *Autonomous Agents and Multi-Agent Systems*, vol. 29, no. 2, pp. 230–265, March 2015.

Y. Chen, I.A. Kash, M. Ruberry, and V. Shnayder. Eliciting Predictions and Recommendations for Decision Making. *ACM Transactions on Economics and Computation*, vol. 2, no. 2, pp. 6:1–6:27, June 2014.

S. Jain, Y. Chen, and D.C. Parkes. Designing Incentives for Online Question-and-Answer Forums. *Games of Economic Behavior*, vol. 86, pp. 458-474, July 2014.

J. Abernethy, Y. Chen, and J.W. Vaughan. Efficient Market Making via Convex Optimization, and a Connection to Online Learning. *ACM Transactions on Economics and Computation*, vol. 1, no. 2, pp. 12:1–12:39, May 2013.

Y. Chen, J.K. Lai, D.C. Parkes, A.D. Procaccia. Truth, Justice, and Cake Cutting. *Games of Economic Behavior*, vol. 77, no. 1, pp. 284–297, January 2013.

Y. Chen and D.M. Pennock. Designing Markets for Prediction. *AI Magazine*, 31(4): 42-52, 2010.

Y. Chen, S. Dimitrov, R. Sami , D.M. Reeves, D.M. Pennock, R.D. Hanson, L. Fortnow, and R. Gonen. Gaming Prediction Markets: Equilibrium Strategies with a Market Maker.

Algorithmica, vol. 58, no. 4, pp. 930-969, 2010.

Y. Chen and J.W. Vaughan. Connections Between Markets and Learning. *ACM SIGecom Exchanges*, vol. 9, no. 1, 2010. (Research letter.)

P.M. Polgreen, Y. Chen, D.M. Pennock, and F.D. Nelson. Using Internet Searches for Influenza Surveillance. *Clinical Infectious Diseases*, vol. 47, no. 11, pp. 1443–1448, 2008.

Y. Chen, L. Fortnow, E.V. Nikolova, and D.M. Pennock. Combinatorial Betting. *ACM SIGecom Exchanges*, vol. 7, no. 1, 2007. (Research letter.)

Y. Chen, C.-H. Chu, and T. Mullen. Predicting Uncertain Outcomes Using Information Markets: Trader Behavior and Information Aggregation. *New Mathematics and Natural Computation*, vol. 2, no. 3, pp. 281–297, 2006.

Y. Chen, T. Mullen, and C.-H. Chu. An In-Depth Analysis of Information Markets with Aggregate Uncertainty. *Electronic Commerce Research*, vol. 6, no. 2, pp. 201–22, 2006.

Y. Chen and F. Song. An Empirical Study on the Relationship between Price Changes and Trading Volume in China Stock Market (In Chinese). *Journal of Management Sciences in China*, vol. 3, no. 2, pp. 62–68, 2000.

Refereed Conference Publications

T. Lin and Y. Chen. Sample Complexity of Forecast Aggregation. In *Proc. of the 37th Conference on Neural Information Processing Systems (NeurIPS)*, December 2023.

G. Noti and Y. Chen. Learning When to Advise Human Decision Makers. In *Proc. of the 32nd International Joint Conference on Artificial Intelligence(IJCAI)*, August 2023.

S. Feng, F.-Y. Yu, and Y. Chen. Peer Prediction for Learning Agents. In *Proc. of the Thirty-sixth Conference on Neural Information Processing Systems (NeurIPS)*, December 2022.

Y. Chen, A. Eden and J. Wang. Cursed Yet Satisfied Agents. In *Proc. of Conference on Innovations in Theoretical Computer Science (ITCS)*, February 2022.

J. Wang, Y. Liu and Y. Chen. Forecast Aggregation via Peer Prediction. In *Proc. of The 9th AAAI Conference on Human Computation and Crowdsourcing (HCOMP)*, November 2021.

B. Green and Y. Chen. Algorithmic Risk Assessments Can Alter Human Decision-Making Processes in High-Stakes Government Contexts. In *Proc. of The 24th ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)*, October 2021.

Y. Chen, B. Tao and F.-Y. Yu. Cooperation in Threshold Public Projects with Binary Actions. In *Proc. of the 30th International Joint Conference on Artificial Intelligence (IJCAI)*, August 2021.

S. Zheng and Y. Chen. Optimal Advertising for Information Products. In *Proc. of the*

22nd ACM Conference on Economics and Computation (EC), July 2021.

S. Zheng, F.-Y. Yu and Y. Chen. The Limits of Multi-task Peer Prediction. In *Proc. of the 22nd ACM Conference on Economics and Computation (EC)*, July 2021.

X. Yan and Y. Chen. Optimal Crowdfunding Design. In *Proc. of the 20th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, May 2021. (Extended abstract)

Y. Chen, Y. Shen, and S. Zheng. Truthful Data Acquisition via Peer Prediction. In *Proc. of the Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS)*, December 2020.

Y. Chen, Y. Liu, and C. Podimata. Learning Strategy-Aware Linear Classifiers. In *Proc. of the Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS)*, December 2020.

Y. Liu, J. Wang and Y. Chen. Surrogate Scoring Rules. In *Proc. of the 21st ACM Conference on Economics and Computation (EC)*, June 2020.

L. Hu and Y. Chen. Fair Classification and Social Welfare. In *Proc. of the Third ACM Conference on Fairness, Accountability and Transparency (FAT*)*, Barcelona, Spain, January 2020.

B. Green and Y. Chen. Algorithm-in-the-Loop Decision Making. In *Proc. of the 34st AAAI Conference on Artificial Intelligence (AAAI)*, Sister Conference Track. 2020.

