



## Fedor Iskhakov *Professor of Economics*

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I'm an applied microeconometrician and a computational economist working in the field of structural estimation of dynamic models of individual and strategic choice, with applications to labor economics, public economics, durable goods markets, household finance, applied industrial organization and dynamic games.

### Current and Previous Academic Positions

Australian Research Council (ARC) Future Fellow	2019 – 2022
Professor	From 2020
Associate Professor	2019 – 2020
Senior Lecturer	2016 – 2018
Research School of Economics, The Australian National University, Canberra	
Senior Research Fellow	2013 – 2016
ARC Centre of Excellence in Population Ageing Research (CEPAR), University of New South Wales, Sydney	
Research Fellow	2010 – 2012
Center of Study of Choice (CenSoC), University of Technology, Sydney	
Postdoctoral Research Fellow	2009 – 2010
Economic Institute, University of Oslo	
Research Fellow	2002 – 2008
Ragnar Frisch Centre for Economic Research, Oslo, Norway	

### Education

Ph.D. in Economics	2009	Candidate Sc. in Economic Cybernetics	2006
University of Oslo, Norway		St.Petersburg State University, Russia	
M.Sc. in Economics	2003	Specialist in Mathematical Economics	2001
University of Oslo, Norway		St.Petersburg State University, Russia	

Citizenship/languages	Russia, Australia	Russian, English (fluent), Norwegian (basic)
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### Publications

#### Selected published papers

- [1] Fedor Iskhakov, John Rust, and Bertel Schjerning. The dynamics of Bertrand price competition with cost-reducing investments. *International Economic Review*, 59(4):1681–1731, 2018
- [2] Julie Agnew, Hazel Bateman, Christine Eckert, Fedor Iskhakov, Jordan Louviere, Stephen Satchell, and Susan Thorp. First impressions matter: An experimental investigation of online financial advice. *Management Science*, 64(1):288–307, January 2018
- [3] Fedor Iskhakov, Thomas Jørgensen, John Rust, and Bertel Schjerning. The endogenous grid method for discrete-continuous dynamic choice models with (or without) taste shocks. *Quantitative Economics*, 8(2):317–365, 2017. (lead article)
- [4] Fedor Iskhakov, John Rust, and Bertel Schjerning. Recursive lexicographical search: Finding all markov perfect equilibria of finite state directional dynamic games. *The Review of Economic Studies*, 83(2):658–703, 2016

- [5] Fedor Iskhakov, Jinhyuk Lee, John Rust, Bertel Schjerning, and Kyoungwon Seo. Constrained optimization approaches to estimation of structural models: Comment. *Econometrica*, 84(1):365–370, January 2016
- [6] Fedor Iskhakov. Multidimensional endogenous gridpoint method: Solving triangular dynamic stochastic optimization problems without root-finding operations. *Economics Letters*, 135:72–76, October 2015
- [7] Fedor Iskhakov. Structural dynamic model of retirement with latent health indicator. *The Econometrics Journal*, 13:126–161, 2010

#### Forthcoming papers and papers under review

- [8] Fedor Iskhakov, John Rust, and Bertel Schjerning. Machine learning and structural econometrics: Contrasts and synergies. *The Econometrics Journal*, 2020. (forthcoming)
- [9] Fedor Iskhakov and Michael Keane. Effects of taxes and safety net pensions on life-cycle labor supply, savings and human capital: the case of Australia. *Journal of Econometrics*, 2020. (forthcoming)
- [10] Kenneth Gillingham, Fedor Iskhakov, Anders Munk-Nielsen, John Rust, and Bertel Schjerning. Equilibrium trade in automobile markets. Revision requested by *Journal of Political Economy*, 2020

