

# Market Design Job Market Candidate Profiles 2023

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Inspired by the SIGecom Exchanges' annual survey of job market candidates,<sup>1</sup> this is the third annual collection of profiles of the junior faculty job market candidates of the market design community. The twelve candidates are listed alphabetically. Along with information regarding the candidate's bio, job market paper, other representative papers, and short research summary, each profile also contains links to the candidate's homepage and CV.

–Yannai A. Gonczarowski, Assaf Romm, and Ran Shorrer

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<sup>1</sup>Starting with: DUGHMI, S., GKATZELIS, V., AND HARTLINE, J. 2015. SIGecom job market candidate profiles 2016. *ACM SIGecom Exchanges* 14, 1, 2–40.

ALTMANN, SAM ([Homepage](#), [CV](#))

**Job market paper:** Choice, Welfare, and Market Design: An Empirical Investigation of Feeding America’s Choice System

**Advisor:** Ian Crawford

**Other fields:** Industrial organisation, Applied microeconomics

**PhD:** University of Oxford, Economics (Expected: 2023)

**Short research summary:** My research examines market design problems from an empirical perspective, with a particular focus on repeated auctions. My work considers problems in which the choice of mechanism depends on the features of agents’ preferences. I use structural econometrics to recover preferences and evaluate alternate allocation mechanisms. My Job Market Paper studies the allocation of food to food banks, and the importance of giving food banks choice over the types of food they receive.

**Other paper:**

[1] Identification and Estimation of a Dynamic Multi-object Auction Model

CELEBI, OGUZHAN ([Homepage](#), [CV](#))

**Job market paper:** Adaptive Priority Mechanisms. With Joel Flynn.

**Advisors:** Parag Pathak, Daron Acemoglu, and Tayfun Sönmez

**Other fields:** Political economy

**PhD:** MIT, Economics (Expected: 2023)

**Short research summary:** My research focuses on incorporating diversity preferences into resource allocation mechanisms. My job market paper studies how should authorities that care about match quality and diversity allocate resources when they are uncertain of the market they face. We propose a new class of adaptive priority mechanisms (APM) that can prioritize agents as a function of their scores and the composition of assigned agents. APM achieves the ex-post optimal allocation in every state and improves upon widely used priority and quota policies, which are optimal if and only if the authority is risk-neutral or extremely risk-averse over diversity, respectively. Using data from Chicago Public Schools, we estimate that the gains from adopting APM are considerable.

**Other papers:**

[1] Priority Design in Centralized Matching Markets. *Review of Economic Studies* (2022). With Flynn, Joel.

[2] Diversity Preferences, Affirmative Action, and Choice Rules

CHAN, ALEX ([Homepage](#), [CV](#))

**Job market paper:** Discrimination Against Doctors: A Field Experiment

**Advisors:** Alvin Roth and Muriel Niederle

**Other fields:** Experimental and behavioral economics, Health economics, Labor economics

**PhD:** Stanford University, Health Economics (Expected: 2023)

**Short research summary:** I am an applied microeconomist interested in how market failures occur in healthcare, how such failures lead to disparities across demographic groups, and how to design incentives and markets to remedy these market failures. My research approach primarily relies on large-scale randomized field experiments, leveraging the partnerships I built with private companies and non-profits. I use novel experimental incentives to study institutions and markets where allocations are not determined solely by prices. I also employ laboratory experiments and quasi-experimental empirical strategies with observational data. My research offers concrete policy solutions that draw upon microeconomic theory and matching models. Currently, my two major streams of research are: (1) identifying the causes and consequences of discrimination and diversity in healthcare; and (2) identifying how the design of health policies, markets, and healthcare organizations affects allocation outcomes.

**Other paper:**

[1] Regulation of Organ Transplantation and Procurement: A Market Design Lab Experiment, Revise and Resubmit at *Journal of Political Economy*. With Alvin E. Roth.

FENG, DI ([Homepage](#), [CV](#))

**Job market paper:** Endowments-Swapping-Proofness in Multiple-type Housing Markets

**Advisor:** Bettina Klaus

**Other fields:** Decision theory, Game theory, Experimental economics, Financial economics

**PhD:** University of Lausanne, Economics (Expected: 2023)

**Short research summary:** I am a microeconomist. I work on both theoretical and applied topics, with a focus on the interaction between microeconomics and market design. The first topic of my research is the Top Trading Cycle (TTC) algorithm and its extensions applied in multiple type housing markets. In my job market paper, I provide characterization results of two extensions for the TTC mechanism based on incentive properties.

