



Zhaojun Yang

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Personal Profile

Dr Zhaojun Yang is an associate professor for finance of the Department of Finance at the Southern University of Science and Technology, an appointment he has held since April 2016. Prior to this he was a full Professor at Hunan University since 2002. He visited the University of Leeds from July 2005 to July 2006, Columbia Business School at Columbia University from September to October 2010 and from February to August 2014, and the university of Macau from October to November 2015. He is a reviewer for Mathematical Reviews and a member of the editorial board of Cogent Economics and Finance, of the Journal of Business and Management, of Finance (in Chinese) and of Theory and Practice of Finance and Economics (in Chinese). His research focuses on finance theory and financial engineering, including optimal portfolio choice, capital asset pricing, pricing of derivative securities, credit risk, loan guarantees, financial innovation and FinTech. He has received many research grants, including one (2006) supported by National Social Science Foundation and four (2009, 2011, 2013, 2020) by National Natural Science Foundation of China. He has published more than 160 peer-reviewed papers in economics, finance, management and mathematics journals, including European Financial Management, Macroeconomic Dynamics, Journal of Economic Dynamics and Control, Journal of Mathematical Economics, Quantitative Finance, European Journal of Operational Research, International Review of Economics and Finance, North American Journal of Economics and Finance, International Review of Financial Analysis, Annals of Economics and Finance, Journal of Credit Risk, International Review of Finance, Economics Letters, Computational Economics, Finance Research Letters, Mathematical Methods of Operations Research, Statistics and Probability Letters among others.

Experience

- 4/2016-Present **Associate Professor and Department Vice-Chair**, *Department of Finance*, Southern University of Science and Technology.
- 12/2015-4/2016 **Professor**, *School of Business Administration*, Hunan University.

- 5/2013-12/2015 **Professor & Department Chair**, *Department of Financial Engineering*, Hunan University.
- 4/2010-12/2015 **Professor**, *School of Finance and Statistics*, Hunan University.
- 7/2005-7/2006 **Academic Visitor**, *Department of Mathematics*, University of Macau.
- 2/2014-8/2014 **Senior Visiting Fellow**, *Columbia Business School*, Columbia University, United States of America.
- 9/2010-10/2010 **Senior Visiting Fellow**, *Columbia Business School*, Columbia University, United States of America.
- 1/2007-4/2010 **Professor**, *School of Economics and Trade*, Hunan University.
- 6/2007-7/2007 **Academic Visitor**, *Academy of Mathematics and Systems Science*, Chinese Academy of Sciences.
- 7/2005-7/2006 **Academic Visitor**, *School of Mathematics and Leeds University Business School*, Leeds University, United Kingdom.
- 9/2002-1/2007 **Professor**, *School of Mathematics and Econometrics*, Hunan University.
- 12/2000-4/2003 **Postdoctor**, *Postdoctoral Station of Mathematics*, Hunan University.
- 8/1997-8/2002 **Associate Professor**, *Hunan Taxation College*.
- 9/1990-1/1991 **Advanced Programmer**, *Taxation Bureau of Hunan Province*.
- 9/1988-1/1989 **Specialist in Econometric Modeling**, *Financial Bureau of Hunan Province*.
- 11/1987-7/1997 **Teaching Assistant and Lecturer**, *Hunan Taxation College*.

Academic Positions

- 09/2017-Present **Area Editor for Cogent Economics and Finance**.
- 1/2016-present **Member of the editorial board of the Theory and Practice of Finance and Economics (in Chinese)**.
- 12/2010-Present **Member of the editorial board of Finance (in Chinese)**.
- 12/2009-Present **Reviewer of Mathematical Reviews**.
- 12/2012-1/2020 **Member of the editorial board of the Journal of Business and Management (ISSN: 2291-1995)**.

Education

- 9/1997-5/2000 **Ph.D. in Probability and Statistics**, *Central South University*.
- 9/1985-7/1987 **M.S. in Applied Mathematics**, *Northwestern Polytechnical University*.
- 9/1981-7/1985 **B.S. in Mathematics**, *Hunan Normal University*.

