

Vasilis Gkatzelis

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Employment History

- **Drexel University**, Computer Science - Associate Professor with tenure (since June 2022)
- **Drexel University**, Computer Science - Assistant Professor (June 2016 - June 2022)
- **UC Berkeley**, EECS & ICSI - Postdoctoral Scholar (Jan. 2016 - May 2016)
- **UC Berkeley**, Simons Institute - Research Fellow (Aug. 2015 - Dec. 2015)
- **Stanford University**, Computer Science - Postdoctoral Scholar (2013 - 2015)
- **Google**, New York - Engineering Intern (September 2012 - December 2012)
- **Hewlett Packard Labs**, Palo Alto - Research Intern (May 2012 - August 2012)
- **Microsoft Research**, Mountain View - Research Intern (May 2011 - August 2011)

Education

- New York University, Courant Institute of Mathematical Sciences
Ph.D. in Computer Science (2008 - 2013)
- New York University, Courant Institute of Mathematical Sciences
M.Sc. in Computer Science (2010)
- University of Patras, Computer Engineering and Informatics Department
Diploma (2002 - 2007)

Research Interests

Algorithmic Mechanism Design, Multiagent Resource Allocation, Approximation Algorithms

Conference Publications

- “Best of Both Distortion Worlds”
V. Gkatzelis, M. Latifian, and N. Shah
24th ACM Conference on Economics and Computation (**EC 2023**)
- “Proportionally Fair Online Allocation of Public Goods with Predictions”
S. Banerjee, V. Gkatzelis, S. Hossain, B. Jin, E. Micha, and N. Shah
32nd International Joint Conference on Artificial Intelligence (**IJCAI 2023**)
- “Optimal Data Acquisition with Privacy-Aware Agents”
R. Cummings, H. Elzayn, V. Gkatzelis, E. Pountourakis, and J. Ziani
IEEE Conference on Secure and Trustworthy Machine Learning (**SaTML 2023**)
- “Strategyproof Scheduling with Predictions”
E. Balkanski, V. Gkatzelis, and X. Tan
14th Innovations in Theoretical Computer Science Conference (**ITCS 2023**)

- “Learning-Augmented Mechanism Design: Leveraging Predictions for Facility Location”
P. Agrawal, E. Balkanski, V. Gkatzelis, T. Ou, and X. Tan
23rd ACM Conference on Economics and Computation (**EC 2022**)
- “Bayesian and Randomized Clock Auctions”
M. Feldman, V. Gkatzelis, N. Gravin, and D. Schoepflin
23rd ACM Conference on Economics and Computation (**EC 2022**)
- “Improved Price of Anarchy via Predictions”
V. Gkatzelis, K. Kollias, A. Sgouritsa, and X. Tan
23rd ACM Conference on Economics and Computation (**EC 2022**)
- “Beyond Cake Cutting: Allocating Homogeneous Divisible Resources”
I. Caragiannis, V. Gkatzelis, A. Psomas, and D. Schoepflin
21st Int. Conference on Autonomous Agents and Multiagent Systems (**AAMAS 2022**)
- “Optimal Deterministic Clock Auctions and Beyond”
G. Christodoulou, V. Gkatzelis, and D. Schoepflin
13th Innovations in Theoretical Computer Science Conference (**ITCS 2022**)
- “Online Nash Social Welfare Maximization with Predictions”
S. Banerjee, V. Gkatzelis, A. Gorokh, and B. Jin
33rd ACM-SIAM Symposium on Discrete Algorithms (**SODA 2022**)
- Deterministic Budget-Feasible Clock Auctions
E. Balkanski, P. Garimidi, V. Gkatzelis, D. Schoepflin, and X. Tan
33rd ACM-SIAM Symposium on Discrete Algorithms (**SODA 2022**)
- “Prior-Free Clock Auctions for Bidders with Interdependent Values”
V. Gkatzelis, R. Patel, E. Pountourakis, and D. Schoepflin
14th International Symposium on Algorithmic Game Theory (**SAGT 2021**)
- “Resource-Aware Cost-Sharing Mechanisms with Priors”
V. Gkatzelis, E. Pountourakis, and A. Sgouritsa
22nd ACM Conference on Economics and Computation (**EC 2021**)
- “PROPM Allocations of Indivisible Goods to Multiple Agents”
A. Baklanov, P. Garimidi, V. Gkatzelis, and D. Schoepflin
30th International Joint Conference on Artificial Intelligence (**IJCAI 2021**)
- “Fair and Efficient Online Allocations with Normalized Valuations”
V. Gkatzelis, A. Psomas, and X. Tan
35th AAAI Conference on Artificial Intelligence (**AAAI 2021**)
- “Achieving Proportionality up to the Maximin Item with Indivisible Goods”
A. Baklanov, P. Garimidi, V. Gkatzelis, and D. Schoepflin
35th AAAI Conference on Artificial Intelligence (**AAAI 2021**)
- “Resolving the Optimal Metric Distortion Conjecture”
V. Gkatzelis, D. Halpern, and N. Shah
61st IEEE Symposium on Foundations of Computer Science (**FOCS 2020**)
Also invited at the ACM EC plenary session on “**Highlights Beyond EC**”
- “Resource-Aware Protocols for Network Cost-Sharing Games”
G. Christodoulou, V. Gkatzelis, A. Sgouritsa, and M. Latifian
21st ACM Conference on Economics and Computation (**EC 2020**)

