

# Xiang Sun | 孙祥

## Curriculum Vitae

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### Education

- 2008–2013 **Ph.D. in Mathematics** (major in Mathematical Economics), *National University of Singapore*, Singapore.  
Dissertation: *Economics and games with many agents*  
Advisors: Yeneng Sun and Xiao Luo  
Committee: Weizhu Bao, Yi-Chun Chen, M. Ali Khan and Gongyun Zhao
- 2004–2008 **B.S. in Mathematics**, *University of Science and Technology of China*, Hefei, China.  
Thesis: *Rigidity theorems of constant mean curvature surface*  
Advisor: Qing Chen

### Position

- 2013–Present Economics and Management School, Wuhan University  
Associate Professor of Economics (2016–Present, without tenure)  
Assistant Professor of Economics (2013–2016)

### Research Interests

Matching and Market Design, Game Theory and Information Economics, Economic Theory, Mathematical Economics, Social and Economic Networks

### Teaching Interests







Game Theory (U/G), Matching and Market Design (U/G), Information Economics (U/G), Mechanism Design (U/G), Mathematical Economics (U/G), Microeconomics (U/G), Industrial Organization (U), Economic and Social Networks (U)

### Publications

- ✦ Equilibria and incentives in private information economies  
Xiang Sun, Yeneng Sun, Lei Wu, and Nicholas C. Yannelis  
*Journal of Economic Theory* **169** (2017), 474–488
- ✦ Modeling infinitely many agents  
Wei He, Xiang Sun, and Yeneng Sun  
*Theoretical Economics* **12:2** (2017), 771–815
- ✦ Independent random partial matching with general types  
Xiang Sun  
*Advances in Mathematics* **286** (2016), 683–702
- ✦ On the diffuseness of incomplete information game  
Wei He and Xiang Sun  
*Journal of Mathematical Economics* **54** (2014), 131–137
- ✦ Pure-strategy Nash equilibria in nonatomic games with infinite-dimensional action spaces  
Xiang Sun and Yongchao Zhang  
*Economic Theory* **58:1** (2015), 161–182






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## Working Papers

-  Pure strategy equilibrium in general Bayesian games  
Wei He, Xiang Sun, Yeneng Sun, and Yishu Zeng, 2017
-  Conflict networks with discriminatory factors  
Qian Jiao, Bo Shen, and Xiang Sun, 2017
-  Another impossibility theorem of unawareness  
Xiao Luo, Xiang Sun, and Ben Wang, 2012
-  Independent random partial matching with general types: dynamic case  
Xiang Sun, 2013
-  Individualistic foundation of distributional equilibrium  
Xiang Sun, Yeneng Sun, and Haomiao Yu, 2017
-  Perfect and proper equilibria in large games  
Xiang Sun and Yishu Zeng  
The second round R&R at *Games and Economic Behavior*, 2017

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## Working in Progress

-  Exact representation  
Wei He, Xiang Sun, and Haomiao Yu
-  Upper hemicontinuity in Bayesian games  
Xiang Sun
-  Pure strategy equilibria in non-atomic games with discontinuous payoffs  
Xiang Sun and Haomiao Yu
-  Pure strategy perfect equilibria in Bayesian games  
Xiang Sun and Yishu Zeng
-  Pure proper equilibrium in Bayesian games  
Xiang Sun and Yishu Zeng

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## Talks

- 25 Jun 2017 Pure strategy equilibrium in general Bayesian games  
The 17th Society for the Advancement of Economic Theory Conference, 25–30 June 2017, Faro, Portugal
- 16 Jun 2017 Modeling large societies  
Lingnan (University) College, Sun Yat-sen University, 16 June 2017, Guangzhou, China
- 3 Jun 2017 Pure strategy equilibrium in general Bayesian games  
The 2017 Asian Meeting of the Econometric Society, The Chinese University of Hong Kong, 3–5 June 2017, Hong Kong, China
- 12 Aug 2016 Type-symmetric randomized equilibrium  
The 2016 Asian Meeting of the Econometric Society, Kyoto University, 11–13 August 2016, Kyoto, Japan
- 24 Jul 2016 Type-symmetric randomized equilibrium  
The 5th World Congress of the Game Theory Society, Maastricht University, 24–28 July 2016, Maastricht, Netherlands
- 27 Jul 2015 On the equivalence of randomized strategy equilibria in non-atomic games  
The 15th Society for the Advancement of Economic Theory Conference, University of Cambridge, 27–31 July 2015, Cambridge, United Kingdom
- 29 Nov 2014 Modeling infinitely many agents  
The 2014 Shanghai Economic Theory Workshop, School of Economics, Shanghai University of Finance and Economics, 29 November 2014, Shanghai, China
- 21 Jun 2014 Equilibrium, core and insurance equilibrium in a private information economy  
The 2014 Asian Meeting of the Econometric Society, Academia Sinica, 20–22 June 2014, Taipei