#### Other published papers

- [11] Hazel Bateman, Christine Eckert, Fedor Iskhakov, Jordan Louviere, Stephen Satchell, and Susan Thorp. Individual capability and effort in retirement benefit choice. *Journal of Risk and Insurance*, 85(2):483–512, 2018
- [12] Hazel Bateman, Christine Eckert, Fedor Iskhakov, Jordan Louviere, Stephen Satchell, and Susan Thorp. Default and naive diversification heuristics in annuity choice. *Australian Journal of Management*, 42(1):32–57, 2017
- [13] Fedor Iskhakov. Corrigendum to “Multidimensional endogenous gridpoint method: Solving triangular dynamic stochastic optimization problems without root-finding operations” [*Econom. Lett.* 135 (2015) 72–76]. *Economics Letters*, 150:26, 2017
- [14] Sarbartha Bandyopadhyay, Fedor Iskhakov, Terence Johnson, Soohyung Lee, David McArthur, John Rust, Joel Watson, and John Watson. Can the job market for economists be improved? In Nir Vulkan, Alvin E. Roth, and Zvika Neeman, editors, *Handbook of market design*. Oxford University Press, 2013

#### Work in progress

- [15] Fedor Iskhakov, Dennis Kristensen, John Rust, and Bertel Schjerning. Structural estimation of dynamic directional games with multiple equilibria. (work in progress)
- [16] Kenneth Gillingham, Fedor Iskhakov, Anders Munk-Nielsen, John Rust, and Bertel Schjerning. A dynamic model of vehicle ownership, type choice, and usage. (work in progress)
- [17] Jaap H. Abbring, Øystein Daljord, and Fedor Iskhakov. Identifying present-biased discount functions in dynamic discrete choice models. (work in progress)
- [18] Christian Langholz Carstensen, Maria Juul-Hansen, Fedor Iskhakov, John Rust, and Bertel Schjerning. A dynamic structural model of residential and job location decisions. (work in progress)
- [19] Julie Agnew, Hazel Bateman, Christine Eckert, Fedor Iskhakov, Jordan Louviere, Stephen Satchell, and Susan Thorp. The impact of confirmation bias on willingness to pay for financial advice. (work in progress)
- [20] Fedor Iskhakov and Philip Ushchev. Error bounds of the endogenous gridpoint method under optimal implementation. (work in progress)
- [21] Fedor Iskhakov, Efthymia Kyriakopoulou, Philip Ushchev, and Yves Zenou. Location, social norms and recycling. (work in progress)

## Awards

- Australian Research Council Future Fellowship. “Solving and estimating dynamic models of strategic interaction.” \$857,585AUD, 2019-2022
- Australian Research Council Discovery Project. “Understanding and overcoming confusion in consumer financial decisions.” \$660,000AUD, 2019-2021
- Finalist of 2017 TIAA Paul A. Samuelson Award. “First Impressions Matter: An Experimental Investigation of Online Financial Advice”
- Early Career Researcher Grant. \$25,000AUD, University of Technology, Sydney, 2012-2013
- His Majesty the King’s of Norway Golden Medal (Hans Majestet Kongens Gullmedalje). Best research in social sciences among young researchers in Norway in 2008

## Professional Service

### Editorial service

Guest co-editor for the special issue of *The Econometrics Journal* “Methodology and Applications of Structural Dynamic Models and Machine Learning”, 2018-2019

Guest co-editor for the special issue of *Journal of Econometrics (Annals of Econometrics)* “Implementation of Structural Dynamic Models: Methodology and Applications”, 2017-2018

Editor-in-Chief and co-founder, *Journal of Open Source Economics (JOSEcon)*, from 2019

### Refereeing

Econometrica, Review of Economic Studies, International Economic Review, RAND Journal of Economics, Management Science, The Econometrics Journal, Labour Economics, Economics Letters, Computational Economics, Journal of Economics Dynamics and Control, Journal of Pension Economics and Finance, Economics of Education Review

### Conference organizing committees

July, 2019. “3rd Conference on Structural Dynamic Models”, Booth School of Business, University of Chicago