Y. Chen, H. Xu and S. Zheng. Selling Information Through Consulting. In *Proc. of ACM-SIAM Symposium on Discrete Algorithms (SODA)*, Salt Lake City, UT, January, 2020.

J. Anunrojwong, Y. Chen, B. Waggoner, and H. Xu. Computing Equilibria of Prediction Markets via Persuasion. In *Proc. of The 15th Conference on Web and Internet Economics (WINE)*, New York, NY, December 2019.

B. Green and Y. Chen. The Principles and Limits of Algorithm-in-the-Loop Decision Making. In *Proc. of the 22nd ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)*, Austin, TX, November 2019. (Best Paper Award)

S. Zheng and Y. Chen. Prior-free Data Acquisition for Accurate Statistical Estimation. In *Proc. of the 20th ACM Conference on Economics and Computation (EC)*, Phoenix, AZ, June 2019.

B. Green and Y. Chen. Disparate Interactions: An Algorithm-in-the-Loop Analysis of Fairness in Risk Assessments. In *Proc. of the Second ACM Conference on Fairness, Accountability and Transparency (FAT*)*, Atlanta, Georgia, January 2019. (Best Technical + Interdisciplinary Paper)

Y. Chen, Y. Liu and J. Wang. Randomized Wagering Mechanisms. In *Proc. of the 33st AAAI Conference on Artificial Intelligence*, Honolulu, Hawaii, January 2019.

S. Zheng, B. Waggoner, Y. Liu and Y. Chen. Active Information Acquisition for Linear

Optimization. In *Proc. of the Conference on Uncertainty in Artificial Intelligence (UAI)*, Monterey, California, August 2018.

Y. Chen, N. Immorlica, B. Lucier, V. Syrgkanis and J. Ziani. Optimal Data Acquisition for Statistical Estimation. In *Proc. of the 19th ACM Conference on Economics and Computation (EC)*, Ithaca, NY, June 2018.

Y. Chen, C. Podimata, A. Procaccia and N. Shah. Strategyproof Linear Regression in High Dimensions. In *Proc. of the 19th ACM Conference on Economics and Computation (EC)*, Ithaca, NY, June 2018. (Among the 5 shortlisted papers for the Best Paper Award)

L. Hu and Y. Chen. A Short-term Intervention for Long-term Fairness in the Labor Market. In *Proc. of The Web Conference (WWW)*, Lyon, France, April 2018. (Research Paper Honorable Mention)

Y. Liu and Y. Chen. Machine-Learning Aided Peer Prediction. In *Proc. of the 18th ACM Conference on Economics and Computation (EC)*, Cambridge, MA, June 2017.

Y. Liu and Y. Chen. Sequential Peer Prediction: Learning to Elicit Effort using Posted Prices. In *Proc. of the 31st AAAI Conference on Artificial Intelligence (AAAI)*, San Francisco, CA, February 2017.

Y. Liu and Y. Chen. A Bandit Framework for Strategic Regression. In *Proc. of the 30th Annual Conference on Neural Information Processing Systems (NIPS)*, Barcelona, Spain, December 2016.

C.-J. Ho, R.M. Frongillo and Y. Chen. Eliciting Categorical Data for Optimal Aggregation, In *Proc. of the 30th Annual Conference on Neural Information Processing Systems (NIPS)*, Barcelona, Spain, December 2016.

M. Yin and Y. Chen. Predicting Crowd Work Quality under Monetary Interventions. In *Proc. of the 4th AAAI Conference on Human Computation and Crowdsourcing (HCOMP)*, Austin, TX, October 30 ? November 3, 2016.

Y. Chen and B. Waggoner. Informational Substitutes. In *Proc. of the 57th Annual IEEE Symposium on Foundations of Computer Science (FOCS)*, New Brunswick, NJ, October, 2016.

Y. Liu and Y. Chen. Learning to Incentivize: Eliciting Effort via Output Agreement. In *Proc. of the 25th International Joint Conference on Artificial Intelligence (IJCAI)*, New York, NY, July 2016.

M. Yin and Y. Chen. Bonus or Not? Learn to Reward in Crowdsourcing. In *Proc. of the 24th International Joint Conference on Artificial Intelligence (IJCAI)*, Buenos Aires, Argentina, July 2015.

J. Abernethy, Y. Chen, C.-J. Ho, and B. Waggoner. Low-Cost Learning via Active Data Procurement. In *Proc. of the 16th ACM Conference on Economics and Computation (EC)*, Portland, Oregon, June 2015.

Y. Chen, K. Nissim, and B. Waggoner. Fair Information Sharing for Treasure Hunting. In

Proc. of the 29th AAAI Conference on Artificial Intelligence (AAAI), Austin, TX, January 2015.

R.M. Frongillo, Y. Chen, and I.A. Kash. Elicitation for Aggregation. In *Proc. of the 29th AAAI Conference on Artificial Intelligence (AAAI)*, Austin, TX, January 2015.

Y. Chen, O. Sheffet, and S. Vadhan. Privacy Games. In *Proc. of the 10th Conference on Web and Internet Economics (WINE)*, Beijing, China, December 2014.

B. Waggoner and Y. Chen. Output Agreement Mechanisms and Common Knowledge. In *Proc. of the 2nd AAAI Conference on Human Computation and Crowdsourcing (HCOMP)*, Pittsburgh, PA, November 2014.

M. Yin, Y. Chen, and Y.-A. Sun. Monetary Interventions in Crowdsourcing Task Switching. In *Proc. of the 2nd AAAI Conference on Human Computation and Crowdsourcing (HCOMP)*, Pittsburgh, PA, November 2014.

