

CURRICULUM VITAE

Contact Information

Joseph Chuang-Chieh Lin (林莊傑)

Assistant Professor

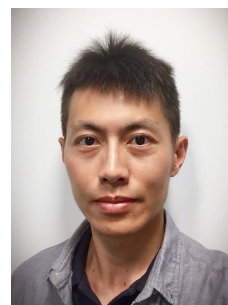
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Work Experience

- 08/2024–present **Position:** Assistant Professor
Institution: Department of Computer Science & Engineering, National Taiwan Ocean University, Keelung City, Taiwan.
- 02/2021–07/2024 **Position:** Assistant Professor
Institution: Department of Computer Science & Information Engineering, Tamkang University, New Taipei City, Taiwan.
- 01/2020–01/2021 **Position:** Quantitative Analyst.
Company: Seth Technologies Inc. (塞特科技), Taipei, Taiwan.
- 03/2018–11/2019 **Position:** Quantitative Finance Researcher (Consultant/Internship).
Company: Cubist Systematic Strategies / Point72, agreement with MDBS Digital Technologies, Co. Ltd., Taipei, Taiwan.
- 09/2014–02/2018 **Position:** Postdoctoral Research Fellow.
Institution: Institute of Information Science, Academia Sinica.
Location: Taipei, Taiwan.
- 09/2011–08/2014 **Position:** Postdoctoral Research Fellow.
Research & Development Alternative Military Service (研發替代役).
Institution: Genomics Research Center, Academia Sinica.
Location: Taipei, Taiwan.

Education

- 09/2004–07/2011 **Ph.D. degree** in *Computer Science and Information Engineering*, National Chung Cheng University, Chia-Yi, Taiwan.
Supervisors: Maw-Shang Chang & Peter Rossmanith
- 09/2002–06/2004 **M.S. degree** in *Computer Science and Information Engineering*, National Chi Nan University, Nantou, Taiwan.
Supervisor: Richard Chia-Tung Lee (R. C. T. Lee)
- 09/1998–06/2002 **B.S. degree** in *Mathematics*, National Cheng Kung University, Tainan, Taiwan.

Research Interests

- Data Science
- Algorithmic Game Theory
- Online Learning
- Quantitative Finance
- Randomized Algorithms
- Bioinformatics

Current Teaching Courses

- C++
- Data Structures
- Economics and Computation
- Mathematics for Machine Learning
- Randomized Algorithms

Scholarship & Projects (獎助與計畫)

- 07/2025–06/2026 **2025 NSTC-NWO JOINT PROJECT: Algorithmic Game Theory with Machine-Learned Predictions** (臺荷雙邊研究人員交流計畫; NSTC 114-2927-I-A49-518). Co-Host.
- 01/2024–12/2025 **2024 NSTC-BFT ORCHID PROGRAM: Parameterized Online Learning for Min-Max Envy Resource Allocation and Team Formation** (臺法幽蘭計畫之雙邊人員交流互訪型計畫; NSTC 113-2927-I-032-501). Host.
- 08/2023–07/2026 **A Study on Group Competition Game of Real-Policy Making Based on Equilibria Existence and Gradient Algorithms** (國科會計畫 NSTC 112-2221-E-032-018-MY3).
- 04/2021–03/2023 **Game Theoretical Aspects in Modeling and Analyzing Party Election Campaign** (科技部計畫 MOST 110-2222-E-032-002-MY2).
- 09/2009–08/2010 **Personnel Exchange Programme for Joint Project Between NSC & DFG** (台德雙邊短期研究計畫; Taiwan: NSC 98-2911-I-194-003; Germany: RO 927/10-1 / 568846).
- 09/2007–08/2008 **DAAD-NSC Sandwich Program** (台德三明治計畫): Scholarship Holder.
Institute to Visit: RWTH Aachen University, Germany.

Awards (獲獎)

- 10/2024 **Best Paper Award**; The International Workshop on Algorithms in Engineering (IWAE 2025), Taoyuan, 24–26 October, 2025.
- 07/2024 **The 2024 ICPC Taiwan Private University Programming Contest: Silver & Bronze Award (Coach)** (全國私立大專校院程式競賽銀獎與銅獎).
- 05/2024 **Best Paper Award**; The 41st Workshop on Combinatorial Mathematics and Computation Theory (CMCT 2024). Taipei City, Taiwan, 17–18 April, 2024.
- 06/2023 **The 2023 ICPC Taiwan Private University Programming Contest: Silver & Bronze Award (Coach)** (全國私立大專校院程式競賽銅獎).
- 04/2009 **Best Paper Award**; The 26th Workshop on Combinatorial Mathematics and Computation Theory. Chiayi, Taiwan, 24–25 April, 2009.

