CURRICULUM VITAE

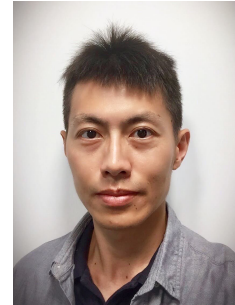## Contact Information

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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)

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. 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 *Mathematical Reviews* (MathSciNet, AMS).
12/2022	**Program Committee Member** of *International Computer Symposium* (ICS 2022).

Publication List

Note: '*': the corresponding author; '†': my student

- Journal Papers:

  1. 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.* Accepted.

  2. 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.

  3. 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.

  4. 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.

  5. 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.

  6. 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.

  7. 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.

  8. 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.

  9. 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.

  10. 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).

11. Maw-Shang Chang, <u>Chuang-Chieh Lin</u>*, and Peter Rossmanith: Testing consistency of quartet topologies: a parameterized approach. *Information Processing Letters* 113 (2013) 852–857.

12. Maw-Shang Chang, <u>Chuang-Chieh Lin</u>*, and Peter Rossmanith: A property tester for tree-likeness of quartet topologies. *Theory of Computing Systems* 49 (2011) 576–587.

13. Maw-Shang Chang, Hsiao-Han Chung, and <u>Chuang-Chieh Lin</u>*: An improved algorithm for the red-blue hitting set problem with the consecutive ones property. *Information Processing Letters* 110 (2010) 845–848.

14. Maw-Shang Chang, <u>Chuang-Chieh Lin</u>*, 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. Po-An Chen*, Chi-Jen Lu, <u>Chuang-Chieh Lin</u> 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.

2. <u>Chuang-Chieh Lin</u>*, 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).*

3. *<u>Chuang-Chieh Lin</u>*, 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.*

4. *Chih-Chieh Hung*, Hong-En Hsiao, <u>Chuang-Chieh Lin</u>, 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.*

5. *Chi-Hao Wang, Chi-Jen Lu, Ming-Tat Ko, Po-An Chen*, <u>Chuang-Chieh Lin</u>*: Budget-Constrained Cost-Covering Job Assignment for a Total Contribution-Maximizing Platform.* In Proceedings of the 34th International Workshop on Combinatorial Algorithms *(IWOCA 2023, Tainan, Taiwan, 7–10 June, 2023), pp. 392–403.*

6. *Po-An Chen*, Chi-Jen Lu, <u>Chuang-Chieh Lin</u>, 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.*

7. *<u>Chuang-Chieh Lin</u> 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.*

8. *<u>Chuang-Chieh Lin</u>*: 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.*

9. *Maw-Shang Chang, Hsiao-Han Chung, and <u>Chuang-Chieh Lin</u>*: 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.*

10. *Maw-Shang Chang, <u>Chuang-Chieh Lin</u>*, 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, <u>Chuang-Chieh Lin</u>, 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 10一14, 2024). Gold Award Winner of the Artificial Intelligence track.

    2. Po-An Chen*, Chi-Jen Lu, <u>Chuang-Chieh Lin</u>, 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, <u>Chuang-Chieh Lin</u>, 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 <u>Chuang-Chieh Lin</u>: 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. <u>Chuang-Chieh Lin</u>, 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.