S. Brânzei, Y. Chen, X. Deng, A. Filos-Ratsikas, S.K.S. Frederiksen, and J. Zhang. The Fisher Market Game: Equilibrium and Welfare. In *Proc. of the 28th AAAI Conference on Artificial Intelligence (AAAI)*, Qubec City, Qubec, Canada, July 2014.

Y. Chen, N.R. Devanur, D. Pennock, and J.W. Vaughan. Removing Arbitrage from Wagering Mechanisms. In *Proc. of the 15th ACM Conference on Economics and Computation (EC)*, Palo Alto, CA, June 2014.

X.A. Gao, A. Mao, Y. Chen, and R.P. Adam. Trick or Treat: Putting Peer Prediction to the Test. In *Proc. of the 15th ACM Conference on Economics and Computation (EC)*, Palo Alto, CA, June 2014.

P. Zhang and Y. Chen. Elicitability and Knowledge-Free Elicitation with Peer Prediction. In *Proc. of the 13th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Paris, France, May 2014.

A. Mao, E. Kamar, Y. Chen, E. Horvitz, M.E. Schwamb, C.J. Lintott, and A.M. Smith. Volunteering vs. Work for Pay: Incentives and Tradeoffs in Crowdsourcing. In *Proc. of the 1st AAAI Conference on Human Computation and Crowdsourcing (HCOMP)*, Palm Springs, CA, November 2013.

M. Yin, Y. Chen and Y.-A. Sun. Task Sequence Design: Evidence on Price and Difficulty. In *Proc. of the 1st AAAI Conference on Human Computation and Crowdsourcing (HCOMP)*, Palm Springs, CA, November 2013. (Work-in-Progress track.)

M. Yin, Y. Chen and Y.-A. Sun. The Effects of Performance-Contingent Financial Incentives in Online Labor Markets. In *Proc. of the 27th AAAI Conference on Artificial Intelligence (AAAI)*, Bellevue, WA, July 2013.

A. Mao, A.D. Procaccia, and Y. Chen. Better Human Computation Through Principled Voting. In *Proc. of the 27th AAAI Conference on Artificial Intelligence (AAAI)*, Bellevue, WA, July 2013.

Y. Chen, S. Chong, I. Kash, T. Moran, and S. Vadhan. Truthful Mechanisms for Agents

that Value Privacy. In *Proc. of the 14th ACM Conference on Electronic Commerce (EC)*, Philadelphia, PA, June 2013.

X.A. Gao, J. Zhang, and Y. Chen. What You Jointly Know Determines How You Act — Strategic Interactions in Prediction Markets. In *Proc. of the 14th ACM Conference on Electronic Commerce (EC)*, Philadelphia, PA, June 2013.

Y. Chen, M. Ruberry, and J.W. Vaughan. Cost Function Market Makers for Measurable Spaces. In *Proc. of the 14th ACM Conference on Electronic Commerce (EC)*, Philadelphia, PA, June 2013.

R. Meir, Y. Chen, and M. Feldman. Efficient Parking Allocation as Online Bipartite Matching. In *Proc. of the 12th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Saint Paul, MN, May 2013.

Y. Chen, M. Ruberry, and J.W. Vaughan. Designing Informative Securities. In *Proc. of the 28th Conference on Uncertainty in Artificial Intelligence (UAI)*, Catalina Island, CA, August 2012.

Thomas Pfeiffer, X.A. Gao, A. Mao, Y. Chen, and D.G. Rand. Adaptive Polling and Information Aggregation. In *Proc. of the 26th AAAI Conference on Artificial Intelligence (AAAI)*, Toronto, Ontario, Canada, July 2012.

H. Zhang, E. Horvitz, Y. Chen, and D.C. Parkes. Task Routing for Prediction Tasks. In *Proc. of the 11th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Valencia, Spain, June 2012.

D.F. Bacon, Y. Chen, I. Kash, D.C. Parkes, M. Rao, and M. Sridharan. Predicting Your Own Effort. In *Proc. of the 11th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Valencia, Spain, June 2012. (Best Paper Award.)

Y. Chen, I.A. Kash, M. Ruberry, and V. Shnayder. Decision Markets with Good Incentives. In *Proc. of the 7th Workshop on Internet and Network Economics (WINE)*, Singapore, December 2011.

Y. Chen, X.A. Gao, R. Goldstein, and I.A. Kash. Market Manipulation with Outside Incentives. In *Proc. of the 25th AAAI Conference on Artificial Intelligence (AAAI)*, San Francisco, CA, August 2011.

J. Abernethy, Y. Chen, and J.W. Vaughan. An Optimization-Based Framework for Automated Maket-Making. In *Proc. of the 12th ACM Conference on Electronic Commerce (EC)*, pp. 297–306, San Jose, CA, June 2011.

Y. Chen and I.A. Kash. Information Elicitation for Decision Making. In *Proc. of the 10th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, pp. 175–182, Taipei, Taiwan, May 2011.

Y. Chen, J. Kung, D.C. Parkes, A.D. Procaccia, and H. Zhang. Incentive Design for Adaptive Agents. In *Proc. of the 10th International Conference on Autonomous Agents*

and Multiagent Systems (AAMAS), pp. 627–634, Taipei, Taiwan, May 2011.

X.A. Gao and Y. Chen. An Axiomatic Characterization of Continuous-Outcome Market Makers. In *Proc. of the 6th Workshop on Internet and Network Economics (WINE)*, pp. 505–514, Stanford, CA, December 2010. (Short paper.)

Y. Chen, J.K. Lai, D.C. Parkes, and A.D. Procaccia. Truth, Justice, and Cake Cutting. In *Proc. of the 24th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 756–761, Atlanta, Georgia, July 2010.

