

CURRICULUM VITAE

Zhen Li

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Academic Positions at Albion College:

John S. Ludington Trustees' Professorship in the Social Sciences, 07/2022 – 06/2026

E. Maynard Aris Endowed Professorship in Economics & Management, 07/2017 – 06/2021

Professor, Department of Economics & Management, 07/2015 – present

Associate Professor, Department of Economics & Management, 07/2011 – 06/2015

Assistant Professor, Department of Economics & Management, 07/2004 – 06/2011

Education:

Princeton University, PhD, Economics, 2004

Princeton University, MA, Economics, 1999

Peking University (China), BA, International Economics, 1996

Major Teaching and Research Fields:

Macroeconomics

International Economics

The Chinese Economy

Economics/Game Theory of Computer Networks and Information Security

Research and Publications:

Journal Articles (Peer-Reviewed):

1. Zhen Li and Qi Liao. Preventive Portfolio against Data-selling Ransomware -- A Game Theory of Encryption and Deception. *Computers & Security*, 116:1-11, Article 102644, May 2022.
2. Zhen Li and Qi Liao. Game Theory of Data-selling Ransomware. *Journal of Cyber Security and Mobility*, 10(1):65-96, March 2021.
3. Zhen Li, Qi Liao, and Aaron D. Striegel. A Game-theoretic Analysis on the Economic Viability of Mobile Content Pre-staging. *Wireless Networks*, 26(1): 667-683, 2020.

4. Zhen Li and Qi Liao. Economic Solutions to Improve Cybersecurity of Governments and Smart Cities via Vulnerability Markets. *Government Information Quarterly*, 35(1):151-160, January 2018.
5. Zhen Li and Qi Liao. Network Pricing: Can Both ISP and P2P Benefit? *International Journal of Network Management*, John Wiley & Sons, Ltd., 24(6):433-449, November/December 2014.
6. Zhen Li and Qi Liao. Toward a Monopoly Botnet Market. *Information Security Journal: A Global Perspective – Cybercrimes, Security Emerging Web Environments, and Digital Forensics*, Taylor & Francis, 23(4-6), 159-171, October 2014.
7. Qi Liao and Zhen Li. Portfolio Optimization of Computer and Mobile Botnets. *Springer International Journal of Information Security*, 13(1):1-14, February 2014.
8. Zhen Li. On the Growth Effects of Equity Market Liberalization. *Journal of Economic Development*, 37(2):59-77, June 2012.
9. Qi Liao, Zhen Li, and Aaron Striegel. Could Firewall Rules Be Public – A Game Theoretical Perspective. *Journal of Security and Communication Networks*, Wiley InterScience, 5(2):197-210, January 2012.
10. Zhen Li, Qi Liao, Andrew Blaich, and Aaron Striegel. Fighting Botnets with Economic Uncertainty, *Journal of Security and Communication Networks*, Wiley InterScience, 4:1104-1113, 2011.
11. Zhen Li. Equity Market Liberalization, Industry Growth and the Cost of Capital. *Journal of Economic Development*, 35(3):103-121, September 2010.

Conference Proceedings (Peer-Reviewed):

12. Zhen Li and Qi Liao. How Much Should I Double Spend My Bitcoin? Game theory of Quantum Mining. In *Proceedings of the 15th Conference on Game Theory and AI for Security (GameSec)*, New York, October 16-18, 2024.
13. Zhen Li and Qi Liao. Is Quantum Computing the Bitcoin Terminator? In *Proceedings of the 30th Americas Conference on Information Systems (AMCIS)*, pages 1–10, Salt Lake City, Utah, August 15-17 2024.
14. Zhen Li and Qi Liao. Does Cyber-insurance Benefit the Insured or the Attacker? – A Game of Cyber-insurance. In *Proceedings of the 14th Conference on Decision and Game Theory for Security (GameSec)*, pages 1-20, Avignon, France, October 18-20 2023.
15. Zhen Li and Qi Liao. Game Theory of Cheating Autonomous Vehicles. In *Proceedings of the First IEEE International Workshop on Security, Privacy & Trust for Connected Autonomous Vehicles (MOSEC)*, pages 231-236, Detroit, MI, May 17-19, 2023.

