

# JOHN STACHURSKI

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## Fields of Interest

- Dynamic programming and optimal stopping
- Distribution dynamics
- Computational methods
- Asset pricing
- Markov process theory

## Professional Experience

- Professor, Research School of Economics, ANU, 2010–present
- Visiting professor, Department of Economics, New York University, 2018
- Visiting professor, Department of Economics, New York University, 2015–2016
- Associate professor, Research School of Economics, ANU, 2009–2010
- Associate professor, Kyoto Institute of Economic Research, 2006–2009
- Senior lecturer, Department of Economics, University of Melbourne, 2004–6
- Postdoctoral fellow, CORE, Université Catholique de Louvain, 2003–4
- Postdoctoral fellow, Kyoto Institute of Economic Research, 2002–3

## Other Affiliations

- Co-Founder of QuantEcon, Member of Steering Committee
- Research Fellow, Research Institute for Economics and Business, Kobe University

## Grants (as Lead Investigator)

- Schmidt Futures Donor Advisor Fund Gift (with Thomas J. Sargent), 2019
- Alfred P. Sloan Foundation Award G-2019-12432 (with Berkeley and NAU), 2019
- Alfred P. Sloan Foundation Award G-2016-7052 (QuantEcon / NumFOCUS), 2016
- Alfred P. Sloan Foundation Award G-2014-14522 (with Thomas J. Sargent), 2014
- Australian Research Council Discovery Grant DP120100321, 2012–2015
- Japan Society for the Promotion of Science Young Scientist Award, 2007–2009
- Murata Science Foundation Research Grant, 2006–2007

## Fellowships

- Australian Research Council Future Fellow, 2017–2020
- Australian Research Council Discovery Outstanding Researcher Fellowship, 2012–2015
- Australian Research Council Postdoctoral Fellowship DP0557625, 2004–2005

- CORE Fellowship, Université Catholique de Louvain, 2003–2004
- Japan Society for the Promotion of Science Postdoctoral Fellowship, 2002–2003

## Scholarships

- Australian Postgraduate Award, 1999–2002
- Monbusho Research Scholarship (Tokyo University), 1993–7

## Prizes and Awards

- 2007 IJET Lionel W. McKenzie Prize
- 2002 Melbourne University Chancellor's Prize for Excellence

## Books

- *A Primer in Econometric Theory*  
**The MIT Press**, 2016
- *Economic Dynamics: Theory and Computation*  
**The MIT Press**, 2009

## Online Lectures

- *Quantitative Economics*  
with Thomas J. Sargent (<https://quantecon.org>)

## Chapters in Books

- *Poverty Traps*  
with Costas Azariadis  
**Handbook of Economic Growth**, S. Durlauf and P. Aghion, eds, 2005

## Refereed Articles

- *Dynamic Programming with State-Dependent Discounting*  
with Junnan Zhang  
**Journal of Economic Theory**, in press, 2021
- *Partial Stochastic Dominance via Optimal Transport*  
with Takashi Kamihigashi  
**Operations Research Letters**, 48, 584–586, 2020
- *Reproducibly Sampling SARS-CoV-2 Genomes Across Time, Geography, and Viral Diversity*  
with J. Gregory Caporaso et al.  
**F1000 Research**, 9.657, 2020