- 30 Apr 2014 Modeling infinitely many agents  
Business School, Nanjing University, 30 April 2014, Nanjing, China
- 12 Nov 2013 Independent random partial matching with general types  
School of Economics, Shanghai University of Finance and Economics, 12 November 2013, Shanghai, China
- 6 Aug 2013 Modeling infinitely many agents  
Summer School of Econometric Society in Seoul, 6–10 August 2013, Seoul, Korea
- 3 Aug 2013 Modeling infinitely many agents  
The 2013 Asian Meeting of the Econometric Society, National University of Singapore, 2–4 August 2013, Singapore
- 22 Jul 2013 On the diffuseness of incomplete information game  
The 13th Society for the Advancement of Economic Theory Conference, MINES ParisTech, 22–26 July 2013, Paris, France
- 24 Jan 2013 Independent random partial matching with general types  
School of Economics, Huazhong University of Science and Technology, 24 January 2013, Wuhan, China
- 8 Dec 2012 Independent random partial matching with infinite types  
The 8th Mathematical and Physical Science Graduate Congress, Faculty of Science, Chulalongkorn University, 7–8 December 2012, Bangkok, Thailand
- 2 Jul 2012 Independent random partial matching with infinite types: dynamic case  
The 12th Society for the Advancement of Economic Theory Conference, University of Queensland, 30 June–3 July 2012, Brisbane, Australia
- 27 Jun 2011 Independent random partial matching with infinite types  
The 11th Society for the Advancement of Economic Theory Conference, Universidade Nova De Lisboa, 26 June–1 July 2011, Faro, Portugal
- 17 Jan 2011 Independent random partial matching with infinite types  
The Probabilistic Impulse behind Modern Economic Theory, Institute for Mathematical Sciences, National University of Singapore, 11–18 January 2011, Singapore

## Other Experiences

- Jul–Aug 2017 Visiting Scholar, Department of Economics, National University of Singapore, 13 July–8 August 2017
- Dec 2016 Visiting Scholar, Department of Economics, The Chinese University of Hong Kong, 18–27 December 2016
- Dec 2016 Visiting Scholar, School of Management and Economics, The Chinese University of Hong Kong (Shenzhen), 12–18 December 2016
- May–Jun 2016 Visiting Scholar, Department of Economics, National University of Singapore, 23 May–13 June 2016
- Jun–Jul 2015 Visiting Scholar, Department of Economics, National University of Singapore, 9 June–2 July 2015
- Mar–Apr 2015 Visiting Scholar, School of Economics, Shanghai University of Finance and Economics, 23 March–2 April 2015
- Jan 2014 Visiting Scholar, Department of Economics, Ryerson University, 6–19 January 2015
- May–Aug 2014 Visiting Scholar, Department of Economics, National University of Singapore, 3 May–4 June, 8 July–29 August 2014
- Jan–Aug 2013 Research Assistant of Professor Yeneng Sun, Department of Mathematics, National University of Singapore, 14 January–31 August 2013
- Aug 2013 Visiting Student, Summer School of Econometric Society in Seoul, College of Economics and Finance, Hanyang University, 6–10 August 2013
- May–Jul 2013 Visiting Student, Trimester Program on Stochastic Dynamics in Economics and Finance, Hausdorff Research Institute for Mathematics, University of Bonn, 31 May–21 July 2013
- Jul–Aug 2007 Visiting Student, Undergraduate Research Project, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, July–August 2007