May 31 - June 1, 2018. “2nd Conference on Structural Dynamic Models: Methodology and Applications of Structural Dynamic Models and Machine Learning”, University of Copenhagen, Denmark

August 29-30, 2017. “Implementation of Structural Dynamic Models: Methodology and Applications”, University College London, UK

August 17-19, 2017. Workshop of the Australasian Macroeconomic Society, Australian National University, Canberra

June 18-19, 2010. “Dynamic Aspects in Economic Decision Making”, University of Copenhagen, Denmark

### Software development

EconJobMarket.org

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## Teaching

Computational Methods in Economics Undergraduate/postgraduate course at ANU	2018, 2019, 2020
Dynamic programming and structural estimation Undergraduate/postgraduate short course at Higher School of Economics, St. Petersburg, Russia	2020
Econometric Society Summer School in Dynamic Structural Econometrics (DSE) <del>University of Zurich</del> (canceled due to COVID pandemic)	<del>2020</del>
DSE 2019, Chicago Booth School of Business With John Rust and Bertel Schjerning, <i>several lectures during short course (5 days)</i>	2019
Copenhagen Summer School on Structural Dynamic Models With John Rust and Bertel Schjerning, <i>several lectures during short course (5 days)</i>	2018
QuantEcon Honours Workshop With John Stachurski and Thomas J. Sargent <i>Invited lecture during a one day graduate workshop</i>	2018
Georgetown University Masterclass “Dynamic Programming”, with John Rust and Bertel Schjerning, <i>short course (2 days)</i>	2017
Zurich Initiative on Computational Economics (ZICE) University of Zurich, Switzerland, <i>several lectures during short course (7 days)</i>	2014, 2015, 2017
University of Macedonia: Short Course in Economics (SCE) With John Rust and Bertel Schjerning, <i>short course (5 days)</i>	2016

Centre for Microdata Methods and Practice (CEMMAP) UCL and IFS, with John Rust and Bertel Schjerning, <i>2 day short course</i>	2015
INFORMS Summer School on Dynamic Discrete Choice Models CIRRELT, University of Montreal, <i>invited lecture</i>	2015
Applied econometrics Graduate School of Management, St.Petersburg State University, Russia, <i>lecturer</i>	2009, 2010

### Student Supervision and Graduation Committee Membership

Yurui (Tina) Zhang, <i>doctoral thesis</i> , associate supervisor	ANU, 2022
Zhuoran (Mike) Liu, <i>doctoral thesis</i> , associate supervisor	ANU, 2022
Derek Wu, <i>honours thesis</i> , co-supervisor	ANU, 2021
Toan Le, <i>honours thesis</i> , main supervisor	ANU, 2018
Oskar Blom Västberg, <i>doctoral thesis</i> , committee member	KTH Royal Institute of Technology, 2018
Yan Zhang, <i>master thesis</i> , main supervisor	University of Oslo, Norway, 2009

