

Yeneng Sun

Curriculum Vitae, April 2016

Contact Information

Department of Economics

National University of Singapore

Singapore 117570

Telephone: +65 6516 3941

Email: ynsun@nus.edu.sg

Homepages: <http://www.fas.nus.edu.sg/ecs/people/profile/ecssuny.html>

www.math.nus.edu.sg/~matsuny/

Education

- B.S., University of Science and Technology of China, 1983
- MSc (1985); PhD (1989), University of Illinois at Urbana-Champaign, Illinois, USA

Current Appointment

- Goh Keng Swee Professor of Economics (2015 -) and Professor of Mathematics, National University of Singapore

Career History

- Lecturer (1989-95); Senior Lecturer (1995-98); Associate Professor (1998-2001), Professor (2002 -), Department of Mathematics, National University of Singapore
- Raffles Professor of Social Sciences (2009-2015), Professor (2003 -), Department of Economics, National University of Singapore

Research Areas

- Economic Theory, Mathematical Economics, Analysis and Probability Theory

Awards and Honors

- Fellow, Singapore National Academy of Science, 2014
- Economic Theory Fellow, Society for the Advancement of Economic Theory, 2011
- The winner of the National Science Award in Singapore, 2000
- A winner of the Outstanding University Researcher Award, National University of Singapore, 1998

Editorial/Advisory Positions and Institutional Reviewer

- Scientific Advisor (2008 -), Research Centre for Mathematical Modelling, Bielefeld University, Germany
- Member (2014), Academic Review Committee of the Humanities and Social Sciences Division, Academia Sinica, Taiwan
- Member (2002 -), Editorial Board of the Springer journal *Economic Theory*
- Member (2013 -), Editorial Board of the Springer journal *Economic Theory Bulletin*
- Member (2004 -), Editorial Board of the Springer journal, *Annals of Finance*
- Member (2006 - 2008), Editorial Board of a Springer journal, *Logic and Analysis*
- Member (2009 -), Editorial Board of an electronic journal, *Journal of Logic and Analysis*
- Member (2010 -), Advisory Board of the *Asia Pacific Mathematics Newsletter*
- Series Editor (2002 - 2004), *IMS Lecture Notes Series*, published by the World Scientific Publishing Corporation and Singapore University Press

Selected Administrative Appointments in NUS

- Head/Acting Head (2008-2012), Department of Economics
- Member (2002-2004), University Promotion and Tenure Committee
- Deputy Director (2001-2004) of the university-level research institute, Institute for Mathematical Sciences
- Deputy Director (2001-2002) and Associate Director (2000-2001) of the university-level research institute, Centre for Financial Engineering
- Chair (2012 -), Interdisciplinary Speaker Series, NUS Finance and Risk Management Cluster
- Member (2010-2012), Management Board of the university-level research institute, Risk Management Institute
- Member (2014 -), Faculty Promotion and Tenure Committee, Faculty of Arts and Social Sciences
- Chair (2015 -), Management Board, Centre for Quantitative Finance, Faculty of Science
- Member (2014 -), Executive Committee, Department of Economics
- Deputy Head (2007-2008), Department of Economics
- Chair (2014-2015, 2006-2008), (Senior) Search Committee, Department of Economics
- Member (2005), Head Search Committee in Economics
- Member (2011), Head Search Committee in Mathematics
- Director (2009), Master Program in Quantitative Finance, Department of Mathematics
- Director (2000-2001), Computational Finance Program, Department of Mathematics
- Assistant Head (2006-2009, 2002-2004, 2000-2001), Department of Mathematics
- Chair (2006-2007, 2000-2001), Search Committee, Department of Mathematics
- Member (2000-2004, 2005-2009), Executive Committee, Department of Mathematics