Y. Chen and J.W. Vaughan. A New Understanding of Prediction Markets Via No-Regret Learning. In *Proc. of the 11th ACM Conference on Electronic Commerce (EC)*, pp. 189–198, Cambridge, MA, June 2010.

Q. Lin and Y. Chen. Gaming Dynamic Parimutuel Markets. In *Proc. of the 5th Workshop on Internet and Network Economics (WINE)*, pp. 623–631, Rome, Italy, December 2009. (Short paper.)

X. Gao, Y. Chen, and D.P. Pennock. Betting on the Real Line. In *Proc. of the 5th Workshop on Internet and Network Economics (WINE)*, pp. 553–560, Rome, Italy, December 2009. (Short paper.)

D.F. Bacon, Y. Chen, D.C. Parkes, and M. Rao. A Market-Based Approach to Software Evolution. In *Proc. of the ACM Onward! Conference*, pp. 973–980, Orlando, FL, October 2009.

H. Zhang, Y. Chen, and D.C. Parkes. A General Approach to Environment Design with One Agent. In *Proc. of the 21st International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 2002–2008, Pasadena, CA, July 2009.

S. Jain, Y. Chen, and D.C. Parkes. Designing Incentives for Online Question and Answer Forums. In *Proc. of the 10th ACM Conference on Electronic Commerce (EC)*, pp. 129–138, Stanford, CA, July 2009.

H. Zhang, D.C. Parkes, and Y. Chen. Policy Teaching Through Reward Function Learning. In *Proc. of the 10th ACM Conference on Electronic Commerce (EC)*, pp. 295–304, Stanford, CA, July 2009.

Y. Chen, A. Ghosh, R.P. McAfee, and D.M. Pennock. Sharing Online Advertising Revenue with Consumers. In *Proc. of the 4th International Workshop on Internet and Network Economics (WINE)*, pp. 456–465, Shanghai, China, December 2008.

Y. Chen, L. Fortnow, N. Lambert, D.M. Pennock, and J. Wortman. Complexity of Combinatorial Market Makers. In *Proc. of the 9th ACM Conference on Electronic Commerce (EC)*, pp. 190–199, Chicago, IL, July 2008.

N. Lambert, J. Langford, J. Wortman, Y. Chen, D.M. Reeves, Y. Shoham, and D.M. Pennock. Self-Financed Wagering Mechanisms for Forecasting. In *Proc. of the 9th ACM Conference on Electronic Commerce (EC)*, pp. 170–179, Chicago, IL, July 2008. (Outstanding

Paper Award.)

Y. Chen, S. Goel, and D.M. Pennock. Pricing Combinatorial Markets for Tournaments. In *Proc. of the 40th ACM Symposium on Theory of Computing (STOC)*, pp. 305–314, Victoria, Canada, May 2008.

Y. Chen, D.M. Reeves, D.M. Pennock, R.D. Hanson, L. Fortnow, and R. Gonen. Bluffing and Strategic Reticence in Prediction Markets. In *Proc. of the 3rd International Workshop on Internet and Network Economics (WINE)*, pp. 70–81, San Diego, CA, December 2007.

Y. Chen and D.M. Pennock. A Utility Framework for Bounded-Loss Market Makers. In *Proc. of the 23rd Conference on Uncertainty in Artificial Intelligence (UAI)*, pp. 49–56, Vancouver, BC Canada, July 2007.

Y. Chen, L. Fortnow, E.V. Nikolova, and D.M. Pennock. Betting on Permutations. In *Proc. of the 8th ACM Conference on Electronic Commerce (EC)*, pp. 326–335, San Diego, CA, June 2007.

Y. Chen, C.-H. Chu, T. Mullen, and D.M. Pennock. Information Markets vs. Opinion Pools: An Empirical Comparison. In *Proc. of the 6th ACM Conference on Electronic Commerce (EC)*, pp. 58–67, Vancouver, BC Canada, June 2005.

Y. Chen, T. Mullen, C.-H. Chu. Predicting Uncertain Outcomes Using Information Markets. In *Proc. of the 8th Joint Conference on Information Sciences (JCIS)*, Salt Lake City, UT, July 2005.

Y. Chen, T. Mullen, and C.-H. Chu. Theoretical Investigation of Prediction Markets with Aggregate Uncertainty. In *Proc. of the 7th International Conference on Electronic Commerce Research (ICECR)*, pp. 81–90, Dallas, TX, June 2004.

Refereed Workshop Papers

F. Berlinger, L. Xu and Y. Chen. A High-Performance Graph Model for Near-Optimal Payments for Ecosystem Services. *The 4th Workshop on Mechanism Design for Social Good (MD4SG)*, 2020.

Y. Liu, M. Gordon, J. Wang, M. Bishop, Y. Chen, T. Pfeiffer, C. Twardy and D. Viganola. Replication Markets: Results, Lessons, Challenges and Opportunities in AI Replication. *AAAI Workshop on Reproducible AI (RAI)*, 2020.

J. Wang, Y. Liu and Y. Chen. Aggregation via Peer Assessment. *The Bayesian Crowd Conference*, Rotterdam, The Netherlands, June 2019.

Y. Chen, H. Xu and S. Zheng. Simple and Optimal Mechanisms for Selling Information to Budget-Constrained Buyers. *ACM/INFORMS Workshop on Market Design*, June 2019.

Y. Chen, Y. Liu and Chara Podimata. Grinding the Space: Learning to Classify Against Strategic Agents. *ACM EC Workshop on Learning in the Presence of Strategic Behavior*, June 2019.

L. Hu and Y. Chen. Fair Classification and Social Welfare. *The 3rd Workshop on Mecha-*

nism Design for Social Good (MD4SG), June 2019.

