Zhiming Huang

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EDUCATION

University of Victoria, BC, Canada

- Ph.D. in Computer Science — Sep 2020 – Aug 2023 (Expected)
- M.Sc. in Computer Science, GPA: 8.75/9 — Sep 2018 – Aug 2020
- Advisor: Dr. Jianping Pan

Northwestern Polytechnical University, Shaanxi, China

- B.Eng. in Communication Engineering, GPA: 87.16/100, Rank: 3/72 — Sep 2014 – Jun 2018

RESEARCH INTERESTS

- **Wireless Communications and Mobile Networks**
  Machine learning & stochastic analysis in radio channel modeling, wireless caching systems, ad hoc networks, and crowdsourcing.

- **Statistical Learning and Optimization**
  Decision-theoretic online learning, multi-armed bandit problems, online decision making and control.

PUBLICATIONS

JOURNAL PUBLICATIONS

[1] A Framework of Multipath Clustering based on Space Transformed Fuzzy c-Means and Data Fusion for Radio Channel Modeling
Z. Huang, R. Zhang, J. Pan, Y. Jiang, and D. Zhai
IEEE Transactions on Vehicular Technology (TVT), Volume 69, Pages 4-15, Jan 2020.

[2] Uncertainty Measurement with Belief Entropy on Interference Effect in Quantum-Like Bayesian Networks
Z. Huang, L. Yang, and W. Jiang
Applied Mathematics and Computation (AMC), Volume 347, Pages 417-428, Nov 2018.

[3] A New Method to Evaluate Risk in Failure Mode and Effects Analysis under Fuzzy Information
Z. Huang, W. Jiang, and Y. Tang
Soft Computing (SOCO), Volume 22, Issue 14, Pages 4779-4787, Jul 2017.

[4] EQRC: A secure QR code-based E-coupon framework supporting online and offline transactions,
Rui Liu, Jun Song, **Z. Huang**, Jianping Pan
Journal of Computer Security (JCS), Pre-press, Pages 1-29, Jul 2020.

CONFERENCE PUBLICATIONS

[1] Intelligent Caching Algorithms in Heterogeneous Wireless Networks with Uncertainty
B. Hu, Y. Chen, **Z. Huang**, N. Mehta, J. Pan
In Proc. the 39th IEEE International Conference on Distributed Computing Systems (ICDCS), Jul 2019.

[2] EQRC: An Enhanced QR Code-based Secure E-coupon Transaction Framework
R. Liu, J. Song, **Z. Huang**, J. Pan
In Proc. the 53rd IEEE International Conference on Communication (ICC), May 2019.

IN PROGRESS

[1] **Z. Huang**, Y. Xu, J. Pan, TSOR: Thompson Sampling-based Opportunistic Routing
Submitted to IEEE Transactions on Mobile Computing (TMC).

[2] **Z. Huang**, Y. Xu, B. Hu, Q. Wang, J. Pan, Thompson Sampling for Combinatorial Semi-bandits with Sleeping Arms and Long-Term Fairness Constraints
arXiv preprint arXiv:2005.06725.

[3] **Z. Huang**, B. Hu, J. Pan, Caching by User Preference with Delayed Feedback for Heterogeneous Cellular Networks
Minor revisions to IEEE Transactions on Wireless Communications (TWC).

[4] **Z. Huang**, J. Pan, on Multi-agent Bandits
In progress.

PRESENTATIONS AND TALKS	**On Fast Intra Size Decision and Mode Decision Algorithm**	Sep 2019
	IEEE Pacific Rim Conference on Communications, Computers and Signal Processing (PACRIM).	
	On Clustering Multi-path Components with Self-organizing Map	Sep 2018
	Northwestern Polytechnical University, Xian, China.	
	On Clustering Multi-path Components in Radio Channels	Sep 2017
	University of Victoria, BC, Canada.	

