JOHN STACHURSKI

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Fields of Interest

- Dynamic programming and optimal stopping
- Asset pricing
- Distribution dynamics (firm size and household wealth dynamics)
- Numerical methods and computational economics
- Time series and Markov process theory
- Heavy-tailed distributions

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
- Advisory Board, OSE Lab, University of Chicago
- Research Fellow, Research Institute for Economics and Business, Kobe University

Grants (as Lead Investigator)

- Alfred P. Sloan Foundation Award G-2019-12432 (with Berkeley Institute for Data Science)
- Alfred P. Sloan Foundation Award G-2016-7052 (QuantEcon / NumFOCUS)
- Alfred P. Sloan Foundation Award G-2014-14522 (with Thomas J. Sargent)
- 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

- *Lectures in Quantitative Economics*
  Thomas Sargent and John Stachurski
  `https://lectures.quantecon.org`
  (Online manuscript, code library and lectures, 2013–)

- *A Primer in Econometric Theory*
  John Stachurski
  The MIT Press, 2016

- *Economic Dynamics: Theory and Computation*
  John Stachurski
  The MIT Press, 2009

Chapters in Books

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

Refereed Articles

- *The Income Fluctuation Problem and the Evolution of Wealth*
  Qingyin Ma, John Stachurski and Alexis Toda
  Journal of Economic Theory, in press, 2020

- *Necessary and Sufficient Conditions for Existence and Uniqueness of Recursive Utilities*
  Jaroslav Borovička and John Stachurski
  Journal of Finance, in press, 2020

- *Trade Clustering and Power Laws in Financial Markets*
  Makoto Nirei, John Stachurski and Tsutomu Watanabe
  Theoretical Economics, in press, 2020

- *Dynamic Programming Deconstructed: Transformations of the Bellman Equation and Computational Efficiency*
  Qingyin Ma and John Stachurski
  Operations Research, in press, 2020

- *An Impossibility Theorem for Wealth in Heterogeneous-agent Models with Limited Heterogeneity*
  John Stachurski and Alexis Akira Toda
  Journal of Economic Theory, 182, 1–24, 2019

- *Optimal Timing of Decisions: A General Theory Based on Continuation Values*
  Qingyin Ma and John Stachurski
  Journal of Economic Dynamics and Control, in press, 2019

- *A Unified Stability Theory for Classical and Monotone Markov Chains*
  Takashi Kamihigashi and John Stachurski
  Journal of Applied Probability, 56.1, 2019

- *Span of Control, Transacion Costs and the Structure of Production Chains*
  Tomoo Kikuchi, Kazuo Nishimura and John Stachurski
  Theoretical Economics, 13(2), 729–760, 2018

- *Volatile Capital Flows and Financial Integration: The Role of Idiosyncratic Risk*
  Tomoo Kikuchi, John Stachurski and George Vachadze
  Journal of Economic Theory, 176, 170–92, 2018

- *Seeking Ergodicity in Dynamic Economies*
  Takashi Kamihigashi and John Stachurski
  Journal of Economic Theory, 163, 900–924, 2016

- *Simulation-Based Density Estimation for Time Series using Covariate Data*
  Yin Liao and John Stachurski
  Journal of Business and Economic Statistics, 33, 595–606, 2015

- *Perfect Simulation for Models of Industry Dynamics*
  Takashi Kamihigashi and John Stachurski
  Journal of Mathematical Economics, 56, 9–14, 2015

- *Solving the Income Fluctuation Problem with Unbounded Rewards*
  Huiyu Li and John Stachurski
  Journal of Economic Dynamics and Control, 45, 353–365, August 2014

- *Stochastic Stability in Monotone Economies*
  Takashi Kamihigashi and John Stachurski
  Theoretical Economics, 9 (2), 383-407, 2014

- *Stochastic Optimal Growth with Risky Labor Supply*
  Yiyong Cai, Takashi Kamihigashi and John Stachurski
  Journal of Mathematical Economics, 50, 167–176, 2014

- *Fitted Value Function Iteration with Probability One Contractions*
  Jeno Pal and John Stachurski
  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*
  Takashi Kamihigashi and John Stachurski
  Fixed Point Theory and Applications, 2013:351, 2013