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## Research Grants

- 2018–2021 Principal Investigator, National Natural Science Foundation of China (国家自然科学基金)  
Relative Saturation and its Applications to Game Theory (相对饱和条件及其在博弈论中的应用), Grant No. 71773087
- 2017–2019 Principal Investigator, Self-determined Research Funds, Wuhan University (武汉大学自主科研项目)  
Network Conflict and its Applications (带有网络结构的冲突模型及其应用), Grant No. 2017QN029
- 2016–2018 Research Grant, Wuhan University
- Jun 2015 Principal Investigator, Scientific Research Foundation for the Returned Overseas Chinese Scholars, State Education Ministry (教育部留学回国启动基金)  
On the Diffuseness of Incomplete-Information Game (不完全信息博弈：基于信息发散的视角)
- 2015–2017 Principal Investigator, National Natural Science Foundation of China (国家自然科学基金)  
Independent Random Partial Matching: Theory and Applications (独立随机不完全配对：理论与应用), Grant No. 11401444
- 2015–2017 Participator, National Natural Science Foundation of China (国家自然科学基金)  
Licence Auction, Licence Lottery and Congestion Pricing: A Theoretical and Experimental Study on Cars Controlling in Cities (车牌拍卖、摇号与拥堵收费：城市汽车管制的理论与实验研究), Grant No. 71403192, Principal Investigator: Lijia Wei
- 2013–2015 Participator, National Natural Science Foundation of China (国家自然科学基金)  
Saturated Probability Spaces and the Applications to Game Theory (饱和概率空间及其在博弈论中的应用), Grant No. 11201283, Principal Investigator: Yongchao Zhang
- 2013–2015 Research Start-up Grant, Wuhan University
- 2011 Travel Grant, National University of Singapore

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## Honors and Awards

- Jul 2017 The First Prize, The 14th Outstanding Achievement Awards in Humanities and Social Sciences (武汉大学第十四届人文社会科学优秀成果一等奖), Wuhan University
- Jan 2017 Prominent Advisor for Undergraduates in Year 2016 (武汉大学 2016 年优秀本科生班级导师), Wuhan University
- Jun 2016 Prominent Teacher for Class-2016 Hongyi Honors Program (武汉大学 2016 届弘毅学堂优秀教育工作者), Wuhan University
- 2016–2017 Advisor for National Training Program of Innovation and Entrepreneurship for Undergraduates (国家级大学生创新创业训练计划)  
Course Exchange Algorithm for Undergraduates: Based on TTC Algorithm (基于 TTC 算法的大学生课程交换算法设计), No. 201610486015, Students: Jiaxin Song, Ni Li, and Xi Liu
- Jan 2016 Prominent Advisor for Undergraduates in Year 2015 (武汉大学 2015 年优秀本科生班级导师), Wuhan University
- 2016–2020 Chutian Young Scholar (楚天学子), Department of Education, Hubei Province
- Jun 2015 Prominent Teacher for Class-2015 Hongyi Honors Program (武汉大学 2015 届弘毅学堂优秀教育工作者), Wuhan University
- Dec 2014 Teaching Award for AY 2013/2014 S2 (本科课堂教学评教前十名), Economics and Management School, Wuhan University
- Dec 2014 Advisor for the Outstanding Bachelor's Thesis of Hubei Province (湖北省优秀学士学位论文)  
Matching Theory with Application in House Allocation (匹配理论在住房分配中的应用), Student: Qian Xie
- 2010–2013 Letter of Commendation for Graduate Tutor for AY 2009/2010, AY 2010/2011, AY 2011/2012, and AY 2012/2013, Department of Mathematics, National University of Singapore
- Oct 2010 Part-Time Teaching Assistant Award for AY 2009/2010, Faculty of Science, National University of Singapore
- 2008–2012 The President's Graduate Fellowship, National University of Singapore

2004–2008 Outstanding Freshman Scholarship (Grade 3) of 2004, Zhang Zongzhi Sci-Tech Scholarship of 2005, Outstanding Student Scholarship (Grade 1) of 2006 and 2007, Outstanding Undergraduate Research Project of 2007, Outstanding Bachelor's Thesis of 2008, University of Science and Technology of China