16. Zhen Li and Qi Liao. Ransomware 2.0: To sell, or not to sell. A game-theoretical model of data-selling ransomware. In *ACM Proceedings of 9th International Workshop on Cyber Crime (IWCC) at the 15th International Conference on Availability, Reliability and Security (ARES)*, Dublin, Ireland, August 25-28, 2020.
17. Zhen Li and Qi Liao. Harnessing Uncertainty in Vulnerability Market for Better Cybersecurity. In *Proceedings of the 27th IEEE International Conference on Computer Communications and Networks (ICCCN)*, Hangzhou, China, July 30-August 2, 2018
18. Zhen Li and Qi Liao. Toward Socially Optimal Bitcoin Mining. In *Proceedings of the 5th IEEE International Conference on Information Science and Control Engineering (ICISCE)*, Zhengzhou, China, July 20-22, 2018
19. Zhen Li and Qi Liao. CAPTCHA: Machine or Human Solvers? A Game-theoretical Analysis. In *Proceedings of the 5th IEEE International Conference on Cyber Security and Cloud Computing (CSCloud)*, Shanghai, China, June 22-24, 2018
20. Zhen Li and Qi Liao. An Economic Alternative to Improve Cybersecurity of E-government and Smart Cities. In *Proceedings of the 17th Annual International Conference on Digital Government Research (dg.o 2016)*, pages 455-464, Shanghai, China, June 8–10, 2016. Digital Government Society (DGS).
21. Zhen Li, Qi Liao, and Aaron Striegel. On the Economics of Mobile Content Pre-Staging. In *IEEE Conference on Computer Communications (INFOCOM) - The Fifth IEEE Workshop on Smart Data Pricing (SDP)*, San Francisco, CA, April 11, 2016.
22. Qi Liao, Zhen Li, and Aaron Striegel. Is More P2P Always Bad for ISPs? – An Analysis of P2P and ISP Business Models. In *Proceedings of the IEEE 23rd International Conference on Computer Communication and Networks (ICCCN) – the First International Workshop on Hot Topics in Big Data and Networking (HotData I)*, pages 1-6, Shanghai, China, August 4-7, 2014.
23. Zhen Li, Qi Liao, and Aaron Striegel. Toward a Socially Optimal Wireless Spectrum Management. In *the Fifth IEEE Workshop on Networking Technologies for Software-Defined Radio and White Space, held in Conjunction with IEEE SECON 2010*, pages 1-6, Boston, MA, June 21-22, 2010.
24. Qi Liao, Zhen Li, and Aaron Striegel. Information Game of Public Firewall Rules. In *Fifth Workshop on Secure Network Protocols (NPSEC '09) in conjunction with the 17th IEEE International Conference on Network Protocols (ICNP'09)*, pages 25–30, Princeton, NJ, October 13-16, 2009.
25. Zhen Li, Qi Liao, and Aaron Striegel. Botnet Economics: Uncertainty Matters. In *Proceeding of the 7th Workshop on the Economics of Information Security (WEIS'08)*, Hanover, New Hampshire, June 25-28 2008.

Book Chapters:

26. Zhen Li and Qi Liao. *Decision and Game Theory for Security*, volume 14167 of *Lecture Notes in Computer Science*, chapter Does Cyber-Insurance Benefit the Insured or the Attacker? – A Game of Cyber-Insurance, pages XXIX, 390. Springer, ISBN: 9783031506697, December 29 2023.
27. Zhen Li, Qi Liao, and Aaron Striegel. Botnet Economics: Uncertainty Matters, in M. Eric Johnson (ed.), *Managing Information Risk and the Economics of Security*, pages 245-267. Springer, ISBN: 978-0-387-09761-9, 2009.

Tech Reports:

28. Zhen Li, Qi Liao, and Aaron Striegel. Toward a Socially Optimal Wireless Spectrum Management. TECH REPORT TR-2010-01, University of Notre Dame, February 2010.

Peer Review Services:

Ad-hoc reviewer – Macmillan Learning, Cengage, Cognella Academic Publishing, John Wiley and Sons, *ACM Digital Threats: Research and Practice*, *AMCIS*, *Computers & Security*, *Computing and Artificial Intelligence*, *IEEE Internet of Things Journal*, *International Journal of Business and Economics*, *Journal of Development Economics*, *Journal of Economic Development*, *Journal of International Economics*, *Systems, Theory, Culture & Society*

Committee Services at Albion College:

Budgets, Salaries, and Benefits Committee (BSBC), August 2021 – July 2024
Campus Planning Committee, May 2022 – September 2022
Curriculum and Resources Committee (C&RC), August 2017 – December 2019
Academic Status & Petitions Committee, spring 2018
International Studies Committee, March 2008 – present
Internal Advisory Committee for the Carl A. Gerstacker Institute for Business and Management, September 2014 – May 2015

Other Services:

Faculty director for Omicro Delta Epsilon (ODE, the International Honor Society for Economics) at Albion College, since August 2024
CSWEP (Committee on the Status of Women in the Economics Profession) liaison for Albion College, since August 2021