M. Yin, E. Heikensten and Y. Chen. Is Time Our Friend or Enemy? The Impact of Timing on Online Experimentation. *Conference on Digital Experimentation (CODE)*, October 2018.

L. Hu and Y. Chen. Welfare and Distributional Impacts of Fair Classification. *Workshop on Fairness, Accountability, and Transparency in Machine Learning (FATML)*, Stockholm, Sweden, July 2018.

Y. Chen, C. Podimata, and N. Shah. Strategyproof Linear Regression. *NIPS'17 Workshop on Learning in the Presence of Strategic Behavior*, Long Beach, CA, December 2017.

L. Hu and Y. Chen. Fairness at Equilibrium in the Labor Market. *Workshop on Fairness, Accountability, and Transparency in Machine Learning (FATML)*, Halifax, Nova Scotia, Canada, August 2017.

R.M. Frongillo, Y. Chen, and I.A. Kash. Elicitation for Aggregation. *The NIPS Workshop on Crowdsourcing and Machine Learning*, Montreal, Canada, December 2014.

B. Waggoner and Y. Chen. Information Elicitation Sans Verification. *The ACM EC Workshop on Social Computing and User Generated Content (SCUGC)*, Philadelphia, PA, June 2013.

X.A. Gao, A. Mao, and Y. Chen. Trick or Treat: Putting Peer Prediction to the Test. *The ACM EC Workshop on Crowdsourcing and Online Behavioral Experiments (COBE)*, Philadelphia, PA, June 2013.

A. Mao, Y. Chen, K. Gajos, D.C. Parkes, A.D. Procaccia, and H. Zhang. Turk Server: Enabling Synchronous and Longitudinal Online Experiments. *The AAAI Human Computation Workshop (HCOMP)*, Toronto, Ontario, Canada, July 2012.

A. Mao, A.D. Procaccia, and Y. Chen. Social Choice for Human Computation. *The AAAI Human Computation Workshop (HCOMP)*, Toronto, Ontario, Canada, July 2012. (Poster)

B. Liem, H. Zhang, and Y. Chen. An Iterative Dual Pathway Structure for Speech-to-Text Transcription. *The AAAI Human Computation Workshop (HCOMP)*, San Francisco, CA, August 2011.

H. Zhang, E. Horvitz, Y. Chen, and D.C. Parkes. Task Routing for Prediction Tasks. *The ACM EC Workshop on Social Computing and User Generated Content (SCUGC)*, San Jose, CA, June 2011.

J. Abernethy, Y. Chen and J.W. Vaughan. An Optimization-Based Framework for Combinatorial Prediction Market Design. *The NIPS Workshop on Computational Social Science and the Wisdom of Crowds*, Whistler, Canada, December 2010.

D.F. Bacon, E. Bokelberg, Y. Chen, I.A. Kash, D.C. Parkes, M. Rao, and M. Sridharan. Software Economies. *The FSE/SDP Workshop on the Future of Software Engineering Re-*

search (FoSER), Santa Fe, NM, November 2010.

E. Huang, H. Zhang, D.C. Parkes, K. Gajos, and Y. Chen. Toward Automatic Task Design: A Progress Report. *The KDD Human Computation Workshop (HCOMP)*, Washington, D.C., July 2010.

Y. Chen, D.M. Pennock, and T. Kasturi. An Empirical Study of Dynamic Pari-mutuel Markets: Evidence from the Tech Buzz Game. *The KDD Workshop on Web Mining and Web Usage Analysis (WebKDD)*, Las Vegas, NV, August 2008.

Y. Chen, A. Ghosh, R.P. McAfee, and D.M. Pennock. Sharing Online Advertising Revenue with Consumers. *The 4th Workshop on Ad Auctions, in conjunction with ACM Conference of Electronic Commerce (EC)*, Chicago, IL, July 2008.

A. Beygelzimer, Y. Chen, N. Lambert, J. Langford, D. Pennock, D.M. Reeves, B. Soule, Y. Vorobeychik, and J. Wortman. Betting with Budgets. *DIMACS Workshop on the Boundary between Economic Theory and Computer Science*, Piscataway, NJ, October 2007.

Y. Chen, D.M. Reeves, D.M. Pennock, R.D. Hanson, and R. Gonen. Bluffing and Strategic Reticence in Prediction Markets. *The 2nd Workshop on Prediction Markets, in conjunction with ACM Conference of Electronic Commerce (EC)*, San Diego, CA, June 2007.

Y. Chen and D.M. Pennock. Socially Embedded Prediction Markets. *Special Issue Workshop for Economica on the Growth of Gambling and Prediction Markets: Economic and Financial Implications*, Palm Desert, CA, May 2007.

Y. Chen and F. Fonseca. A Bipartite Graph Co-Clustering Approach for Ontology Mapping. *Workshop of Semantic Web Technologies for Searching and Retrieving Scientific Data, in conjunction with the 2nd International Semantic Web Conference (ISWC)*, Sanibel Island, FL, October, 2003.

Edited Volumes

D. Bergemann and Y. Chen (Eds.), ACM Transactions on Economics and Computation (TEAC) – Special Issue on EC'16, Volume 7, Issue 3, October 2019.

D. Bergemann, Y. Chen and V. Conitzer (Eds.), Proceedings of the 2016 ACM Conference on Economics and Computation, ACM, New York, NY, 2016.

Y. Chen and N. Immorlica (Eds.), ACM Transactions on Economics and Computation (TEAC) – Special Issue on WINE '13, Volume 3 Issue 4, July 2015.

Y. Chen and N. Immorlica (Eds.), Web and Internet Economics (Proceedings of WINE

2013), Lecture Notes in Computer Science, Volume 8289. Springer Berlin Heidelberg, 2013.