- “A Truthful Cardinal Mechanism for One-Sided Matching”
R. Abebe, R. Cole, V. Gkatzelis, and J. Hartline
31st ACM-SIAM Symposium on Discrete Algorithms (**SODA 2020**)
- “Balanced Ranking with Diversity Constraints”
K. Yang, V. Gkatzelis, and J. Stoyanovich
28th International Joint Conference on Artificial Intelligence (**IJCAI 2019**)
- “Fair and Efficient Memory Sharing: Confronting Free Riders”
E.J. Friedman, V. Gkatzelis, C.A. Psomas, and S. Shenker
33rd AAAI Conference on Artificial Intelligence (**AAAI 2019**)
- “Coordination Mechanisms, Cost-Sharing, and Approximation Algorithms for Scheduling”
I. Caragiannis, V. Gkatzelis, and C. Vinci
13th International Conference on Web and Internet Economics (**WINE 2017**)
- “Deferred-Acceptance Auctions for Multiple Levels of Service”
V. Gkatzelis, E. Markakis, and T. Roughgarden
18th ACM Conference on Economics and Computation (**EC 2017**)
- “Cost-Sharing Methods for Scheduling Games under Uncertainty”
G. Christodoulou, V. Gkatzelis, and A. Sgouritsa
18th ACM Conference on Economics and Computation (**EC 2017**)
- “Convex Program Duality, Fisher Markets, and Nash Social Welfare”
R. Cole, N.R. Devanur, V. Gkatzelis, K. Jain, T. Mai, V.V. Vazirani, and S. Yazdanbod
18th ACM Conference on Economics and Computation (**EC 2017**)
- “Nash Social Welfare Approximation for Strategic Agents”
S. Branzei, V. Gkatzelis, and R. Mehta
18th ACM Conference on Economics and Computation (**EC 2017**)
- “Participation Incentives on a Wireless Random Access Erasure Collision Channel”
V. Gkatzelis and S. Weber
12th Workshop on the Economics of Networks, Systems and Computation (**NetEcon 2017**)
- “Approximating the Nash Social Welfare with Indivisible Items”
R. Cole and V. Gkatzelis
47th ACM Symposium on Theory of Computing (**STOC 2015**)
- “Optimal Cost-Sharing in Weighted Congestion Games”
V. Gkatzelis, K. Kollias, and T. Roughgarden
10th Conference on Web and Internet Economics (**WINE 2014**)
- “The Performance of Deferred-Acceptance Auctions”
P. Dütting, V. Gkatzelis, and T. Roughgarden
15th ACM Conference on Economics and Computation (**EC 2014**)
- “Mechanism Design for Fair Division”
R. Cole, V. Gkatzelis, and G. Goel
14th ACM Conference on Electronic Commerce (**EC 2013**)
- “Positive Results for Mechanism Design without Money”
R. Cole, V. Gkatzelis, and G. Goel
12th Int. Conference on Autonomous Agents and Multiagent Systems (**AAMAS 2013**)

- “Inner Product Spaces for MinSum Coordination Mechanisms”
R. Cole, J.R. Correa, V. Gkatzelis, V. Mirrokni, and N. Olver
43rd ACM Symposium on Theory of Computing (**STOC 2011**)
- “The Impact of Social Ignorance on Weighted Congestion Games”
D. Fotakis, V. Gkatzelis, A. Kaporis, and P. Spirakis
5th International Workshop on Internet and Network Economics (**WINE 2009**)

