

Po-wei Harn

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Department of Computer Science and Information Engineering, National Central University, Taoyuan City

EDUCATION

Ph.D. Computer Science and Software Engineering | Auburn University, USA

AUG 2019-MAY 2024

M.S. Computer Science and Information Engineering | National Central University, TW

SEPT 2013-JUNE 2015

B.S. Mathematics | National Central University, TW

SEPT 2009-JUNE 2013

AREAS OF INTEREST

1. Genetic Programming of Evolutionary Computation
2. Graph Neural Networks of Machine Learning
3. Searchable Encryption of Cybersecurity

PUBLICATION LIST

1. **Po-Wei Harn**, Libo Sun, Suryansh Soni, Min-Te Sun and Wei-Shinn Ku, "AI Coordination and Communication on Network Intrusion using Reinforcement Learning and Genetic Programming in Multi-Agent Systems," in Proceedings of the Conference on Technologies and Applications of Artificial Intelligence (**TAAI 2025**)
2. Che-kuan Shen, Mai Mahn Duy, Yung-Wen Lai, and **Po-Wei Harn**, " VulScan: The Guardian of Open Source World," in Proceedings of the Conference on Technologies and Applications of Artificial Intelligence (**TAAI 2025**)
3. **Po-Wei Harn**, Bo Hui, Sai Deepthi Yeddula, Libo Sun, Min-Te Sun and Wei-Shinn Ku. "Evolutionary Quadtree Pooling for Convolutional Neural Networks". in Proceedings of the Conference on Genetic and Evolutionary Computation (**GECCO 2025**)

4. **Po-Wei Harn**, Bo Hui, Sai Deepthi Yeddula, Libo Sun, Min-Te Sun and Wei-Shinn Ku, "A Novel Quadtree-Based Genetic Programming Search for Searchable Encryption Optimization," in Companion Proceedings of the Conference on Genetic and Evolutionary Computation (**GECCO** 2023)
5. **Po-Wei Harn**, Sai Deepthi Yeddula, Bo Hui, Jie Zhang, Libo Sun, Min-Te Sun and Wei-Shinn Ku, "IGRP: Iterative Gradient Rank Pruning for Finding Graph Lottery Ticket," in Proceedings of the IEEE International Conference on Big Data (**Big Data** 2022)
6. **Po-Wei Harn**, Sai Deepthi Yeddula, Libo Sun, Min-Te Sun and Wei-Shinn Ku, "Location-based Alert System Using Searchable Encryption with Hilbert Curve Encoding, " in Proceedings of the IEEE International Conference on Big Data (**Big Data** 2022)
7. Jian Song, **Po-Wei Harn**, Kazuya Sakai, Min-Te Sun and Wei-Shinn Ku, "An RFID Zero-Knowledge Authentication Protocol Based on Quadratic Residues," in IEEE Internet of Things Journal (**IoT-J** 2022)
8. **Po-Wei Harn**, Ji Zhang, Ting Shen, Wenlu Wang, Xunfei Jiang, Wei-Shinn Ku, Min-Te Sun, Yao -Yi Chiang. "Multiple ground/aerial parcel delivery problem: a Weighted Road Network Voronoi Diagram based approach. " (**Distributed Parallel Databases** 2021)
9. Ji Zhang, **Po-Wei Harn**, Wei-Shinn Ku, Xiao Qin, Hua Lu, and Xunfei Jiang. "An overlapping Voronoi diagram-based system for multi-criteria optimal location queries." (**Geoinformatica** 2019).
10. **Po-Wei Harn**, Ji Zhang, Min-Te Sun and Wei-Shinn Ku. "A framework for updating multi-criteria optimal location query (demo paper) ". in Proceedings of the International Conference on Advances in Geographic Information Systems (**SIGSPATIAL/GIS** 2016)

PROJECTS

#	Project Title	Project Code	Position	Duration	Status
1	Evolutionary Quadtree Pooling for Convolutional Neural Networks	NSTC 113-2222-E-008-009	PI	113/10/01 ~ 114/09/30	Completed
2	Implementation of Generative AI-Driven Intelligent Manufacturing: A Case Study on Laser Fabrication and Non-Destructive Inspection of Glass-core Substrates	NSTC 114-2218-E-008-008	Co-PI	114/06/01 ~ 115/05/31	Ongoing