SIGecom Exchanges, Vol. 11, No. 1, June 2012. (Contributed editor's introduction.)

SIGecom Exchanges, Vol. 10, No. 3, December 2011. (Contributed editor's introduction.)

SIGecom Exchanges, Vol. 10, No. 2, June 2011. (Contributed editor's introduction.)

SIGecom Exchanges, Vol. 10, No.1, March 2011. Co-edited with Vincent Conitzer. (Co-contributed editor's introduction.)

Other Publications

Y. Chen. Markets as an Information Aggregation Mechanism for Decision Support. *Ph.D. Dissertation*, School of Information Sciences and Technology, The Pennsylvania State University, December 2005.

Y. Chen and I.G. Council. An Introduction to Support Vector Machines: A Review. *AI Magazine*, vol. 24, no. 2, pp. 105–106, 2003. (Book review.)

Y. Chen. An Empirical Study on the Relationship between Price Changes and Trading Volume in China Stock Market. *M.S. Thesis*, School of Economics and Management, Tsinghua University, Beijing, China, June 1999.

TUTORIALS

Social Computing and User-Generated Content. *ACM Conference on Electronic Commerce (EC)*, Philadelphia, PA, June, 2013. (Co-taught with Arpita Ghosh)

Topics in Social Computing. *IFI (Institute for Informatics) Summer School*, University of Zurich, June 2012.

Designing Markets for Prediction. *ASI 2010: Theory and Applications on Algorithmic Game Theory*, Hong Kong, July 2010.

Prediction Markets: Economics, Computation, and Mechanism Design. *ACM Conference on Electronic Commerce (EC)*, San Diego, CA, June, 2007.

SELECTED TALKS

MIT, Cambridge, MA, October 2023. Harvard-MIT Econ Theory Seminar. *Surrogate Scoring Rules for Information Elicitation and Evaluation.*

Cornell Tech. New York, NY, April 2023. Learning Machines Seminar. *Forecast Aggregation: Sample Complexity and Peer-Assessment-Based Improvements.*

Workshop on Deployable AI @ AAAI 2023, February 2023. Invited talk. *AI-Facilitated Human Decision Making.*

Workshop on Data Science for Data Marketplaces @ VLDB 2022, September 2022. Invited talk. *Economic Considerations for Pricing Information and Data.*

Harvard College Summer Program for Undergraduates in Data Science (SPUDS) Distin-

guished Speaker Lecture, July 2022. *Strategic Considerations in Data Science.*

DataPerf Workshop for Benchmarking Data for Data-Centric AI @ ICML, July 2022. Invited talk. *Assessing Quality of Information without Ground Truth.*

The Institute for Mathematical and Statistical Innovation (IMSI)'s Workshop on Data Value: Assessment and Evolution, June 2022. Invited talk. *Optimal Advertising for Information Products.*

Israel Algorithmic Game Theory Seminar, November 2021. *Faithful Lottery Mappings: from Games to Competitions.*

George Institute of Technology, Atlanta, GA, November 2021. ISyE Seminar. *Mechanisms for Selling Information.*

The Pennsylvania State University, University Park, PA, October 2021. LEMA Seminar. *Algorithm-in-the-Loop Decision Making.*

The 32nd Stony Brook International Conference on Game Theory, July 2021. Invited talk. *Cursed Yet Satisfied Agents.*

Luiss Guido Carli, May 2021. Seminar Series on Decision Science. *Forecast Aggregation via Peer Prediction.*

The 16th Conference on Web and Internet Economics (WINE), December 2020. Keynote talk. *Challenges of Incorporating Algorithms into Decision Making: Fairness, Welfare and Disparate Interactions.*

University of Pennsylvania, Philadelphia, PA, December 2020. Computer and Information Science Colloquium talk. *Challenges of Incorporating Algorithms into Decision Making: Fairness, Welfare and Disparate Interactions.*

Harvard University, Cambridge, MA, November 2020. Applied Statistics Seminar Series, co-sponsored by Institute for Quantitative Social Science (IQSS) and Department of Government. *Unexpected Consequences of Algorithm-in-the-Loop Decision Making.*

Boston University, November 2019. Seminar Series at the Intersection of Law, Technology, and Policy. *Algorithm-in-the-Loop Decision Making.*

Peking University, Beijing China. August 2019. The Center on Frontiers of Computing Studies (CFCS) Seminar Series. *Assessing Quality of Information without Ground Truth.*

Workshop on New Directions in Mechanism Design, Stony Brook, NY. July 2019. Invited Talk. *Surrogate Scoring Rules and a Uniform Dominant Truth Serum.*

The Fifth Marketplace Innovation Workshop (MIW), Stanford, CA. June 2019. Invited talk. *Fair Classification and Social Welfare.*

University of California, Irvine. May 2019. Seminar series at the Algorithm, Combinatorics

and Optimization Center. *Statistical Estimation with Strategic Data Holders.*

Stanford University, Stanford, CA, December 2018. RAIN Seminar. *Surrogate Scoring and A Dominant Truth Serum.*

University of Pennsylvania, Philadelphia, PA, December 2018. Warren Center TCS Talk Series. *Statistical Estimation with Strategic Data Holders.*

Sportify, November 2018. Research seminar. *Statistical Estimation with Strategic Data Holders.*

NIPS17 Workshop on Learning in the Presence of Strategic Behavior, Long Beach, CA. December 2017. Invited talk. *Learning in Strategic Data Environments.*

University of Maryland, College Park, MD. October 2017. Department of Computer Science Distinguished Colloquia. *Learning in the Presence of Strategic Behavior.*

The Third Workshop on Algorithmic Game Theory and Data Science at ACM EC'17, Cambridge, MA. June 2017. Invited talk. *Data Elicitation and Learning without Ground Truth.*