**Other papers:**

[1] Preference Revelation Games and Strict Cores of Multiple-type Housing Market Problems, *International Journal of Economic Theory* (Special Issue in Honor of William Thomson, 2022). With Klaus, Bettina.

[2] On the Asymptotic Performance of Affirmative Actions in School Choice. With Liu, Yun.

FERDOWSIAN, ANDREW ([Homepage](#), [CV](#))

**Job market paper:** When A Match Isn't Forever: Learning Through Transient Matching

**Advisor:** Leeat Yariv

**Other fields:** Behavioral, Industrial organization

**PhD:** Princeton University, Economics (Expected: 2023)

**Short research summary:** I am interested in market design in applied scenarios. My JMP is about transient matching in decentralized markets, where workers learn about their preferences through their experiences. I show that the link between information and matches generates a multiarmed bandit problem, wherein firms act as bandits with endogenously determined rewards.

**Other papers:**

[1] Build to Order: Endogenous Supply in Centralized Mechanisms. with Lee, Kwok Hao and Yap, Luther.

[2] Decentralized Matching with Aligned Preferences. With Niederle, Muriel and Yariv, Leeat.

FERREIRA, MATHEUS V. X. ([Homepage](#), [CV](#))

**Job market paper:** Credible Decentralized Exchange Design via Verifiable Sequencing Rules. With Parkes, David.

**Advisor:** S. Matthew Weinberg

**Other fields:** Security, Cryptography

**PhD:** Princeton University, Computer Science (2021)

**Post-doc:** Harvard University, Computer Science (2021–2023)

**Short research summary:** I am interested in the interplay of security and algorithmic game theory and, in particular, their application to market design and how strategic behavior impacts security and fairness in digital platforms. My job market paper studies market manipulation in DeFi applications. I propose a framework that eliminates manipulations by making decentralized exchanges auditable to an external observer.

**Other papers:**

[1] Credible, Truthful, and Two-Round (Optimal) Auctions via Cryptographic Commitments, *EC 2020*. With Weinberg, S. Matthew.

[2] Optimal Strategic Mining Against Cryptographic Self-Selection in Proof-of-Stake, *EC 2021*. With Weinberg, S. Matthew.

KANG, ZI YANG ([Homepage](#), [CV](#))

**Job market paper:** The Public Option and Optimal Redistribution

**Advisors:** Paul Milgrom and Andy Skrzypacz

**Other fields:** Microeconomic theory, Industrial organization

**PhD:** Stanford University, Graduate School of Business (Expected: 2023)

**Short research summary:** My research examines how economic policies should be designed and evaluated, often through the lenses of information design and mechanism design. My job market paper studies optimal redistribution when the policymaker can supply a public alternative, or a “public option,” to goods sold by private producers. This is challenging because the design of the public option interacts with the private market—an important feature for many redistribution programs, such as public housing, education, and health care. I show how the private market affects design considerations, characterize the optimal mechanism, and evaluate the gain in social welfare from doing so. Taken together, my results thus provide a framework for determining how and when governments should redistribute via the public option.

**Other papers:**

[1] Optimal Indirect Regulation of Externalities

[2] Robust Bounds for Welfare Analysis, *EC 2022*. With Vasserman, Shoshana.

LEE, KWOK-HAO ([Homepage](#), [CV](#))

**Job market paper:** The Dynamic Allocation of Public Housing: Policy and Spillovers. With Ferdowsian, Andrew, and Yap, Luther.

**Advisor:** Adam Kapor

**Other fields:** Industrial organization, Urban economics, Economics of digitization

**PhD:** Princeton University, Economics (Expected: 2023)

**Short research summary:** I am an empirical industrial organization economist. I apply tools from market design to study urban economics and the economics of digitization. My job market paper uses data from the Singapore public housing mechanism. I investigate if rule changes can improve applicant outcomes and how building slightly more apartments can achieve these improvements.

**Other papers:**

[1] Principal responsiveness in centralized mechanisms: Build to order. With Ferdowsian, Andrew and Yap, Luther.

[2] Entry into two-sided markets shaped by platform-guided search. Rising Star Paper Prize at the *20th International Industrial Organization Conference (2022)*. With Musolff, Leon.