Research Interests

Financial engineering and finance theory, including optimal portfolio choice, capital asset pricing, pricing of derivative securities, loan guarantees, financial innovation, capital structure, real options, financial risk management, Internet finance and FinTech.

Research Grants

- 1/2021-12/2025 **National Natural Science Foundation of China (Key Program)**, *The design of asset securitization financing mode for micro-, small- and medium-sized enterprises based on blockchain technology*, No. 72031003, 2.1 million RMB.

- 1/2020-12/2022 **Guangdong Planning Office of Philosophy and Social Science for the 13th Five Year Plan**, *Risk measure theory based on utility and hedging and its application*, No. GD19CYJ23.
- 6/2019-5/2020 **Special Innovation Projects of Universities in Guangdong of China**, *The management and performance valuation of the government guarantee funds*, No. 2018WTSCX131.
- 9/2017-8/2018 **A project supported by the government of Shenzhen**, *Research on a road map for overcoming financing constraints experienced by small- and medium-sized technology-based enterprises*.
- 1/2014-12/2017 **National Natural Science Foundation of China**, *A New Contingent Capital-Based Mechanism of Credit Guarantees and SMEs Finance*, No. 71371068.
- 1/2012-12/2015 **National Natural Science Foundation of China**, *The Design and Pricing Theory of Contingent Convertible Bonds*, No. 71171078.
- 1/2012-12/2014 **Social Science Foundation of Hunan Province in China**, *Continuous-time Evolutionary Financial Markets: Theory and Practice*, No. 11YBA058.
- 1/2011-12/2013 **Doctoral Fund of Ministry of Education of China**, *Option game theory based on consumption utility indifference prices*, No. 20100161110022.
- 1/2010-12/2012 **National Natural Science Foundation of China**, *Consumption Utility-Based Indifference Pricing and Hedging with Partial Information*, No. 70971037.
- 10/2007-9/2008 **Program Supported by Financial Department of Hunan**, *Strategy for Minimizing Financial Risk and Its Application*.
- 5/2006-7/2008 **China Social Science Fund**, *Continuous-Time Evolutionary Finance with Mix Strategies*, No. 06BJL022.
- 1/2005-12/2006 **Hunan Natural Science Fund**, *Studies on Optimal Investment and Consumption Problems*, No. 04JJ3009.
- 1/2005-12/2005 **Program Supported by State Tax Bureau of Hunan**, *Tax Compliance Valuation Models and Its Application*.
- 1/2005-12/2005 **Key Program of Hunan University**, *Strategy for Minimizing Financial Risk and Its Application*.
- 1/2001-12/2002 **Youth Fund of Hunan Education Bureau**, *The Valuation and Hedging of Options under Stochastic Volatility*, No. 01B031.

Honors & Awards

- 2017 **High-Level Talent in Nanshan District of Shenzhen.**
- 2016 **Pengcheng Scholar.**
- 2016 **High-Level Talent in Shenzhen.**
- 2013 **Outstanding Researcher Award in Hunan University.**
- 2013 **Distinguished Supervisor Award of One Distinguished Doctoral Dissertation in Hunan Province.**

Selected Publications since 2012 in English, where '*' indicates the corresponding author ([Welcome to access my selected papers on the Social Science Research Network here](#))

- [32] Yang, Zhaojun. [Investment and asset securitization with an option-for-guarantee swap](#). *European Financial Management*, 2020, forthcoming.