- *The Income Fluctuation Problem and the Evolution of Wealth*  
with Qingyin Ma and Alexis Akira Toda  
**Journal of Economic Theory**, 187, 2020
- *Necessary and Sufficient Conditions for Existence and Uniqueness of Recursive Utilities*  
with Jaroslav Borovička  
**Journal of Finance**, 75, 1457–1493, 2020
- *Trade Clustering and Power Laws in Financial Markets*  
with Makoto Nirei and Tsutomu Watanabe  
**Theoretical Economics**, 15(4), 1365–1398, 2020
- *Dynamic Programming Deconstructed*  
with Qingyin Ma  
**Operations Research**, in press, 2020
- *An Impossibility Theorem for Wealth in Heterogeneous-agent Models with Limited Heterogeneity*  
with Alexis Akira Toda  
**Journal of Economic Theory**, 182, 1–24, 2019
- *Optimal Timing of Decisions: A General Theory Based on Continuation Values*  
with Qingyin Ma  
**Journal of Economic Dynamics and Control**, 101, 62–81, 2019
- *A Unified Stability Theory for Classical and Monotone Markov Chains*  
with Takashi Kamihigashi  
**Journal of Applied Probability**, 56.1, 2019
- *Span of Control, Transaction Costs and the Structure of Production Chains*  
with Tomoo Kikuchi and Kazuo Nishimura  
**Theoretical Economics**, 13(2), 729–760, 2018
- *Volatile Capital Flows and Financial Integration: The Role of Idiosyncratic Risk*  
with Tomoo Kikuchi and George Vachadze  
**Journal of Economic Theory**, 176, 170–92, 2018
- *Seeking Ergodicity in Dynamic Economies*  
with Takashi Kamihigashi  
**Journal of Economic Theory**, 163, 900–924, 2016
- *Simulation-Based Density Estimation for Time Series using Covariate Data*  
with Yin Liao  
**Journal of Business and Economic Statistics**, 33, 595–606, 2015
- *Perfect Simulation for Models of Industry Dynamics*  
with Takashi Kamihigashi  
**Journal of Mathematical Economics**, 56, 9–14, 2015
- *Solving the Income Fluctuation Problem with Unbounded Rewards*  
with Huiyu Li  
**Journal of Economic Dynamics and Control**, 45, 353–365, August 2014

- *Stochastic Stability in Monotone Economies*  
with Takashi Kamihigashi  
**Theoretical Economics**, 9 (2), 383-407, 2014
- *Stochastic Optimal Growth with Risky Labor Supply*  
with Yiyong Cai and Takashi Kamihigashi  
**Journal of Mathematical Economics**, 50, 167-176, 2014
- *Fitted Value Function Iteration with Probability One Contractions*  
with Jenő Pal  
**Journal of Economic Dynamics and Control**, 37 (1), 251-264, 2013
- *Simple Fixed Point Results for Order-Preserving Self-Maps and Applications to Nonlinear Markov Operators*  
with Takashi Kamihigashi  
**Fixed Point Theory and Applications**, 2013:351, 2013
- *Generalized Look-Ahead Methods for Computing Stationary Densities*  
with R. Anton Braun and Huiyu Li  
**Mathematics of Operations Research**, 37, 489-500, 2012
- *An Order-Theoretic Mixing Condition for Monotone Markov Chains*  
with Takashi Kamihigashi  
**Statistics and Probability Letters**, 82, 262-267, 2012
- *Bounding Tail Probabilities in Dynamic Economic Models*  
**Macroeconomic Dynamics**, 16, 117-126, 2012
- *Perfect Simulation of Stationary Equilibria*  
with Kazuo Nishimura  
**Journal of Economic Dynamics and Control**, 34, 577-584, 2010
- *Endogenous Inequality and Fluctuations in a Two-Country Model*  
with Tomoo Kikuchi  
**Journal of Economic Theory**, 144 (4), 1560-1571, 2009
- *On Geometric Ergodicity of the Commodity Pricing Model*  
with Kazuo Nishimura  
**International Journal of Economic Theory**, 5 (3), 293-300, 2009
- *Equilibrium Storage with Multiple Commodities*  
with Kazuo Nishimura  
**Journal of Mathematical Economics**, 45, 80-96, 2009
- *Computing the Distributions of Economic Models via Simulation*  
with Vance Martin  
**Econometrica**, 76 (2), 443-450, 2008
- *Continuous State Dynamic Programming via Nonexpansive Approximation*  
**Computational Economics**, 31 (2), 141-160, 2008