Journal Publications

- “Resource-Aware Cost-Sharing Methods for Scheduling Games”
G. Christodoulou, V. Gkatzelis, and A. Sgouritsa
Operations Research
- “Nash Social Welfare Approximation for Strategic Agents”
S. Branzei, V. Gkatzelis, and R. Mehta
Operations Research
- “Approximating the Nash Social Welfare with Indivisible Items”
R. Cole and V. Gkatzelis
(invited to special issue featuring selected ACM STOC 2015 papers)
SIAM Journal on Computing
- “Optimal Cost-Sharing in General Resource Selection Games”
V. Gkatzelis, K. Kollias, and T. Roughgarden
Operations Research
- “The Performance of Deferred-Acceptance Auctions”
P. Dütting, V. Gkatzelis, and T. Roughgarden
Mathematics of Operations Research
- “Pricing Private Data”
V. Gkatzelis, C. Aperjis, and B.A. Huberman
(invited to special issue on Markets for Personal Data)
Electronic Markets - Int. Journal on Networked Business
- “Decentralized Utilitarian Mechanisms for Scheduling Games”
R. Cole, J.R. Correa, V. Gkatzelis, V. Mirrokni, and N. Olver
(invited to special issue featuring selected STOC/FOCS/SODA 2011 papers)
Games and Economic Behavior
- “The Impact of Social Ignorance on Weighted Congestion Games”
D. Fotakis, V. Gkatzelis, A. Kaporis, and P. Spirakis
Theory of Computing Systems

Honors and Awards

- “Faculty Early Career Development Program (CAREER) Award”
by the National Science Foundation (2021)
- “Faculty Teaching Excellence Award”
by the Drexel University College of Computing and Informatics (2022)

- **“Faculty Research Excellence Award”**
by the Drexel University College of Computing and Informatics (2021)
- **“Janet Fabri Prize”** *for the department’s most outstanding dissertation*
by the Courant Institute of Mathematical Sciences (2014)
- **“Dean’s Dissertation Fellowship”** *for selected students writing their dissertation*
by the NYU Graduate School of Arts & Science (2012-2013)
- **“Henning Biermann Award”** *for outstanding contributions to education*
by the Courant Institute of Mathematical Sciences (2011)
- **“Andreas Mentzelopoulos Scholarship”** (supplemental financial support)
by the University of Patras (2008-2010)

Tutorials and Workshops

- “Practical Mechanism Design for Bidders with Bounded Rationality” (London, 2023)
Tutorial at 24th ACM Conference on Economics and Computation (EC 2023)
Organizers: Vasilis Gkatzelis and Daniel Schoepflin
- “Learning-Augmented Mechanism Design” (Boulder, 2022)
Tutorial at 23rd ACM Conference on Economics and Computation (EC 2022)
Organizers: Eric Balkanski and Vasilis Gkatzelis
(<https://www.youtube.com/watch?v=yxpXYbCP16E>)
- “Understanding the power and limitations of clock auctions” (Aarhus, 2021)
Tutorial at 14th International Symposium on Algorithmic Game Theory (SAGT)
Organizer: Vasilis Gkatzelis
(<https://events.au.dk/sagt2021/>)
- “Nash Welfare, Market Equilibrium, and Stable Polynomials” (Phoenix, 2019)
Workshop at 51st Annual ACM Symposium on the Theory of Computing (STOC)
Organizers: Nima Anari, Jugal Garg, and Vasilis Gkatzelis
(https://www.cs.drexel.edu/~gkatz/STOC19_NSW.html)
- “Appeal and challenges of competitive approach to fair resource allocation” (Rome, 2019)
Tutorial on fair division preceding De Aequa Divisione workshop
Organizers: Vasilis Gkatzelis and Fedor Sandomirskiy
(<https://sites.google.com/view/deaequadivisione/home>)

Funding

- “CAREER: Optimal Mechanism Design without Monetary Transfers”, February 2021
NSF CCF Algorithmic Foundations: \$600,000 (Single PI)
https://www.nsf.gov/awardsearch/showAward?AWD_ID=2047907
- “Mechanisms with Predictions”, October 2022
NSF CCF Algorithmic Foundations: \$600,000 (split equally with co-PI Eric Balkanski)
https://www.nsf.gov/awardsearch/showAward?AWD_ID=2210502
- “The Efficiency of Clock Auctions”, July 2020
NSF CCF Algorithmic Foundations: \$358,000 (Single PI)
https://www.nsf.gov/awardsearch/showAward?AWD_ID=2008280

- “Practical Auction Design Using the Deferred-Acceptance Framework”, January 2018
NSF (CISE) Research Initiation Initiative (Algorithmic Foundations): \$183,000 (Single PI)
https://www.nsf.gov/awardsearch/showAward?AWD_ID=1755955

Teaching

- CS457 “Data Structures and Algorithms I” (every Fall 2016-2021)
- CS458 “Data Structures and Algorithms II” (Winter 2023)
- CS522 “Data Structures and Algorithms II” (Spring 2022)
- CS525 “Theory of Computation” (Spring 2018 and Winter 2023)
- CS618 “Algorithmic Game Theory” (Spring 2019 and 2021)
- CS621 “Approximation Algorithms” (Spring 2020)
- CST680 “Economics and Computation” (Spring 2017)