Main Supervisor for the Following Graduate Students

1. Koh Lip-Kang, Master student, 1999; Thesis title: Arbitrage pricing theory.
2. Lin Xiaoi, Master student, 2000; Thesis title: Independence and asset pricing.
3. Lee Hon-Sing, Part-time Master student, withdrawn from the program to study for a Ph.D degree in Northwestern University (currently, Senior Lecturer of Finance in NUS).
4. Liu Xia, Master student, 2002; Thesis title: Homogeneity of independence and factor pricing models.
5. Zhu Wei, Master student, 2004; Thesis title: Equilibria in economies with asymmetric information and in games with many players.
6. Yu Haomiao, Master student, 2004 (currently, Associate Professor at Ryerson University, Toronto); Thesis title: Existence of Nash equilibrium in atomless games.
7. Zhang Luyi, Master student, 2008; Thesis title: Equilibrium characterization and incentives in large games.
8. Xu Ying, Master student, 2008; Thesis title: Large games and large asset markets.
9. Fu Haifeng, Ph.D student, 2008 (first placement: Assistant Professor in Nanyang Technological University; currently, Lecturer at Xi'An Jiaotong-Liverpool University, China); Thesis title: Equilibria of large games and Bayesian games with private and public information.
10. Wu Lei, Ph.D student, 2009 (working in J.P. Morgan Singapore); Thesis title: General equilibrium with negligible private information.
11. Zhang Yongchao, Ph.D student, 2011 (Associate Professor in Shanghai University of Economics and Finance); Thesis title: Saturation and economic theory
12. Sun Xiang, Ph.D student, 2013 (Assistant Professor in Wuhan University, China); Thesis title: Economies and games with many agents.
13. He Wei, Ph.D student, 2014 (Placement: Assistant Professor in Chinese University of Hong Kong); Thesis title: Theory of correspondences and games.

14. Qiao Lei, Ph.D student, 2015 (Placement: Assistant Professor in Shanghai University of Economics and Finance), Thesis title: Games, economies and random matching with many agents.
15. Zeng Yishu, current Ph.D student.
16. Wu Bin, current Ph.D student.

Conference/Workshop Organization

- Co-Chair of the Program Committee and Chair of the Local Organizing Committee for the 10th SAET Conference on Current Trends in Economics, Singapore, 13 - 15 August 2012 (with about 240 speakers)
- Chair of the Program Committee and Chair of the Local Organizing Committee for the 2013 Asian Econometric Society Meeting, Singapore, 2 - 4 August 2013 (over 500 speakers)
- Served in the organizing/program committees of over twenty other conferences/workshops as a member or chair

Publications

60 journal articles and 10 book chapters

Selected Publications in Economics

1. Modeling infinitely many agents (with Wei He and Xiang Sun), *Theoretical Economics*, published online.
2. Conditional exact law of large numbers and asymmetric information economies with aggregate uncertainty (with Lei Qiao and Zhixiang Zhang), *Economic Theory*, published online.
3. Strategic uncertainty and the ex-post Nash property in large games (with Ali Khan, Kali Rath, Haomiao Yu), *Theoretical Economics* **10** (2015), 103-129.
4. Large games with a bio-social typology (with Ali Khan, Kali Rath, Haomiao Yu), *Journal of Economic Theory* **148** (2013), 1122-1149.
5. The exact law of large numbers for independent random matching (with Darrell Duffie) *Journal of Economic Theory* **147** (2012), 1105-1139.
6. Existence, incentive compatibility and efficiency of the rational expectations equilibrium (with Lei Wu and Nicholas Yannelis), *Games and Economic Behavior* **76** (2012), 329-339.
7. Individual risk and Lebesgue extension without aggregate uncertainty (with Yongchao Zhang), *Journal of Economic Theory* **144** (2009), 432-443.
8. Monte Carlo simulation of macroeconomic risk with a continuum of agents: the general case (with Peter Hammond), *Economic Theory* **36** (2008), 303-325.
9. Core, equilibria and incentives in large asymmetric information economies (with Nicholas Yannelis), *Games and Economic Behavior* **61** (2007), 131-155.
10. Perfect competition in asymmetric information economies: compatibility of efficiency and incentives (with Nicholas Yannelis), *Journal of Economic Theory* **134** (2007), 175-194.
11. The exact law of large numbers via Fubini extension and characterization of insurable risks, *Journal of Economic Theory* **126** (2006), 31-69.
12. Monte Carlo simulation of macroeconomic risk with a continuum of agents: the symmetric case (with Peter Hammond), *Economic Theory* **21** (2003), 743-766.
13. Exact arbitrage, well-diversified portfolios and asset pricing in large markets (with Ali Khan), *Journal of Economic Theory* **110** (2003), 337-373.