- *Log-Linearization of Stochastic Economic Models*  
**Journal of Difference Equations and Applications**, 13 (2&3), 217–222, 2007
- *Parametric Continuity of Stationary Distributions*  
with Cuong Le Van  
**Economic Theory**, 33 (2), 333–348, 2007
- *Stochastic Optimal Growth when the Discount Rate Vanishes*  
with Kazuo Nishimura  
**Journal of Economic Dynamics and Control**, 31 (4), 1416–1430, 2007
- *Stochastic Optimal Growth with Nonconvexities*  
with Kazuo Nishimura and Ryszard Rudnicki  
**Journal of Mathematical Economics**, 42 (1), 74–96, 2006
- *Some Stability Results for Markovian Economic Semigroups*  
with Leonard Mirman and Kevin Reffett  
**International Journal of Economic Theory**, 1 (1), 57–72, 2005
- *Stability of Stochastic Optimal Growth Models: A New Approach*  
with Kazuo Nishimura  
**Journal of Economic Theory**, 122 (1), 100–118, 2005
- *Stochastic Growth with Increasing Returns: Stability and Path Dependence*  
**Studies in Nonlinear Dynamics and Econometrics**, 7 (2), Article 1, July 2003
- *Stochastic Growth: Asymptotic Distributions*  
**Economic Theory**, 21 (4), 913–919, 2003
- *Economic Dynamical Systems with Multiplicative Noise*  
**Journal of Mathematical Economics**, 39 (1–2), 135–152, 2003
- *Stochastic Optimal Growth with Unbounded Shock*  
**Journal of Economic Theory**, 106 (1), 40–65, 2002

## Other Publications

- *Corrigendum to An Impossibility Theorem for Wealth in Heterogeneous-Agent Models with Limited Heterogeneity*  
with Alexis Akira Toda  
**Journal of Economic Theory**, in press, 2020
- *Nonlinear Dynamics in Equilibrium Models: Chaos, Cycles and Indeterminacy*  
with Alain Venditti and Makoto Yano (eds)  
**Springer**, 2012

## Other Professional Activities

- **Program Chair**

- World Congress of the Econometric Society 2020: Computational Economics
- **Advisory Boards**
  - OSE Lab, Becker-Friedman Institute, University of Chicago, 2017-
  - Alfred P. Sloan Foundation Digital Technology Advisory Group, 2017-2019
- **Workshops**
  - Lead organizer, *QuantEcon PhD Workshops on Computational Economics* series at Columbia, MIT, Harvard, Princeton, Berkeley, Stanford, UCLA and UCSD, 2017
  - Lead organizer of the *RBA-RBNZ Computational Economics with Julia* Workshops in Australia and NZ, March 2017
  - Lead organizer of the *Econometric Society Workshop on Python and Julia* at the Summer Meetings of the Econometric Society, Philadelphia, June 2016
  - Co-organized and ran the *Workshop on Scientific Computing* at the Federal Reserve Bank of Chicago, May 2016
- **Short Courses**
  - Open Source Macroeconomics Lab instructor, University of Chicago , June 2018
  - Shenzhen Winter School Computational Economics instructor, June 2018
  - Columbia University Mini Course on Computational Economics, March 2018
  - Tinbergen Short Course on Computational Economics, June 2018
  - Open Source Macroeconomics Lab instructor, University of Chicago , June 2017
- **Editorial and Referee Work**
  - Associate Editor, *Journal of Computational Social Science*
  - Referee for *Econometrica*, *Journal of Economic Theory*, *American Economic Review*, *Theoretical Economics*, *Annals of Operations Research*, *Journal of Mathematical Economics*, *Journal of Economic Dynamics and Control*, *Journal of Economic Growth*, etc.
- **Keynotes and Invited Sessions**
  - 2018 Econometric Society Australasian Meeting, Auckland, July 2018
  - 26th Annual Symposium of the Society for Nonlinear Dynamics and Econometrics, Tokyo, March 2018
  - 2013 Econometric Society Australasian Meeting, Sydney, July 2013
- **Conference Presentations**
  - 2nd Asia-Pacific Conference on Economic Dynamics, Vietnam, December 2016
  - 16th SAET Conference, Rio, July 2016
  - Federal Reserve Bank of Chicago Computational Economics Conference, Chicago, May 2016
  - 20th International Conference on Computing in Economics and Finance, Oslo, June 2014

