Curriculum Vitae of Yeneng Sun

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Current Appointments
- Goh Keng Swee Professor of Economics and Professor of Mathematics, National University of Singapore
- Dean, Faculty of Science, National University of Singapore

Career History
- Professor of Economics (since 2003) and Raffles Professor of Social Sciences (2009 – 2015), Department of Economics, National University of Singapore
- Lecturer (1989 – 1995), Senior Lecturer (1995 – 1998), Associate Professor (1998 – 2001), Professor (since 2002), Department of Mathematics, National University of Singapore

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

Forty Selected Publications
For the full list of 86 publications (74 journal articles and 12 book chapters), see https://blog.nus.edu.sg/sunyeneng/publications/.

1. Dynamic games with (almost) perfect information (with Wei He), *Theoretical Economics* **15** (2020), 811-859 (plus 36 pages of online supplement).
2. The individualistic foundation of equilibrium distribution (with Xiang Sun and Haomiao Yu), *Journal of Economic Theory* **189** (2020), Article 105083 (28 pages).
3. Modeling large societies: why countable additivity is necessary (with Ali Khan, Lei Qiao and Kali Rath), *Journal of Economic Theory* **189** (2020), Article 105102 (35 pages).
4. Equivalence of stochastic and deterministic mechanisms (with Yi-Chun Chen, Wei He, Jiangtao Li), *Econometrica* **87** (2019), 1367-1390 (plus 18 pages of online supplement).
5. Pure-strategy equilibria in Bayesian games (with Wei He), *Journal of Economic Theory* **180** (2019), 11-49.
6. The necessity of nowhere equivalence (with Wei He), *Advances in Mathematics* **325** (2018), 608-639.
7. Dynamic directed random matching (with Darrell Duffie and Lei Qiao), *Journal of Economic Theory* **174** (2018), 124-183.

8. Modeling infinitely many agents (with Wei He and Xiang Sun), *Theoretical Economics* **12** (2017), 771-815.

9. Stationary Markov perfect equilibria in discounted stochastic games (with Wei He), *Journal of Economic Theory* **169** (2017), 35-61.

10. Equilibria and incentives in private information economies (with Xiang Sun, Lei Wu and Nicholas Yannelis), *Journal of Economic Theory* **169** (2017), 474-488.

11. Strategic uncertainty and the ex-post Nash property in large games (with Ali Khan, Kali Rath, Haomiao Yu), *Theoretical Economics* **10** (2015), 103-129.

12. Large games with a bio-social typology (with Ali Khan, Kali Rath, Haomiao Yu), *Journal of Economic Theory* **148** (2013), 1122-1149.

13. The exact law of large numbers for independent random matching (with Darrell Duffie) *Journal of Economic Theory* **147** (2012), 1105-1139.

14. Existence, incentive compatibility and efficiency of the rational expectations equilibrium (with Lei Wu and Nicholas Yannelis), *Games and Economic Behavior* **76** (2012), 329-339.

15. Why saturated probability spaces are necessary (with Jerome Keisler), *Advances in Mathematics* **221** (2009), 1584-1607.

16. Individual risk and Lebesgue extension without aggregate uncertainty (with Yongchao Zhang), *Journal of Economic Theory* **144** (2009), 432-443.

17. Monte Carlo simulation of macroeconomic risk with a continuum of agents: the general case (with Peter Hammond), *Economic Theory* **36** (2008), 303-325.

18. Existence of independent random matching (with Darrell Duffie), *Annals of Applied Probability* **17** (2007), 386-419.

19. A general Fatou lemma (with Peter Loeb), *Advances in Mathematics* **213** (2007), 741-762.

20. Core, equilibria and incentives in large asymmetric information economies (with Nicholas Yannelis), *Games and Economic Behavior* **61** (2007), 131-155.

21. Perfect competition in asymmetric information economies: compatibility of efficiency and incentives (with Nicholas Yannelis), *Journal of Economic Theory* **134** (2007), 175-194.

22. Martingale property of empirical processes (with Sergio Albeverio and Jiang-Lun Wu), *Transactions of the American Mathematical Society* **359** (2007), 517-527.

23. The essential equivalence of pairwise and mutual conditional independence (with Peter Hammond), *Probability Theory and Related Fields* **135** (2006), 415-427.

24. The exact law of large numbers via Fubini extension and characterization of insurable risks, *Journal of Economic Theory* **126** (2006), 31-69.

25. 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.

26. Exact arbitrage, well-diversified portfolios and asset pricing in large markets (with Ali Khan), *Journal of Economic Theory* **110** (2003), 337-373.

27. Monte Carlo simulation of macroeconomic risk with a continuum of agents: the symmetric case (Peter Hammond), *Economic Theory* **21** (2003), 743-766.

