



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

### Education

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

### Publications

#### Published articles

- [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  
Media coverage: Wall Street Journal blog (Oct 9, 2016), NBER Reporter (Dec 4, 2018), Alicia Munnell blog, Center for Retirement Research at Boston College (Jan 2019)
- [3] 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
- [4] 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)

- [5] 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
- [6] 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
- [7] 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
- [8] Fedor Iskhakov. Multidimensional endogenous gridpoint method: Solving triangular dynamic stochastic optimization problems without root-finding operations. *Economics Letters*, 135:72–76, October 2015
- [9] Fedor Iskhakov. Corrigendum to “Multidimensional endogenous gridpoint method: Solving triangular dynamic stochastic optimization problems without root-finding operations” [Econ. Lett. 135 (2015) 72–76]. *Economics Letters*, 150:26, 2017
- [10] Fedor Iskhakov, Susan Thorp, and Hazel Bateman. Optimal annuity purchases for Australian retirees. *Economic Record*, 91(293):139–154, 2015
- [11] 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
- [12] Fedor Iskhakov. Structural dynamic model of retirement with latent health indicator. *The Econometrics Journal*, 13:126–161, 2010

#### Forthcoming papers and papers under review

- [13] 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. (revise and resubmit at Journal of Econometrics)
- [14] Kenneth Gillingham, Fedor Iskhakov, Anders Munk-Nielsen, John Rust, and Bertel Schjerning. Equilibrium trade in automobile markets. (submitted)

#### 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. (working paper)
- [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. (working paper)
- [20] Fedor Iskhakov and Philip Ushchev. Error bounds of the endogenous gridpoint method under optimal implementation. (work in progress)

#### Awards

- Australian Research Council Future Fellowship. “Solving and estimating dynamic models of strategic interaction.” \$1,614,000AUD, 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

### 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

### Software development

EconJobMarket.org

### 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

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## Teaching

Computational Methods in Economics Undergraduate/postgraduate course at ANU	2018, 2019
Copenhagen Summer School on Structural Dynamic Models With John Rust, Michael Keane 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

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## Student Supervision and Graduation Committee Membership

Yurui (Tina) Zhang, <i>doctoral thesis</i> , associate supervisor	ANU, 2019
Zhuoran (Mike) Liu, <i>doctoral thesis</i> , associate supervisor	ANU, 2019
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

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## Conferences and Seminar Presentations

2019	(2 talks)
Yale School of Forestry and Environmental Studies, Yale University; Tepper School of Business, Carnegie Mellon University;	

- 2018 (3 talks + 2 conference presentations)  
 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;
- 2017 (3 talks + 4 conference presentations)  
 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;
- 2016 (8 talks + 5 conference presentations)  
 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;
- 2015 (5 talks + 2 conference presentations)  
 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;
- 2014 (4 talks + 9 conference presentations)  
 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 Inequity", Sydney; Department of Economics, University of Zurich; Econometric Society North American Winter Meeting;
- 2013 (2 talks + 3 conference presentations)  
 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;
- 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;

## Other skills and personal information

### IT skills

Extensive programming experience (Python, Matlab, C) including distributed computations (OpenMP, MPI) and software engineering;  
Advanced data analysis (SAS, STATA, TSP, SQL);  
Intermediate skills in web development (HTML, Java script, PHP, MySQL, PostgreSQL);  
Basic skills in system administration (Unix).

### Citizenship

Russia, Australia

### Marital status

Married, two children

### Languages

Russian (native), English (fluent),  
Norwegian (basic)