- Asia-Pacific Conference on Economic Dynamics, Vietnam, November 2013
- Asian Meeting of the Econometric Society, Singapore, August 2013
- 13th SAET Conference, Paris, July 2013
- 2013 Vietnamese Economic Association Meeting, Hue, June 2013
- 2012 Summer Workshop on Economic Theory, Paris, July 2012
- 12th SAET Conference, Brisbane, July 2012
- 17th International Conference on Computing in Economics and Finance, San Francisco, July 2011
- IJET Conference, Kyoto, February 2011
- 10th SAET Conference, Singapore, August 2010
- 4th Workshop on Macroeconomic Dynamics, Singapore, August 2009
- 15th International Conference on Computing in Economics and Finance, Sydney, July 2009
- 4th International Conference of Economic Theory, Tokyo, February 2007
- 7th International Public Economic Theory Conference, Hanoi, August 2006
- 12th International Conference on Computing in Economics and Finance, Cyprus, June 2006
- Instability and Fluctuations in Intertemporal Equilibrium Models, Marseille, June 2005
- Winter Meeting of the Econometric Society, Philadelphia, January 2005
- Handbook of Economic Growth Conference, New York, December 2004
- Economic Growth and Distribution, Lucca, June 2004
- 13th European Workshop on General Equilibrium Theory, Venice, June 2004
- 1st International Conference on Economic Theory, Tokyo, March 2004
- Conference on Irregular Growth, Université Paris 1, July 2003

- **Research Visits**

- Chicago University, Becker–Friedman Institute, July 2018
- Tinbergen Institute, June 2018
- Department of Economics, Copenhagen University, May 2018
- Chicago University, Becker–Friedman Institute, July 2017
- RIEB Kobe University, February 2017
- Singapore Management University, January 2017
- Department of Economics, Keio University, October 2016
- Montana USA (working with Tom Sargent), August 2016
- Department of Economics, UC Santa Barbara, July 2016
- Department of Economics, Georgetown University, May 2016
- Singapore Management University, January 2015
- RIEB Kobe University, September 2014
- New York University, April 2014
- Montana USA (working with Tom Sargent), September 2013

- National University of Singapore, August 2013
- Seoul National University, April 2013 and May 2013
- National University of Singapore, April 2013
- KIER, Kyoto University, December 2012
- National University of Singapore and Kyoto University, Sept/Oct 2012
- Department of Economics, National University of Singapore, July 2012
- KIER, Kyoto University and RIEBA, Kobe University, May 2012
- Department of Economics, Cornell University, December 2011
- KIER, Kyoto University, July 2011
- Department of Management Science, Stanford University, July 2011
- KIER, Kyoto University, November 2010
- Department of Economics, Tokyo University, February 2010
- KIER, Kyoto University, February 2010
- Department of Economics, Melbourne University, February 2008
- School of Economics, University of Tasmania, February 2008
- Department of Economics, Hokkaido University, January 2008
- Department of Economics, National University of Singapore, October 2007
- WP Carey School of Business, Arizona State University, February 2006
- Economics Department, UCLA, May 2005
- RIEBA, Kobe University, February 2005
- Economics Department, SMU, Dallas, January 2005
- G.R.E.Q.A.M. at Marseille, April 2004
- WP Carey School of Business, Arizona State University, March 2004
- Economics Department, UCLA, February 2004
- Institute of Mathematics, Silesian University, Poland, December 2001
- CentER, Tilburg University, The Netherlands, November 2001
- CERMSEM, Université Paris 1, Panthéon–Sorbonne, October 2001

## Education

- Ph.D. in Economics, University of Melbourne, 2002
- Masters in Economics, University of Tokyo, 1997
- Bachelor of Arts, University of Melbourne, 1993

## Other Skills

- Japanese language
- Programming in Python, Julia and C; UNIX environment

## Other Achievements

- Gold, first taekwondo Olympic selection trial, U58kg, 1999
- Gold, Australian national taekwondo championships, 54–58kg, 1993
- Gold, Japanese national taekwondo championships, U54kg, 1991