28. Non-cooperative games with many players (with Ali Khan), in *Handbook of Game Theory with Economic Applications* Volume III (Robert Aumann and Sergiu Hart eds), Elsevier Science, Amsterdam, 2002, pp. 1761-1808.

29. Asymptotic arbitrage and the APT with or without measure-theoretic structures (with Ali Khan), *Journal of Economic Theory* **101** (2001), 222-251.

30. On a private information game without pure strategy equilibria (with Ali Khan and Kali Rath), *Journal of Mathematical Economics* **31** (1999), 341-359.

31. A theory of hyperfinite processes: the complete removal of individual uncertainity via exact LLN, *Journal of Mathematical Economics* **29** (1998), 419-503.

32. The almost equivalence of pairwise and mutual independence and the duality with exchangeability, *Probability Theory and Related Fields* **112** (1998), 425-456.

33. 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.

34. Integration of correspondences on Loeb spaces, *Transactions of the American Mathematical Societ*y **349** (1997), 129-153.

35. 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.

36. Nonatomic games on Loeb spaces (with Ali Khan), *Proceedings of the National Academy of Sciences USA* **93** (1996), 15518-15521.

37. The nonexistence of symmetric equilibria in annonymous games with compact action spaces (with Kali Rath and Shinji Yamashige), *Journal of Mathematical Economics* **24** (1995), 331-346.

38. Isomorphisms for convergence structures, *Advances in Mathematics* **116** (1995), 322-355.

39. Pure strategies in games with private information (with Ali Khan), *Journal of Mathematical Economics* **24** (1995), 633-653.

40. On metric theorems in the theory of uniform distribution, *Compositio Mathematica* **86** (1993), 15-21.

Education

- B.S., University of Science and Technology of China, 1983
- M.S. (1985) and Ph.D (1989), University of Illinois at Urbana-Champaign, Illinois, USA

Professional Activities

- Member (since 2002), Editorial Board of the Springer journal *Economic Theory*
- Member (since 2013), Editorial Board of the Springer journal *Economic Theory Bulletin*
- Member (since 2004), Editorial Board of the Springer journal, *Annals of Finance*
- Member (since 2009), Editorial Board of an electronic journal, *Journal of Logic and Analysis*
- Member (since 2017), Advisory Committee, Institute of Economics, Academia Sinica, Taiwan
- Member (since 2010), Advisory Board of the *Asia Pacific Mathematics Newsletter*
- Member (since 2017), International Advisory Board, Centre for Mathematical Research in Economics and Finance, University of Manchester
- Series Editor (2002 – 2004), *Lecture Notes Series in the Institute for Mathematical Sciences*, published by the World Scientific Publishing Corporation and Singapore University Press
- Member (2006 – 2008), Editorial Board of a Springer journal, *Logic and Analysis*
- Member (2014), Academic Review Committee of the Humanities and Social Sciences Division, Academia Sinica, Taiwan
- Scientific Advisor (2008 – 2016), Research Centre for Mathematical Modelling, Bielefeld University, Germany

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 2010 (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)
- Local Organizer, *6th Summer School of the Econometric Society*, National University of Singapore, 15-19 June 2018.
- Program Co-Chair, *Thirteenth Annual Risk Management Conference*, Singapore, 25 July 2019 (over 170 participants)
- Served in the organizing/program committees of over twenty other conferences/workshops as a member or chair

Selected Administrative Appointments in the National University of Singapore
- Director/Acting Director of the university-level research institute (September 2018 – July 2020), Risk Management Institute
- 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
- Founding Director (2009), Master Program in Quantitative Finance, Department of Mathematics
- Member (2014 – 2018), Faculty Promotion and Tenure Committee, Faculty of Arts and Social Sciences

Main Supervisor for the Following Ph.D Students in the National University of Singapore
1. Haifeng Fu (2008), first placement: Assistant Professor in Nanyang Technological University; currently, Tenured Lecturer at Xi'An Jiaotong-Liverpool University, Suzhou, China.
2. Lei Wu (2009), working in the financial industry in Singapore.
3. Yongchao Zhang (2011), currently, Tenured Associate Professor in Shanghai University of Economics and Finance, China.
4. Xiang Sun (2013), currently, Associate Professor in Wuhan University, China.
5. Wei He (2014), currently, Assistant Professor in Chinese University of Hong Kong.
6. Lei Qiao (2016), currently, Associate Professor without tenure in Shanghai University of Economics and Finance, China.
7. Yishu Zeng (2016), studying for a second Ph.D at University of Michigan.
8. Bin Wu (2019), currently, Assistant Professor in Capital University of Economics and Business, Beijing, China.
9. Enxian Chen (2021), to join Nankai University as Assistant Professor.
10. Hanping Xu, current student