Simon Finster

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Education

University of Oxford – Ph.D. (D.Phil.), Economics, Nuffield College, 2016 -
"Essays on Multi-Object Auctions for Differentiated Goods" | Supervisor: Prof. Paul Klemperer

Paris School of Economics – Masters, Economics (APE), 2014 - 2016

Karlsruhe Institute of Technology (KIT) – B.Sc., Industrial Engineering, 2010 - 2013

References

Prof. Paul Klemperer
Department of Economics
University of Oxford
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Prof. Péter Esö
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Prof. Ian Jewitt
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University of Oxford
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Research fields

Microeconomic Theory, Auction and Market Design, Experimental Economics

Work in progress

"Selling Multiple Complements with Packaging Costs" [job market paper]

I consider a package assignment problem where multiple units of indivisible objects are allocated to individuals. The seller can specify additional costs or cost savings on certain packages of objects: e.g., a manufacturer may incur cost savings if they obtain a range of products or services from a single supplier. The objective is to find a socially efficient allocation among buyers. I propose a sealed-bid auction with a novel cost function graph to express the seller's preferences. The graph structure facilitates the use of linear programming to find anonymous, competitive, and package-linear prices. If agents act as price takers, these prices support a Walrasian equilibrium, and I provide additional conditions under which an equilibrium always exists. The auction design guarantees fairness and transparency in pricing, and it admits preferences of the seller or auctioneer over the type and degree of concentration in the market.

"Strategic Bidding in Product-Mix, Sequential, and Simultaneous Auctions" (theory and experiment) [working paper]

The three auction formats are used to sell differentiated, indivisible goods. A flexible bidder with unit demand, interested in buying any of the goods, competes against several inflexible bidders, each interested in only one specific good. For first-price and second-price payments, I obtain theoretical results on equilibrium bidding, and compare efficiency, revenue, and bidder surplus numerically. Differences in outcomes between Product-Mix and sequential auctions are small for a range of value distributions. The simultaneous auction performs worst in all dimensions, and differences in performance vary substantially with the degree of competition the flexible bidder faces. I have planned a series of lab experiment to obtain further insights into real-life bidding behaviour in the three auction formats, addressing the effect of anticipated regret as well as resale prospects.

"The Complexity of Envy-free Pricing in Revenue-maximising Multi-unit Auctions" (with Paul Goldberg and Edwin Lock, University of Oxford)

This paper considers the computational challenges of finding an envy-free and revenue-maximising allocation and prices in multi-unit environments. The tension between envy-freeness and maximal seller's revenue makes this problem as computationally difficult as highly practically relevant: a mechanism with these properties has applications in many public and private sector auctions, e.g., for the licensing of telecommunication spectrum and natural resource extraction, in financial markets and procurement. We present a linear-time algorithm in the case where the expressivity of the bidding language is restricted to additive demand. In the more general case where the bidding language is restricted to specifying trade-offs between at most two objects,

we show that it is impossible in polynomial time to get arbitrarily close to maximum revenue when respecting the constraints of envy-freeness, generalising results from the previous literature.

"Robust Bidding in Multi-unit Auctions" (with Bernhard Kasberger, University of Oxford)

We study optimal bidding under strategic uncertainty. If a bidder faces a high degree of uncertainty about the bidding environment, a formulation of priors is an unrealistic assumption. Instead, we develop a robust bidding rule that requires no prior information about other participants in the auction. The bidders' objective is to minimise the maximal loss they could incur, building on the concept of minimax-regret.

Conference and seminar presentations

2021	World Congress of the Game Theory Society x 2 (postponed from 2020)
2020	World Congress of the Econometric Society, Student Microtheory Workshop, University of Oxford
2019	CESS Colloquium and Gorman Seminar, University of Oxford

Teaching

2020	Game Theory, Microeconomics Analysis, and Core Microeconomics (undergraduate, PPE & Economics and Management, University of Oxford) - tutorials and small classes
2019 - 2020	Microeconomics (graduate, MSc in Financial Economics, University of Oxford) - one-to-one tuition
Supervision:	Undergraduate independent research (Oxford, 2020), co-supervision of MSc thesis in Financial Economics (Oxford, 2018)

Research experience and other employment

2016 -	University of Oxford – Research assistant to Prof. Paul Klemperer
2016	University of California, Berkeley – Visiting Student, Economics
2015 - 2016	Paris Dauphine University – Research assistant to Prof. Anna Creti
2013 - 2014	The Chinese University of Hong Kong – Visiting Student, Economics and Mandarin Chinese
2012 - 2013	Karlsruhe Institute of Technology – Research assistant to Prof. Christof Weinhardt
2011	Allianz Inhouse Consulting – Intern, Allianz Deutschland AG, Munich

Awards and scholarships

2019 - 2020	Doctoral Bursary, Department of Economics, University of Oxford
2016 - 2019	Oxford-Jerry Hausman Graduate Scholarship | Funding for PhD at Nuffield College
2016	Fellowship for visit at UC Berkeley, American Foundation for the Paris School of Economics
2013 - 2014	Deutschlandstipendium, National Merit Scholarship
2013	Baden-Württemberg-STIPENDIUM, Merit Scholarship for visit at CUHK

Extracurricular

2017 - 2019	GJCC chair and DPhil Representative, Department of Economics, University of Oxford
2016 - 2019	Equality Representative, Nuffield College, University of Oxford
2011 - 2013	KonsumGlobal Karlsruhe, Student association for sustainable consumption politics
2009 - 2010	Lecturer, Tutor, and IT management, Diocese of Mbinga, Tanzania

Other

Computer skills: Julia, LaTeX, Mathematica, Matlab, Python

Languages: German (native), English (business level), French (good), Swahili (good), Mandarin (basic)