New York Computer Science and Economics Day, New York, NY, May 2017. Invited talk. *Learning-Aided Peer Prediction.*

Boston University, Boston, MA. April 2017. IVC Seminar. *Machine-learning Aided Incentive Design.*

Vanderbilt University, Nashville, TN. March 2017. EECS Department Seminar. *Machine-learning Aided Incentive Design.*

Conference on Big Data, Cambridge, MA. August 2016. Invited talk. *Machine Learning with Strategic Data Sources.*

Microsoft Research New England, Cambridge, MA. June 2016. *Incentive Alignment for Machine Learning..*

Harvard SEAS-HBS Faculty Research Symposium. May 2016. *Social Computing: A Design Perspective.*

The 9th ACM International Conference on Web Search and Data Mining (WSDM), San Francisco, CA, February 2016. Keynote. *Why Incentive Alignment is Relevant for Data Science.*

Simons Institute, Berkeley CA. November 2015. Workshop on Algorithmic Game Theory and Practice. Invited talk. *Informational Substitutes and Complements for Prediction.*

MIT, Cambridge, MA. May 2015. LIDS Seminar. *Computation and Incentives in Social Computing.*

Harvard University, Cambridge, MA, February 2015. CS Colloquium. *Computation and*

Incentives in Social Computing.

Cornell University, Ithaca, NY, August 2014. AI Seminar. *Computation and Incentives in Social Computing.*

Microsoft Research New England, April 2014. Game Theory and Computation Seminar. *Removing Arbitrage from Wagering Mechanisms.*

Harvard University, Cambridge, MA, February 2014. EE Seminar. *Online Optimization, Learning, and Market Making.*

Columbia University, New York, NY, October 2013. CS/EE-Econ Seminar. *Incentivizing the Crowd.*

Workshop on New Trends in Mechanism Design II, Aarhus, Denmark, June 2013. Invited Talk. *Mechanism Design for Privacy-Aware Agents.*

ICML'13 Workshop: Machine Learning Meets Crowdsourcing, June 2013. Plenary Talk. *Financial Incentives and Crowd Work.*

The 2nd Cambridge Area Economics and Computation Day, April 2013. *Financial Incentives and Crowd Work.*

Duke University, Durham, NC, March 2013. CS-Econ Seminar. *Information Elicitation Sans Verification.*

Tufts University, Medford, MA, March 2013. CS Colloquium. *Designing Markets for Prediction.*

Microsoft Research, Redmond, WA, November 2012. *Efficient Market Making via Convex Optimization.*

University of Washington, Seattle, WA, November 2012. CSE Colloquium. *Designing Markets for Prediction.*

Brown University, Providence, RI, April 2012. CS Colloquium. *Efficient Market Making via Online Convex Optimization*

Collective Intelligence Conference, April 2012. Plenary Talk. *Mechanism Design for Prediction Markets.*

Rensselaer Polytechnic Institute, Troy, NY, March 2012. CS Colloquium. *From Prediction Markets to Decision Markets.*

Massachusetts Institute of Technology, Cambridge, MA, March 2012. Marketing Workshop Seminar. *Efficient Market Making via Convex Optimization.*

Stanford University, Stanford, CA, November 2011. RAIN Seminar. *Task Routing for Prediction Tasks.*

Workshop on Innovations in Algorithmic Game Theory, Jerusalem, Israel, May, 2011. In-

vited Talk. *Automated Market-Making via Online Convex Optimization.*

Harvard Business School, Boston, MA, April, 2011. Science-Based Business Initiative Seminar. *Designing Markets for Prediction.*

The Pennsylvania State University, University Park, PA, March 2011. IST Colloquium. *An Optimization-Based Framework for Automated Market Making.*

Yale University, New Haven, CT, March 2011. CS Colloquium. *An Optimization-Based Framework for Automated Market Making.*

Yahoo! Research, New York, NY, February 2011. *An Optimization-Based Framework for Automated Market Making.*

Dartmouth University, Hanover, NH, January 2011. CS Colloquium. *Designing Markets for Prediction.*

Dartmouth University, Hanover, NH, January 2011. Decision Sciences Seminar. *Information Elicitation for Decision Making.*

Stanford University, Stanford, CA, December 2010. OR Seminar. *An Optimization-Based Framework for Automated Market Making.*

NIPS Workshop on Computational Social Science and the Wisdom of Crowds, Whistler, Canada, December 2010. Invited Talk. *Markets as a Forecasting Tool.*

Microsoft Research Asia, Beijing, China, July 2010. *Combinatorial Prediction Markets.*

Microsoft Research New England, Cambridge, MA, September 2009. *Strategic Behavior and Combinatorial Betting in Prediction Markets.*

University of Iowa, Henry B. Tippie College of Business, Iowa City, IA, March 2008. *Betting on Permutations.*

University of Texas, Mccombs School of Business, Austin, TX, February 2008. Guest lecture. *Prediction Markets, Scoring Rules, and Proper Scoring Rules.*

New York University, Leonard N. Stern School of Business, New York, NY, February 2008. Guest lecture. *Prediction Markets: Tapping the Wisdom of Crowds.*

University of Michigan, School of Information, Ann Arbor, MI, September, 2007. Guest lecture. *Prediction Markets: Real and Potential Applications.*

University of Michigan, School of Information, Ann Arbor, MI, September, 2007. STIET Seminar. *Bluffing and Strategic Reticence in Prediction Markets.*

Prediction Markets in Marketing Conference: Issues, Challenges and Research Opportunities, The Pennsylvania State University, University Park, PA, March, 2007. *Prediction Market Mechanism Design.*

INFORMS Annual Meeting, Pittsburgh, PA, November, 2006. *Security Design and Information Aggregation in Markets.*

Patents

System and Method of Making Markets for a Finite Subset of Orders Placed across Continuous and Countably Infinite Outcome Spaces, US Patent No. US 8566205 B2, with D.M. Pennock, October 2013.