- [31] Luo, Pengfei and Tian, Yuan and Yang*, Zhaojun. [Real Option Duopolies with Quasi-hyperbolic Discounting](#). Semifinalist for Best Paper Award at FMA Annual Meetings, 2018. *Journal of Economic Dynamics and Control*, 2020, 111.
- [30] Gan, Lirong and Wang*, Huamao and Yang, Zhaojun. [Machine learning solutions to challenges in finance: An application to the pricing of financial products](#). *Technological Forecasting and Social Change*, 2020, 153
- [29] Luo, Pengfei and Yang*, Zhaojun. [Investment and Financing for Cash Flow Discounted with Group Diversity](#). *International Review of Finance*, 2020, forthcoming.
- [28] Luo P, Yang* Z. [Growth option and debt maturity with equity default swaps in a regime-switching framework](#). *Macroeconomic Dynamics*, 2019, 23(6).
- [27] Luo, Pengfei and Xiong, Jie and Yang, Jinqiang and Yang*, Zhaojun, [Real Options under a Double Exponential Jump-Diffusion Model with Regime Switching and Partial Information](#). *Quantitative Finance*, 2019, 19(6): 1061-1073.
- [26] Cai, Yanping, Yang, Zhaojun and Zhao, Zhiming, [Contingent capital with repeated interconversion between debt- and equity-like instruments](#). *European Financial Management*, 2019, 25(2): 358-379.
- [25] Tang, Xiaolin and Yang*, Zhaojun, [Irreversible Investment, Ambiguity, and Equity Default Swaps](#). *Applied Economics Letters*, 2018, 25(18): 1301-1305.
- [24] Tang X, Yang* Z. [Optimal investment and financing with macroeconomic risk and loan guarantees](#). *Journal of Credit Risk*, 2017, 13(4): 75-97.
- [23] Gan, L., Yang*, Z.J. [Investment, agency conflicts, debt maturity, and loan guarantees by negotiation](#). *Annals of Finance*, 2017, 13(3): 253-271.
- [22] Tan, Y.X., Yang*, Z.J. [Growth option, contingent capital and agency conflicts](#). *International Review of Economics and Finance*, 2017, 51: 354-369.
- [21] Luo, P.F., Yang*, Z.J. [Real options and contingent convertibles with regime switching](#). *Journal of Economic Dynamics and Control*, 2017, 75: 122-135.
- [20] Gan, L., Luo, P.F., Yang*, Z.J. [Real option, debt maturity and equity default swaps under negotiation](#). *Finance Research Letters*, 2016, 18: 278-284.
- [19] Song, Dandan and Yang*, Zhaojun. [Contingent capital, real options and agency costs](#). *International Review of Finance*, 2016, 16(1): 3-40 (lead article).
- [18] Jiang, Wuyuan*, Yang, Zhaojun. [The maximum surplus before ruin for dependent risk models through Farlie-Gumbel-Morgenstern copula](#). *Scandinavian Actuarial Journal*, 2016, (5): 385-397.
- [17] Luo, P., Wang, H., Yang*, Z. [Investment and financing for SMEs with a partial guarantee and jump risk](#). *European Journal of Operational Research*, 2016, 249: 1161-1168.
- [16] Tan, Y.X., Yang*, Z.J. [Contingent Capital, Capital Structure and Investment](#). *North American Journal of Economics and Finance*, 2016, 35: 56-73.
- [15] Yang*, Zhaojun and Zhang, Chunhong. [The Pricing of Two Newly Invented Swaps in a Jump-Diffusion Model](#). *Annals of Economics and Finance*, 2015, 16(2): 371-392.
- [14] Yang*, Zhaojun and Zhao, Zhiming. [Valuation and Analysis of Contingent Convertible Securities with Jump Risk](#). *International Review of Financial Analysis*, 2015, 41: 124-135.