14. Non-cooperative games with many players (with Ali Khan), in *Handbook of Game Theory with Economic Applications* Volume III (Nobel Laureate Robert Aumann and Sergiu Hart eds), Elsevier Science, Amsterdam, 2002, pp. 1761-1808.
15. Asymptotic arbitrage and the APT with or without measure-theoretic structures (with Ali Khan), *Journal of Economic Theory* **101** (2001), 222-251.
16. The complete removal of individual uncertainty: multiple optimal choices and random economies, *Economic Theory* **14** (1999), 507-544.
17. A theory of hyperfinite processes: the complete removal of individual uncertainty via exact LLN, *Journal of Mathematical Economics* **29** (1998), 419-503.
18. On the existence of pure strategy equilibria in games with a continuum of players (with Ali Khan and Kali Rath), *Journal of Economic Theory* **76** (1997), 13-46.
19. The capital-asset-pricing model and arbitrage pricing theory: a unification (with Ali Khan), *Proceedings of the National Academy of Sciences USA* **94** (1997), 4229-4232.
20. Nonatomic games on Loeb spaces (with Ali Khan), *Proceedings of the National Academy of Sciences USA* **93** (1996), 15518-15521.

Selected Publications in Mathematics

1. Why saturated probability spaces are necessary (with Jerome Keisler), *Advances in Mathematics* **221** (2009), 1584-1607.
2. A general Fatou lemma (with Peter Loeb), *Advances in Mathematics* **213** (2007), 741-762.
3. Existence of independent random matching (with Darrell Duffie), *Annals of Applied Probability* **17** (2007), 386-419.
4. Martingale property of empirical processes (with Sergio Albeverio and Jiang-Lun Wu), *Transactions of the American Mathematical Society* **359** (2007), 517-527.
5. The essential equivalence of pairwise and mutual conditional independence (with Peter Hammond), *Probability Theory and Related Fields* **135** (2006), 415-427.
6. Uncorrelatedness and orthogonality for vector-valued processes (with Peter Loeb, Horst Osswald and Zhixiang Zhang), *Transactions of the American Mathematical Society* **356** (2004) 3209-3225.
7. A metric on probabilities, and products of Loeb spaces (with Jerome Keisler), *Journal of the London Mathematical Society* **69** (2004), 258-272.
8. The almost equivalence of pairwise and mutual independence and the duality with exchangeability, *Probability Theory and Related Fields* **112** (1998), 425-456.
9. Integration of correspondences on Loeb spaces, *Transactions of the American Mathematical Society* **349** (1997), 129-153.
10. Integrals of set-valued functions with a countable range (with Ali Khan), *Mathematics of Operations Research* **21** (1996), 946-954.
11. Distributional properties of correspondences on Loeb spaces, *Journal of Functional Analysis* **139** (1996), 68-93.
12. Isomorphisms for convergence structures II: Borel spaces and infinite measures, *Advances in Mathematics* **124** (1996), 77-93.
13. Isomorphisms for convergence structures, *Advances in Mathematics* **116** (1995), 322-355.
14. On metric theorems in the theory of uniform distribution, *Compositio Mathematica* **86** (1993), 15-21.
15. On the theory of vector valued Loeb measures and integration, *Journal of Functional Analysis* **104** (1992), 327-362.