Po-wei Harn

Ph. D. candidate
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Department of Computer Science and Software Engineering, Auburn University, AL

EDUCATION

Ph.D. Computer Science and Software Engineering |Auburn University, USA
AUG 2019-MAY 2024, EXPECTED
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**, 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)
2. **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)
3. **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)
4. 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)
5. **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)
6. 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).

7. **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)

Preprints

8. Jie Zhang, Bo Hui, **Po-Wei Harn**, Min-Te Sun and Wei-Shinn Ku, "From ChebNet to ChebGibbsNet".
9. Jie Zhang, Bo Hui, **Po-Wei Harn**, Min-Te Sun and Wei-Shinn Ku, "MGC: A Complex-Valued Graph Convolutional Network for Directed Graphs".
10. **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". Under review by IEEE International Conference on Big Data (**Big Data 2023**)
11. **Po-Wei Harn**, Bo Hui, Sai Deepthi Yeddula, Libo Sun, Min-Te Sun and Wei-Shinn Ku, " An Advanced Quadtree-Based Genetic Programming Search on Searchable Encryption Optimization ". Under review by IEEE Transactions on Evolutionary Computation (**TEVC 2023**)

INVITED TALKS

- **IGRP: Iterative Gradient Rank Pruning for Finding Graph Lottery Ticket**
  Conference talk at IEEE BigData, 2022

- **Location-based Alert System Using Searchable Encryption with Hilbert Curve Encoding**
  Conference talk at IEEE BigData, 2022

CONFERENCE REVIEW

- MDM (2023)
- IOT-J (2023)
- ICDE (2024)

TEACHING

- **Teaching Assistant**
  Software Construction (2023, 2021, 2020),
  Database Systems (2023, 2022),
  Intro to C Programming (2020, 2019)

INDUSTRY EXPERIENCE (3 YEARS)

Senior Software Engineer | Institute for Information Industry, TW
JAN 2017-SEPT 2018
Software Development of Smart Credit Information Assistant for Financial Technology and Applications
Deep Learning, Text Classification, Web Crawlers
Programming Tools: Python, SQL Server, MariaDB

Software Engineer | **Institute for Information Industry, TW**
SEPT 2015-JAN 2017
Website Development of Smart Tourism Taiwan
VzTaiwan Website, Front End Development, Back End Development, API Development
Programming Tools: AngularJS, NodeJS, MySQL

REFERENCES

Wei-Shinn Ku, Professor, Auburn University | weishinn@auburn.edu
Min-Te Sun, Professor, National Central University | msun@csie.ncu.edu.tw
Kazuya Sakai, Associate Professor, Tokyo Metropolitan University | ksakai@tmu.ac.jp
Bo Hui, Assistant Professor, University of Tulsa | boh1704@utulsa.edu