- [13] Yang*, Zhaojun and Zhang, Chunhong. [Two new equity default swaps with idiosyncratic risk](#). *International Review of Economics and Finance*, 2015, 37: 254-273.
- [12] Xiang, Hua and Yang*, Zhaojun. [Investment timing and capital structure with loan guarantees](#). *Finance Research Letters*, 2015, 13: 179-187.
- [11] Wang, Huamao and Yang*, Zhaojun and Zhang, Hai. [Entrepreneurial Finance with Equity-for-Guarantee Swap and Idiosyncratic Risk](#). *European Journal of Operational Research*, 2015, 241(3): 863-871.
- [10] Jiang*, Wuyuan, Yang, Zhaojun. [The expected discounted penalty function for two classes of risk processes perturbed by diffusion with multiple thresholds](#). *Indian Journal of Pure and Applied Mathematics*, 2014, 45(4): 479-495.
- [9] Song, Dandan and Wang, Huamao and Yang*, Zhaojun. [Learning, Pricing, Timing and Hedging of the Option to Invest for Perpetual Cash Flows with Idiosyncratic Risk](#). *Journal of Mathematical Economics*, 2014, 51: 1-11 (lead article).
- [8] Song, Dandan and Yang*, Zhaojun. [Utility-Based Pricing, Timing and Hedging of an American Call Option under an Incomplete Market with Partial Information](#). *Computational Economics*, 2014, 44(1): 1-26 (lead article).
- [7] Zhaojun Yang*, Hai Zhang. [Optimal capital structure with an equity-for-guarantee swap](#). *Economics Letters*, 2013, 118(2): 355-359.
- [6] Yang, Jinqiang and Yang*, Zhaojun. [Arbitrage-Free Interval and Dynamic Hedging in an Illiquid Market](#). *Quantitative Finance*, 2013, 13(7): 1029-1039.
- [5] Wuyuan Jiang*, Zhaojun, Yang. [The phase-type risk model perturbed by diffusion under a threshold dividend strategy](#). *Acta Mathematicae Applicatae Sinica (English Series)*, 2013, 29(1): 215-224.
- [4] Jiang, Wuyuan, Yang*, Zhaojun. [Dividend Payments in a Risk Model Perturbed by Diffusion with Multiple Thresholds](#). *Stochastic Analysis and Applications*, 2013, 31(6): 1097-1113.
- [3] Song, Dandan, Yang, Jinqiang and Yang*, Zhaojun. [High-Water Marks and Hedge Fund Management Contracts with Partial Information](#). *Computational Economics*, 2013, 42(3): 327-350.
- [2] Jiang, Wuyuan, Yang*, Zhaojun, and Li, Xinping. [The Discounted Penalty Function with Multi-Layer Dividend Strategy in the Phase-Type Risk Model](#). *Statistics and Probability Letters*, 2012, 82(7): 1358-1366.
- [1] Yang, Jinqiang and Yang*, Zhaojun. [Consumption Utility-Based Pricing and Timing of the Option to Invest with Partial Information](#), *Computational Economics*, 2012, 39(2): 195-217.

Conference Presentations

- [1] The pricing of two newly invented swaps in a jump-diffusion model. Hunan University International Financial Engineering Conference, 10-11 January, 2015, Changsha, China.
- [2] Growth option, contingent capital and agency conflicts. The 5th International Conference of the Financial Engineering and Banking Society, 11-13 June, 2015, Nantes, France.
- [3] A new contingent convertible security with jump risk. The International Workshop on Markov Processes and Stochastic Models, 23-25 June, 2015, Changsha, China