Professional Services (研究服務)

05/2025	Program Committee Member for the 7th Games, Agents, and Incentives Workshop (GAIW 2025).
05/2024	Program Committee Member for the 40th Symposium on Combinatorial Mathematics and Computational Theory (CMCT 2024).
05/2023	Program Committee Member for the 39th Symposium on Combinatorial Mathematics and Computational Theory (CMCT 2023).
12/2022	Organizing Committee Member & Domestic Program Chair for the 27th International Conference on Technologies and Applications of Artificial Intelligence (TAAI 2022).
09/2021–present	Reviewer for <i>Mathematical Reviews</i> (MathSciNet, AMS).
12/2022	Program Committee Member of <i>International Computer Symposium</i> (ICS 2022).

Publication List

Note: ‘*’: the corresponding author; ‘†’: my student

- Journal Papers:

1. Chuang-Chieh Lin, Yung-Shen Huang and Shih-Yeh Chen*: A Cloud-Based Distributed System for Story Visualization Using Stable Diffusion. *Computers, Materials & Continua*. 86 (2026) 1–19.
2. Chuang-Chieh Lin, Ming-Chu Ho and Chih-Chieh Hung*: Toward key factors in travel time prediction for sustainable mobility and well-being. *Computer Science and Information Systems*. 22 (2025) 1797–1816.
3. Chuang-Chieh Lin, Guanyao Li, Chih-Chieh Hung*, Yi-Chen Ku and Wen-Chih Peng: Rethinking Suspicious Account Identification from a Perspective of Machine Learning Ranking. *International Journal of Machine Learning and Cybernetics*. Accepted.
4. Chuang-Chieh Lin, Ming-Chu Ho, Chih-Chieh Hung* and Hui-Huang Hsu: A comparative study and simple baseline for travel time prediction. *Scientific Reports*. 15 (2025) 25609.
5. Po-An Chen*, Chi-Jen Lu, Chuang-Chieh Lin*, An-Tzu Teng and Ke-Wei Fu: Multiagent Learning for Competitive Opinion Optimization. *Theoretical Computer Science* 1017 (2024) 11487.
6. Bo-Hsin Lin†, Chuang-Chieh Lin, Chih-Chieh Hung, and Chien-Chang Chen*: On the Identifiability of Artificial Financial Time Series. *Journal of Information Science and Engineering* 40 (2024) 567–579.
7. Chuang-Chieh Lin, Chih-Chieh Hung*, Chi-Jen Lu, and Po-An Chen: Group Formation by Group Joining and Opinion Updates via Multi-Agent Online Gradient Ascent. *IEEE Computational Intelligence Magazine* 18 (2023) 60–61.
8. Wendgoundi Abdoul Rasmané Savadogo, Chuang-Chieh Lin, Chih-Chieh Hung*, Chien-Chang Chen, Zhen Liu, Tingting Liu: A study on constructing an elderly abuse detection system by convolutional neural networks. *Journal of the Chinese Institute of Engineers* 46 (2023) 118–127.
9. Chih-Chieh Hung, Chuang-Chieh Lin, Hsien-Chu Wu*, Chia-Wei Lin: A study on reversible data hiding technique based on three-dimensional prediction-error histogram modification and a multilayer perceptron. *Applied Sciences* 12 (2022) 2502.
10. Chuang-Chieh Lin*, Chi-Jen Lu, and Po-An Chen: How good is a two-party election game? *Theoretical Computer Science* 871 (2021) 79–93.