System and Method for Providing A Graphical User Interface for Prediction Markets, US Patent Application US 12/201526, pending, with P. Sarkar, S. Goel, D.M. Pennock, D.M. Reeves, and C. Yu, filed in August 2008.

Prediction Market Making Method and Apparatus, US Patent Application US 12/061062, pending, with S. Goel and D.M. Pennock, filed in April 2008.

Revenue-Sharing to Incentivize Users to Reveal Online Purchasing Interests, US Patent Application US 11/963595, pending, with Arpita Ghosh, filed in December 2007.

System and Method for Permutation Betting, US Patent Application US 11/716217, pending, with E.V. Nikolova and D.M. Pennock, filed in March 2007.

Professional Activities

Associate Editor:

ACM Transactions on Economics and Computation, 10/2015 – present;
ACM Transactions on Social Computing, 12/2015 – 12/2018;
Journal of Artificial Intelligence Research, 07/2015 – 06/2018;
Journal of Artificial Intelligence Research, Special Track on Human Computation and AI, 2014 – 2018.

Editor:

Special Issue of ACM Transactions on Economics and Computation for EC'16, 2016 – 2019
Special Issue of ACM Transactions on Economics and Computation for WINE'13, 2014 – 2015

Program Committee Chair/Co-Chair:

The 37th AAAI Conference on Artificial Intelligence (AAAI), 2023
The 6th Conference on Human Computation and Crowdsourcing (HCOMP), 2018;
ACM Conference on Economics and Computation (EC), 2016;
Conference on Web and Internet Economics (WINE), 2013;
The 4th Human Computation Workshop (HCOMP), 2012.

Area Chair:

International Joint Conference on Artificial Intelligence (IJCAI), AI & Economics, 2015.

Senior Program Committee:

ACM Conference on Economics and Computation (EC), 2012, 2014, 2015, 2019, 2024;
Conference on Artificial Intelligence (AAAI), 2016;
International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2012;
International Joint Conference on Artificial Intelligence (IJCAI), 2011, 2013.

Program Committees:

ACM Conference on Economics and Computation (EC), 2009, 2010, 2011, 2013;
International Joint Conference on Artificial Intelligence (IJCAI), 2009;
Conference on Artificial Intelligence (AAAI), 2011;

Conference on Uncertainty in Artificial Intelligence (UAI), 2010, 2011;
Conference on Human Computation and Crowdsourcing (HCOMP), 2013, 2014;
International World Wide Web Conference (WWW), 2008, 2012;
Conference on Auctions, Market Mechanisms and Their applications (AMMA), 2011;
International Conference on Electronic Commerce (ICEC), 2009;
International Workshop on Internet and Network Economics (WINE), 2008, 2012;
NIPS Workshop on Computational Social Science and the Wisdom of Crowds, 2011;
NetEcon: Workshop on the Economics of Networks, Systems and Computation, 2010;
The Sixth Ad Auction Workshop, 2010;
SIGIR Information Retrieval and Advertising Workshop (IRA), 2009;
International Workshop on Software Engineering Challenges for Cloud Computing in conjunction with International Conference on Software Engineering (ICSE-Cloud), 2009.

Organizing Committees:

The Workshop on Behavioral EC, in conjunction with ACM Conference on Economics and Computation (EC), 2019;
IJCAI-EAI Workshop on Game-Theoretic Mechanisms for Data and Information, 2018.
Workshop on Opinion Aggregation, Dynamics, and Elicitation, in conjunction with ACM Conference on Economics and Computation (EC), 2018;
CCC Visioning Workshop on Theoretical Foundations for Social Computing, 2015;
The 2nd Cambridge Area Economics and Computation Day (CAEC), 2013;
Workshop on Social Computing and User Generated Content (SCUGC), in conjunction with ACM Conference on Economics and Computation (EC), 2011, 2012, 2013, 2014;
Workshop on Prediction Markets, in conjunction with ACM Conference on Economics and Computation (EC), 2007, 2008.

Editor-in-Chief:

SIGecom Exchanges, 07/2010 – 06/2012.

Steering Committees:

AAAI Council, 2019 – 2022.
HCOMP Council, 2013 – 2021.

Member of Editorial Board:

Journal of Artificial Intelligence Research, 07/2009 – 06/2015.

Journal Refereeing:

Journal of Artificial Intelligence Research; Artificial Intelligence Journal; Autonomous Agents and Multi-Agent Systems; ACM's Transactions on Internet Technology; Economic Inquiry; Management Science; Operations Research; Algorithmic Finance; Information Systems Research; Decision Support Systems; Information Systems and e-Business Management; European Journal of Industrial Engineering.

Conference Refereeing:

ACM Conference on Electronic Commerce (EC) 2008; Workshop of Internet and Network Economics (WINE) 2009; Conference on Uncertainty in Artificial Intelligence (UAI) 2009;

Decision Science Institute (DSI) Annual Meeting 2004.

Tutorial Chair:

ACM Conference on Electronic Commerce (EC), 2008.

Local Arrangement Co-Chair:

ACM Conference on Electronic Commerce (EC), 2010.

Other:

Advisory Board member for Penn State College of Information Sciences and Technology, 02/2017 – 06/2019.

ACM SIGecom Secretary-Treasurer, 07/2011 – 06/2015.

Expert Advisory Group, IARPA ACE Program, 2012.

[0]Last updated on January 3, 2024.