### Conferences and Seminar Presentations

2020 St.Petersburg Economics Seminar, Higher School of Economics, St.Petersburg; Econometric Society World Congress, Milan (virtual);	(1 talk + 1 conference presentation)
2019 ANU-Treasury Fiscal Policy Modelling Workshop, Canberra; Institute for Applied Microeconomics, Bonn; Open-SourceEconomics, Bonn; National Research University Higher School of Economics, St.Petersburg; Yale School of Forestry and Environmental Studies, Yale University; Tepper School of Business, Carnegie Mellon University;	(4 talks + 2 conference presentations)
2018 24th International Conference on Computing in Economics and Finance; Department of Economics, Monash University; European University in St.Petersburg; KTH Royal Institute of Technology, Stockholm, Sweden; American Economic Association, Allied Social Science Associations Annual Meeting;	(3 talks + 2 conference presentations)
2017 Inaugural conference of Asian and Australasian Society of Labor Economics (AASLE); Macroeconomic Group, Department of the Treasury, Australian Government; Workshop on urbanization, productivity, congestion and car-ownership, University of Copenhagen; Implementation of Structural Dynamic Models: Methodology and Applications, University College London; International Association for Applied Econometrics 2017 Annual Conference, Hokkaido University, Sapporo, Japan; Discipline of Business Analytics, The University of Sydney Business School; Berlin Applied Micro Seminar, DIW, Berlin; International Pension Workshop 2017, Netspar, Netherlands;	(3 talks + 4 conference presentations)
2016 Longitudinal Data Conference 2016, Canberra, ACT; Workshop on urbanization, productivity, congestion and car-ownership, University of Copenhagen; Department of Economics, University of Copenhagen; Department seminar, HSE, St. Petersburg; Stanford Institute for Theoretical Economics (SITE); 22nd International Conference on Computing in Economics and Finance, Bordeaux, France; International Association for Applied Econometrics (IAAE) 2016 Annual Conference, University of Milano-Bicocca, Italy; New Economic School, Moscow; International College of Economics and Finance (ICEF), Higher School of Economics, Moscow; Research School of Economics, Australian National University; Department of Economics, Concordia University, Montreal; Department of Economics, University of Massachusetts, Amherst; Department of Economics, University College London;	(8 talks + 5 conference presentations)
2015 Department of Economics, University of Copenhagen; Centre for Microdata Methods and Practice (CEMMAP), London (2 talks); Econometric Society World Congress, Montreal; International Association for Applied Econometrics (IAAE) 2015 Annual Conference, Thessaloniki, Greece; Summer School on Dynamic Discrete Choice Models, University of Montreal; International College of Economics and Finance, HSE, Moscow;	(5 talks + 2 conference presentations)
2014 Means Testing Workshop, CEPAR, University of New South Wales; Department of Economics, UNSW; Q group colloquium, Sydney; Australian Colloquium of Superannuation Researchers; Econometric Society Australasian Meeting, Australian Conference of Economists (2 presentations); International Association for Applied Econometrics (IAAE) 2014 Annual Conference, London; 20th International Conference on Computing in Economics and Finance, Oslo, Norway; 5th Microeconomic Network Meeting Copenhagen; Department of Economics, UNSW; Centre for International Finance and Regulation (CIFR) workshop "Financial System Inquiry", Sydney; Department of Economics, University of Zurich; Econometric Society North American Winter Meeting;	(4 talks + 9 conference presentations)
2013 Department of Economics, Australian National University; Department of Economics, La Trobe University; Econometric Society Australasian Meeting; 1st CEPAR International Conference; Marketing and Public Policy Conference;	(2 talks + 3 conference presentations)

- 2012 (1 talk + 3 conference presentations)  
School of Risk and Actuarial Studies, University of New South Wales; Society for Computational Economics, 18th International Conference on Computing in Economics and Finance, Prague, Czech Republic; Society for Economic Dynamics Annual Meeting, Limassol, Cyprus (2 talks);
- 2011 (1 talk + 4 conference presentations)  
Intelligent road user charging (IRUC) workshop, Copenhagen; Division of Economics, Nanyang Technological University, Singapore; 19th Annual Colloquium of Superannuation Researchers, UNSW; 40th Australian Conference of Economists, Australian National University; Econometric Society Australasian Meeting, 2011;
- 2010 and before (5 talks + 7 conference presentations)  
New Economic School; Department of Economics, American University; Department of Agricultural and Resource Economics, University of Maryland; Department of Economics, University of Maryland; 3rd Italian Congress of Econometrics and Empirical Economics, Ancona, Italy; Fourth PhD Presentation Meeting, UCL, London; EC-square 19th conference, Rome; Simposio de Analisis Economico, Zaragoza, Spain; Center for Applied Econometrics at the University of Copenhagen (CAM); International conference at Graduate School of Management, St.Petersburg State University; Det 29. Nasjonale Forskermøtet for Økonomer, Tromsø; 19th ESPE Conference, Paris, France;
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