- *Generalized Look-Ahead Methods for Computing Stationary Densities*
  R. Anton Braun, Huiyu Li and John Stachurski
  Mathematics of Operations Research, 37, 489-500, 2012

- *An Order-Theoretic Mixing Condition for Monotone Markov Chains*
  Takashi Kamihigashi and John Stachurski
  Statistics and Probability Letters, 82, 262–267, 2012

- *Bounding Tail Probabilities in Dynamic Economic Models*
  John Stachurski
  Macroeconomic Dynamics, 16, 117–126, 2012

- *Perfect Simulation of Stationary Equilibria*
  Kazuo Nishimura and John Stachurski
  Journal of Economic Dynamics and Control, 34, 577–584, 2010

- *Endogenous Inequality and Fluctuations in a Two-Country Model*
  Tomoo Kikuchi and John Stachurski
  Journal of Economic Theory, 144 (4), 1560–1571, 2009

- *On Geometric Ergodicity of the Commodity Pricing Model*
  Kazuo Nishimura and John Stachurski
  International Journal of Economic Theory, 5 (3), 293–300, 2009

- *Equilibrium Storage with Multiple Commodities*
  Kazuo Nishimura and John Stachurski
  Journal of Mathematical Economics, 45, 80–96, 2009

- *Computing the Distributions of Economic Models via Simulation*
  John Stachurski and Vance Martin
  Econometrica, 76 (2), 443–450, 2008

- *Continuous State Dynamic Programming via Nonexpansive Approximation*
  John Stachurski
  Computational Economics, 31 (2), 141–160, 2008

- *Log-Linearization of Stochastic Economic Models*
  John Stachurski
  Journal of Difference Equations and Applications, 13 (2&3), 217–222, 2007

- *Parametric Continuity of Stationary Distributions*
  Cuong Le Van and John Stachurski
  Economic Theory, 33 (2), 333–348, 2007

- *Stochastic Optimal Growth when the Discount Rate Vanishes*
  Kazuo Nishimura and John Stachurski
  Journal of Economic Dynamics and Control, 31 (4), 1416–1430, 2007

- *Stochastic Optimal Growth with Nonconvexities*
  Kazuo Nishimura, Ryzard Rudnicki and John Stachurski
  Journal of Mathematical Economics, 42 (1), 74–96, 2006

- *Some Stability Results for Markovian Economic Semigroups*
  Leonard Mirman, Kevin Reffett and John Stachurski
  International Journal of Economic Theory, 1 (1), 57–72, 2005

- *Stability of Stochastic Optimal Growth Models: A New Approach*
  Kazuo Nishimura and John Stachurski
  Journal of Economic Theory, 122 (1), 100–118, 2005

- *Stochastic Growth with Increasing Returns: Stability and Path Dependence*
  John Stachurski
  Studies in Nonlinear Dynamics and Econometrics, 7 (2), Article 1, July 2003

- *Stochastic Growth: Asymptotic Distributions*
  John Stachurski
  Economic Theory, 21 (4), 913–919, 2003

- *Economic Dynamical Systems with Multiplicative Noise*
  John Stachurski
  Journal of Mathematical Economics, 39 (1–2), 135–152, 2003

- *Stochastic Optimal Growth with Unbounded Shock*
  John Stachurski
  Journal of Economic Theory, 106 (1), 40–65, 2002

Edited Collections

- *Nonlinear Dynamics in Equilibrium Models: Chaos, Cycles and Indeterminacy*
  John Stachurski, Alain Venditti and Makoto Yano (eds)
  Springer, 2012

Education

- Ph.D. in Economics, University of Melbourne, 2002

- Masters in Economics, University of Tokyo, 1997
- Bachelor of Arts, University of Melbourne, 1993

Other Professional Activities

- **Workshops**
  - Lead organizer of the *PhD Workshops on Computational Economics* series at Columbia, MIT, Harvard, Princeton, Berkeley, Stanford, UCLA and UCSD, September 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 Australiasian Meeting, Auckland, July 2018
  - 26th Annual Symposium of the Society for Nonlinear Dynamics and Econometrics, Tokyo, March 2018
  - 2013 Econometric Society Australiasian 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

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