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## Professional Service

-  Referee for *Economic Theory*, *Frontiers of Economics in China*, *Fuzzy Sets and Systems*, *International Journal of Game Theory*, *Journal of Mathematical Economics*, *Mathematics of Operations Research*, 中国工业经济
-  Co-Chair of the Program Committee
-  Co-Chair and Organizing Secretary of the Local Organizing Committee  
The 2017 China Meeting of the Econometric Society, 9–11 June 2017, Wuhan, China (with about 450 speakers/600 participants)
-  Co-Coordinator of Workshop on Quantitative Economics  
Department of Mathematical Economics and Mathematical Finance, Economics and Management School, Wuhan University, 8 June 2017, Wuhan, China
-  Deputy Head (Undergraduate Program)  
Department of Mathematical Economics and Mathematical Finance, Economics and Management School, Wuhan University, 28 March 2016–Present
-  Secretary of Junior Faculty Recruiting Committee  
Economics and Management School, Wuhan University, 2013–2014 (Philadelphia), 2014–2015 (Boston), 2015–2016 (San Francisco), 2016–2017 (Chicago)
-  Co-coordinator of Department Seminars  
Department of Mathematical Economics and Mathematical Finance, Economics and Management School, Wuhan University, 2013–2014, 2014–2015, 2015–2016, 2016–2017, 2017–2018
-  Advisor for Class-2018 Undergraduates (2014 级班级导师)  
Department of Mathematical Economics and Mathematical Finance, Economics and Management School, Wuhan University, 2014–Present
-  Student Assistant of the Local Organizing Committee  
The 2013 Asian Meeting of the Econometric Society, Department of Economics, National University of Singapore, 2–4 August 2013, Singapore

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## Teaching Experience

- 2017 Fall Game Theory (year-4 undergraduate), Wuhan University, Instructor
- 2017 Fall Social and Economic Networks (year-2 honors undergraduate), Wuhan University, Instructor
- 2017 Spring Game Theory (year-1 graduate), Wuhan University, Instructor (with Junmin Liao)
- 2017 Spring Introduction to Matching and Market Design (year-1 honors undergraduate), Wuhan University, Instructor
- 2016 Fall Game Theory (year-4 undergraduate), Wuhan University, Instructor
- 2016 Fall Matching and Market Design (year-2 honors undergraduate), Wuhan University, Instructor
- 2016 Spring Game Theory (year-1 graduate), Wuhan University, Instructor (with Junmin Liao)
- 2016 Spring Industrial Organization (year-2 honors undergraduate), Wuhan University, Instructor (with Bo Shen)
- 2015 Fall Game Theory (year-4 undergraduate), Wuhan University, Instructor
- 2015 Fall Matching and Market Design (year-2 honors undergraduate), Wuhan University, Instructor
- 2015 Summer Matching and Market Design, Summer School on Mathematical Economics, Wuhan University, Instructor
- 2014 Fall Game Theory (year-4 undergraduate), Wuhan University, Instructor
- 2014 Fall Auction Theory (year-3 honors undergraduate), Wuhan University, Instructor
- 2014 Fall Topics in Frontiers of Economics and Finance (year-4 undergraduate), Wuhan University, Instructor (with O-Chia Chuang, Jingbo Cui, Xiaoying Deng, Wei Huang, Tian Xie)

- 2014 Fall Mechanism Design (year-2 graduate), Wuhan University, Instructor (with Jingbo Cui)
- 2014 Spring Matching and Market Design (year-2 honors undergraduate), Wuhan University, Instructor
- 2014 Spring Matching and Market Design (year-1 graduate), Wuhan University, Instructor (with Lijia Wei)
- 2013 Fall Game Theory (year-4 undergraduate), Wuhan University, Instructor
- 2013 Fall Topics in Game Theory (year-2 graduate), Wuhan University, Instructor (with Jingbo Cui)
- 2012 Fall Game Theory (MA4264), National University of Singapore, Teaching Assistant
- 2012 Spring Linear Algebra (MA1101R), National University of Singapore, Teaching Assistant
- 2011 Fall Game Theory (MA4264), National University of Singapore, Teaching Assistant
- 2011 Spring Linear Algebra (MA1101R), National University of Singapore, Teaching Assistant
- 2010 Fall Fundamental Concepts of Mathematics (MA1100), National University of Singapore, Teaching Assistant
- 2010 Spring Linear Algebra (MA1101R), National University of Singapore, Teaching Assistant
- 2009 Fall Fundamental Concepts of Mathematics (MA1100), National University of Singapore, Teaching Assistant
- 2009 Spring Linear Algebra 1 (MA1101R), National University of Singapore, Lab Assistant
- 2008 Fall Calculus (MA1102R), National University of Singapore, Lab Assistant

## References

Available upon request