PERNOUD, AGATHE ([Homepage](#), [CV](#))

**Job market paper:** How Competition Shapes Information in Auctions

**Advisors:** Matthew Jackson, Paul Milgrom, and Mohammad Akbarpour

**Other fields:** Microeconomic theory, Financial networks

**PhD:** Stanford University, Economics (Expected: 2023)

**Short research summary:** My research examines settings where market participants must incur costs to learn about the goods in a market. Natural examples are the sale of complex, high-value assets, such as companies or procurement contracts, which often involve extensive due diligence. My job market paper investigates how these learning frictions affect the properties of competition in auctions. I show that buyers have an incentive to learn how much other participants value the goods for sale in order to avoid due diligence costs when their chances of winning are low. Such an incentive hurts revenue and price discovery.

**Other paper:**

[1] Informationally Simple Incentives, *Journal of Political Economy* (Forthcoming). With Gleyze, Simon.

RUDOV, KIRILL ([Homepage](#), [CV](#))

**Job market paper:** Fragile Stable Matchings

**Advisor:** Leeat Yariv

**Other fields:** Microeconomic theory, Behavioral economics

**PhD:** Princeton University, Economics (Expected: 2023)

**Short research summary:** I am interested in market design and robustness. My JMP shows the fragility of stable matchings in a decentralized environment, where randomly-chosen blocking pairs are allowed to match in sequence. I show that these dynamics can lead to any stable matching from any unstable one in most markets. Thus, stable matchings are fragile—any small deviation from a stable matching may culminate in any stable matching. I show that a unique stable matching is also fragile: upon a small perturbation, the market might be far from stable for a long duration.

**Other papers:**

[1] Centralized Matching with Incomplete Information, *American Economic Review: Insights* (2022). With Fernandez, Marcelo A. and Yariv, Leeat.

[2] Dominance Solvability in Random Games. With Alon, Noga and Yariv, Leeat.

SANDOMIRSKIY, FEDOR ([Homepage](#), [CV](#))

**Job market paper:** Geometry of Consumer Preference Aggregation

**Advisors:** Ernst Presman and Victor Domansky

**Other fields:** Microeconomic theory, Information economics, Mechanism design, Algorithmic economics

**PhD:** Russian Academy of Sciences, Economics and Mathematics (2014)

**Post-doc:** Technion (2018–2021); Caltech (2021–2023)

**Short research summary:** I am interested in the interconnectedness of information economics and mechanism design, focusing on multi-agent information design,

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pseudomarkets, and multi-item auctions. My JMP studies how individual preferences shape aggregate demand and connects aggregation to Bayesian persuasion by reducing it to convexification. Applications include characterization of aggregation-invariant domains, bidding language design for pseudomarkets, gains from trade estimation, and preference identification.

**Other papers:**

[1] Feasible Joint Posterior Beliefs, *Journal of Political Economy* (2021). Best Paper Award at *EC 2020*. With Arieli, Itai, Babichenko, Yakov, and Tamuz, Omer.

[2] Competitive Division of a Mixed Manna, *Econometrica* (2017). With Bogomolnaia, Anna, Moulin, Herve, and Yanovskaya, Elena.

THOMAS, CLAYTON ([Homepage](#), [CV](#))

**Job market paper:** Strategyproofness-Exposing Mechanism Descriptions. With Gonczarowski, Yannai A. and Heffetz, Ori.

**Advisor:** S. Matthew Weinberg

**Other fields:** Strategic simplicity, Communication complexity, Auctions

**PhD:** Princeton University, Computer Science (Expected: 2023)

**Short research summary:** Where traditional computer science studies the ease of running an algorithm on a computer, my work studies the ease of explaining an algorithm to a human, especially explaining economically meaningful properties of algorithms such as strategyproofness. Thus far, this program has achieved a new, simple, strategyproofness-exposing description of deferred acceptance, a crucial real-world mechanism whose strategic properties are quite opaque under traditional descriptions.

**Other papers:**

[1] Classification of Priorities Such That Deferred Acceptance is Obviously Strategyproof, *EC 2021*

[2] Exponential Communication Separations between Notions of Selfishnes, *STOC 2021*. With Rubinstein, Aviad, Saxena, Raghuvansh, Weinberg, S. Matthew, and Zhao, Junyao.