- [4] Investment and financing for SMEs with a partial guarantee and jump risk. 2015 Asian Finance Association Annual Meeting, 29 June - 1 July, 2015, Changsha, China
- [5] Contingent Capital, Capital Structure and Investment. 2015 Asian Finance Association Annual Meeting, 29 June - 1 July, 2015, Changsha, China
- [6] A new contingent convertible security with jump risk. Tianfu Workshop on Financial Mathematics, 3-5 July, 2015, Chengdu, China
- [7] Contingent capital with repeated inter-conversion between debt and equity. International Conference of Credit Risk Management, 27 December, 2015, Beijing
- [8] Optimal investment and financing with macroeconomic risk and an equity-for-guarantee swap. 58th CORS Annual Conference, Banff, Alberta, Canada, May 30 - June 1, 2016.
- [9] Investment-Financing-Asset Securitization, The Eighth Conference on the Financial Mathematics and Financial Engineering in China, November 17 - 20, 2016.
- [10] The stock-based incentive compensation for a time-inconsistent manager in a real options framework. 2017 2nd Applied Financial Modelling conference, Melbourne, 2nd-3rd February 2017.
- [11] Pricing equity and contingent convertibles with idiosyncratic risk (invited talk), Hunan Institute of Science and Technology, Yueyang, June 19, 2017.
- [12] Pricing equity and contingent convertibles with idiosyncratic risk. The 26th European Financial Management Association (EFMA) conference, the Deree-The American College of Greece Gravias St., Aghia Paraskevi 15342, Athens, Greece, June 28 - July 1, 2017.
- [13] Investment and financing for cash flow discounted with group diversity (invited talk), Chu Hai College of Higher Education, HK, 4 October, 2017.
- [14] Government Guarantee and Technology-Based Enterprises' Financing Problems (invited talk), 2017 Workshop on Innovation Cooperation between Industries and Financial Institutions, Guangdong University of Finance and Economics, Guangzhou, China, 4 November, 2017.
- [15] Investment and financing for cash flow discounted with group diversity (invited talk), Lingnan College in Sun Yat-sen University, Guangzhou, China, 24 November, 2017.
- [16] Government Guarantee and Financing for Small Businesses (plenary talk), Annual Meeting on Financial Engineering and Risk Management at Sun Yat-sen University, Guangzhou, China, 24-26 November, 2017.
- [17] Luo, Pengfei and Tian, Yuan and Yang*, Zhaojun, Option Games with Time-Inconsistent Preferences (May 15, 2018). Available at SSRN: <https://ssrn.com/abstract=3179275>. Semifinalist for Best Paper Award in Options and Derivatives at FMA Annual Meetings, 2018.
- [18] Tang, Xiaolin and Yang*, Zhaojun, Investment and asset securitization with an option-for-guarantee swap. Available at SSRN: <https://ssrn.com/abstract=2895593>. Invited Talk, Twelfth Annual Risk Management Conference, National University of Singapore, 2018.
- [19] Luo, Pengfei and Yang, Zhaojun*, Investment and Financing for Cash Flow Discounted with Group Diversity. Available at SSRN: <https://ssrn.com/abstract=3078631>, INFORMS 2018 Annual Meeting in Phoenix, AZ, USA, Nov. 4-7, 2018.

- [20] Luo, Pengfei and Yang, Zhaojun*, Investment and Financing for Cash Flow Discounted with Group Diversity. Available at SSRN: <https://ssrn.com/abstract=3078631>. Keynote Speech, the Sixth Asian Quantitative Finance Conference (AQFC2018), Sun Yat-sen University (SYSU), Guangzhou, China, Nov. 17-19, 2018.
- [21] ICOs and SME Financing, 2019 Workshop on FinTech and Blockchain. Sponsored by the government of the city of WUhu in China and Anhui University of Engineering, Invited Talk, December 7th, 2019.
- [22] The Asian option pricing by a machine learning method, The 6th Beihang IEB Forum—Frontiers in Theory and Practice of FinTech. Invited Talk, Nov. 9, 2019.
- [23] Investment and Asset Securitization with an Option-for-guarantee Swap. 2019 EFMA Annual Meeting, University of Azores, Portugal June 27, 2019.
- [24] Machine learning solutions to challenges in finance: An application to the pricing of financial products. invited speech. The 2019 Annual Meeting of the branch of Quantitative Finance and Insurance of the Chinese Society of Optimization, Overall Planning and Economical Mathematics, Hulun Buir, 2019/7/26.
- [25] The learning, timing and pricing of the option to invest with guaranteed debt and asymmetric information. The branch of Financial Engineering and Financial Risk Management of the Chinese Society of Operational Research, Shanghai, 2019/8/29.
- [26] Investment and financing with insured debt and information asymmetry. Invited Talk at Central South University, CN, June 3, 2019.
- [27] Investment and financing with insured debt and information asymmetry. Invited Talk at Wuhan University, CN, May 21, 2019.
- [27] Luo, Pengfei and Wang, Huamao and Yang, Zhaojun, The Learning, Timing, and Pricing of the Option to Invest with Guaranteed Debt and Asymmetric Information. WEAI Annual Meeting, Virtual Conference, June 28, 2020.

Conference Organizing Activities in 2015

- (1) [Initiating and organizing the international conference, Hunan University International Financial Engineering Conference 2015.](#)
- (2) [Initiating and organizing the conference, China Taxation and Credit Guarantee Conference 2015.](#)

Courses Taught

Financial modeling and asset pricing; stochastic calculus for finance; financial economics; financial derivative instruments; financial engineering; dynamic programming and stochastic control; asset pricing and portfolio choice theory; corporate finance; mathematical finance; game theory for applied economists.