AWARDS & SCHOLARSHIPS

- **UVic Graduate Fellowship** $15,000 — Sep 2020
  For the outstanding academic performance during graduate study.
- **UVic Graduate Award** $613 — Aug 2020
  For the outstanding academic performance during graduate study.
- **IEEE Pacific Rim Wu-Sheng Lu Graduate Scholarship** $1,650 — Nov 2019
  For excellent academic performance.
- **ICDCS 2019 Travel Grant Award** — Jun 2019
  For graduate students and post-doctoral researchers to participate in ICDCS 2019.
- **UVic Graduate Award** $4,000 — Jun 2019
  For the outstanding academic performance during graduate study.
- **Mitacs Graduate Fellowship** $15,000 — Sep 2018
  For former Globalink research interns who return to Canada for research-based graduate studies at eligible Mitacs academic partners.
- **The Best Final Thesis Award** — Jun 2018
  For the outstanding final thesis, top 5% undergraduate awardees in the university.
- **The Excellent Graduate Award** — Jun 2018
  For the outstanding academic performance during undergraduate study, top 5% in the university.
- **Scholarship of Ministry of Industry and Information Technology of China** $4,000 — Oct 2017
  For the outstanding performance in academic research, top 0.01% in the university.
- **Scholarship of China Scholarship Council** $4,500 — Jun 2017
  Full-tuition scholarship with stipend for undergraduate research internship at UVic, one of 4 undergraduate awardees in the university.
- **Scholarship of Ministry of Industry and Information Technology of China** $4,000 — Oct 2016
  For the outstanding performance in academic research, top 0.01% in the university.

CONTEST EXPERIENCE

2017 COMAP Interdisciplinary Contest in Modeling

- Designated as **Meritorious Winner**
  - Project: Optimizing The Passenger Throughput at An Airport Security Checkpoint
  - Team Members: Zhiming Huang, Yubei Lv, Zhenchao Guo
  - Advisor: Prof. Wen Jiang
  - We established a Markov model using the queuing theory to simulate the passenger throughput.

2016 COMAP Interdisciplinary Contest in Modeling

- Designated as **Meritorious Winner**
  - Project: A System Dynastic Model for Water Resources Analysis
  - Team Members: Zhiming Huang, Zichang He, Yubo Huang
  - Advisor: Prof. Wen Jiang
  - We established a system dynamic model and simulate with Vensim to predict the water resource situation in the future.

2016 National Undergraduate Innovation Training Program

- Designated as **Excellent Project**
  - Project: Medical Image Segmentation Based on Evidence Theory and Its Accomplishment in FPGA
  - Faculty Advisor: Dr. Wen Jiang
  - We developed the algorithm based on Dempster-Shafer Evidence theory for medical image segmentation, and implement the algorithm on an FPGA.

2015 Southwestern District Model United Nations, Chengdu, China,

- Designated as **Outstanding Delegate**
  - Council: United Nations Educational, Scientific and Cultural Organization (UNESCO)
  - Topic: Enhancement of World Cultural Heritage Protection
  - Team Members: Zhiming Huang, Ziyuan Wang
  - We were awarded as Outstanding Delegate, which is the highest honor for the excellent performance in presentation, collaboration and negotiation.

2015 Northwestern District Model United Nations, Xian, China,

- Designated as **Distinguished Delegate**
  - Council: Economic and Social Council (ECOSOC)
  - Topic: Fostering Sustainable Development Practices through Gender Equality and the Empowerment of Women
  - Team Members: Zhiming Huang
  - I was awarded as Distinguished Delegate for the excellent performance in presentation, collaboration and negotiation.

PROFESSIONAL ACTIVITIES	**PAPER REVIEWER**	
	■ IEEE VTC-FALL 2020	
	■ IEEE INFOCOM 2019	
	VOLUNTEER	
	■ IEEE PACRIM 2019	
	■ IEEE PACRIM 2017	
	MEMBERSHIP	
	■ ACM Student Member	Sep 2019 – Now
	■ IEEE Student Member	Apr 2019 – Now
TEACHING EXPERIENCE	■ **Assistant in CSC361 Lab Redesign and Development**	Jul 2020 – Aug 2020
	■ **Teaching Assistant in CSC361: Computer Communications and Networks**	Sep 2019 – May 2020
	■ **Consultant in UVic Computer Science Assistance Centre**	Jan 2019 – Aug 2019
OTHER ACTIVITIES	**President of Microsoft Students Club**, Northwestern Polytechnical University	Sep 2016 – Jun 2017

- Organized a hackthon competition among Xi'an city, with more than 15 teams from different universities attended
- Organized workshops within the university, teaching Junior students coding techniques.
- Assisted Microsoft Research Asia in organizing a programming competition called "the beauty of programming".