Service for Conferences and Journals

- **Editor:**
 - Associate Editor at the ACM Transactions on Economics and Computation journal
- **Chair:**
 - Poster session chair at 20th ACM Conference on Economics & Computation (EC 2019)
 - Poster session chair at 12th Conference on Web and Internet Economics (WINE 2016)
 - Session chair at 22nd International Symposium on Mathematical Programming (ISMP 2015)
- **Program Committees:**
 - 24th ACM Conference on Economics & Computation (EC 2023)
 - 32nd Int. Joint Conference on Artificial Intelligence (IJCAI 2023)
 - 23rd ACM Conference on Economics & Computation (EC 2022)
 - 31st Int. Joint Conference on Artificial Intelligence (IJCAI 2022)
 - 36th Conference on Artificial Intelligence (AAAI 2022)
 - 33rd ACM-SIAM Symposium on Discrete Algorithms (SODA 2022)
 - 17th Conference on Web and Internet Economics (WINE 2021)
 - 22nd ACM Conference on Economics & Computation (EC 2021)
 - 30th Int. Joint Conference on Artificial Intelligence (IJCAI 2021)
 - 35th Conference on Artificial Intelligence (AAAI 2021)
 - 16th Conference on Web and Internet Economics (WINE 2020)
 - 21st ACM Conference on Economics & Computation (EC 2020)
 - 29th Int. Joint Conference on Artificial Intelligence (IJCAI 2020)
 - 34th Conference on Artificial Intelligence (AAAI 2020)

- 15th Conference on Web and Internet Economics (WINE 2019)
 - Workshop on Theoretical Aspects of Fairness (WTAF 2019)
 - Workshop on Fair Allocation in Multiagent Systems (FAMAS 2019)
 - 20th ACM Conference on Economics & Computation [Senior PC] (EC 2019)
 - 28th International World Wide Web Conference (WWW 2019)
 - AAAI/ACM Conf. on Artificial Intelligence, Ethics, and Society (AEIS 2019)
 - 14th Conference on Web and Internet Economics (WINE 2018)
 - 19th ACM Conference on Economics & Computation (EC 2018)
 - 27th Int. Joint Conference on Artificial Intelligence (IJCAI 2018)
 - 27th International World Wide Web Conference (WWW 2018)
 - 11th International Symposium on Algorithmic Game Theory (SAGT 2018)
 - 32nd Conference on Artificial Intelligence (AAAI 2018)
 - 13th Conference on Web and Internet Economics (WINE 2017)
 - 18th ACM Conference on Economics & Computation (EC 2017)
 - 26th Int. Joint Conference on Artificial Intelligence (IJCAI 2017)
 - 16th Int. Conf. on Autonomous Agents & Multiagent Systems (AAMAS 2017)
 - 26th International World Wide Web Conference (WWW 2017)
 - 12th Conference on Web and Internet Economics (WINE 2016)
 - 17th ACM Conference on Economics & Computation (EC 2016)
 - AGT Workshop at Int. Joint Conference on AI (AGT@IJCAI 2016)
 - 25th Int. Joint Conference on Artificial Intelligence (IJCAI 2016)
 - 11th Conference on Web and Internet Economics (WINE 2015)
 - 16th ACM Conference on Economics & Computation (EC 2015)
 - AGT Workshop at Int. Joint Conference on AI (AGT@IJCAI 2015)
 - 10th Conference on Web and Internet Economics (WINE 2014)
- **Journal Reviewer:** SIAM Journal on Computing, Operations Research, Mathematics of Operations Research, Games and Economic Behavior, Journal of Economic Theory, Algorithmica, Discrete Optimization, Transactions on Economics and Computation, Theory of Computing Systems, Information Processing Letters, Journal of Machine Learning, Mathematical Social Sciences, Information and Computation, IEEE Transactions on Parallel and Distributed Systems, Mathematical Methods of Operations Research
 - **Conference Reviewer:** ACM Symposium on Theory of Computing, ACM Conference on Economics & Computation, ACM-SIAM Symposium on Discrete Algorithms, International Colloquium on Automata, Languages, and Programming, Conference on Web and Internet Economics, European Symposium on Algorithms, International Symposium on Algorithmic Game Theory, Symposium on Theoretical Aspects of Computer Science, International Conference on Algorithms and Complexity, Latin American Theoretical Informatics Symposium, ACM Symposium on Parallelism in Algorithms and Architectures