11. Trees-Juen Chuang*, Min-Yu Yang, Chuang-Chieh Lin, Ping-Hung Hsieh, and Li-Yuan Hung: Comparative genomics of grass EST libraries reveals previously uncharacterized splicing events in crop plants. *BMC Plant Biology* 15:39 (2015).
 12. Maw-Shang Chang, Chuang-Chieh Lin*, and Peter Rossmanith: Testing consistency of quartet topologies: a parameterized approach. *Information Processing Letters* 113 (2013) 852–857.
 13. Maw-Shang Chang, Chuang-Chieh Lin*, and Peter Rossmanith: A property tester for tree-likeness of quartet topologies. *Theory of Computing Systems* 49 (2011) 576–587.
 14. Maw-Shang Chang, Hsiao-Han Chung, and Chuang-Chieh Lin*: An improved algorithm for the red-blue hitting set problem with the consecutive ones property. *Information Processing Letters* 110 (2010) 845–848.
 15. Maw-Shang Chang, Chuang-Chieh Lin*, and Peter Rossmanith: New fixed-parameter algorithms for the minimum quartet inconsistency problem. *Theory of Computing Systems* 47 (2010) 342–367.
- Refereed Conference Papers:
 1. Chuang-Chieh Lin, Chi-Jen Lu, Po-An Chen* and Chih-Chieh Hung: Computing Pure-Strategy Nash Equilibria in a Two-Party Policy Competition: Existence and Algorithmic Approaches *In Proceedings of the 25th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2026)*. Accepted for publication as an extended abstract.
 2. Po-An Chen*, Chi-Jen Lu, Chuang-Chieh Lin and Jing Huang: Towards Distributed Multiagent Learning for Finding Linear Arrow-Debreu Market Equilibria: Projection-Free Optimistic Gradient Descent Ascent. Accepted *In Proceedings of the International Workshop on Algorithms in Engineering (IWAE 2025, Taoyuan, 24–26 October, 2025)*. Best Paper Award.
 3. Chuang-Chieh Lin*, Chi-Jen Lu, Po-An Chen: Nash Equilibria of a Two-Party Policy Competition Game. Accepted *In Proceedings of the 41st Workshop on Combinatorial Mathematics and Computation Theory (CMCT 2024, Taipei City, Taiwan, 17–18 May, 2024)*.
 4. Chuang-Chieh Lin*, Chi-Jen Lu, and Po-An Chen: How Bad Can An Election Game of Two or More Parties Be? *In Proceedings of the 6th Games, Agents, and Incentives Workshop (GAIW 2024, Auckland, New Zealand, 6–7 May 2024)*. Accepted for full presentation.
 5. Chih-Chieh Hung*, Hong-En Hsiao, Chuang-Chieh Lin, Hui-Huang Hsu: Air Pollution Source Tracing Framework: Leveraging Microsensors and Wind Analysis for Pollution Source Identification. *In Proceedings of the 28th International Conference on Technologies and Applications of Artificial Intelligence (TAAI 2023, Yunlin, Taiwan; 1–2 December 2023)*. pp. 142–154. Excellent Paper Award.
 6. Chi-Hao Wang, Chi-Jen Lu, Ming-Tat Ko, Po-An Chen*, Chuang-Chieh Lin*: Budget-Constrained Cost-Covering Job Assignment for a Total Contribution-Maximizing Platform. *In Proceedings of the 34th International Workshop on Combinatorial Algorithms (IWOC 2023, Tainan, Taiwan, 7–10 June, 2023)*, pp. 392–403.
 7. Po-An Chen*, Chi-Jen Lu, Chuang-Chieh Lin, and Ke-Wei Fu: Multiagent Learning for Competitive Opinion Optimization. *In Proceedings of the 2022 International Computer Symposium (ICS 2022, Taoyuan, Taiwan; 15–17 December 2022)*, pp. 61–72.
 8. Chuang-Chieh Lin and Chi-Jen Lu*: Efficient mechanisms for peer grading and dueling bandits. *In Proceedings of the 10th Asian Conference on Machine Learning (ACML 2018, Beijing, China; 14–16 November)*, pp. 740–755.

9. Chuang-Chieh Lin*: *Testing tree-consistency with k missing quartets*. In *Proceedings of the 28th Workshop on Combinatorial Mathematics and Computation Theory (CMCT 2011, Penghu, Taiwan, 27–28 May, 2011)*, pp. 280–285.
 10. Maw-Shang Chang, Hsiao-Han Chung, and Chuang-Chieh Lin*: *An improved algorithm for the red-blue hitting set problem with the consecutive ones property*. In *Proceedings of the 26th Workshop on Combinatorial Mathematics and Computation Theory, (CMCT 2009, Chiayi, Taiwan, 24–25 April, 2009)*, pp. 15–20. *Best Paper Award*.
 11. Maw-Shang Chang, Chuang-Chieh Lin*, and Peter Rossmanith: *New fixed-parameter algorithms for the minimum quartet inconsistency problem*. In *Proceedings of International Workshop on Exact and Parameterized Computation (IWPEC 2008, Victoria B.C., Canada; 14–16 May)*, pp. 66–77.
- Refereed Posters or Non-Archived Work:
 1. Shuo-Ting Hung, Pin-Hua Wei, Yu-Chuan Huang, Nan-Tien Chen, Han-Siang Lan, Chuang-Chieh Lin, and Chih-Chieh Hung: *Portfolio Optimization Using No-Regret Online Learning: A Case Study on US Stocks Accepted in the Program of Frontier Innovation Award Competition 2024*, organized in the 14th International Conference on Frontier Computing (FC 2024) (Singapore, July 10–14, 2024). *Gold Award Winner of the Artificial Intelligence track*.
 2. Po-An Chen*, Chi-Jen Lu, Chuang-Chieh Lin, Yu-Qin Lin: *When and How to Have Negative Regrets for Online Learners? Profits for Prediction Market Makers as an Example*. COMSOC’2023 Poster Session (3rd July 2023).
 3. Bo-Hsin Lin, Chuang-Chieh Lin, Chih-Chieh Hung, and Chien-Chang Chen*: *On the Identifiability of Artificial Financial Time Series Data (人造金融時間序列的可檢測性)*. In *Program of the 27th International Conference on Technologies and Applications of Artificial Intelligence (TAAI 2022, Tainan, Taiwan; 1–3 December 2022)*.
 4. Po-An Chen*, Yiling Chen, Chi-Jen Lu, and Chuang-Chieh Lin: *Profitable prediction market making*. *Program of the 14th Annual Meeting of the Asian Association for Algorithms and Computation (AAAC 2021, Tainan, Taiwan; 22–24 October 2021)*.
 5. Chuang-Chieh Lin, Chi-Jen Lu, Po-An Chen*: *How good is a two-party election game?* EC’20 Main Poster Session (S3W3).
 - Ph.D. Dissertation:
 - *A Study on Fixed-Parameter Algorithms and Property Testing*. July 2011.