

Wanyu Lin

PRESENT APPOINTMENT	Research Assistant Professor Department of Computing The Hong Kong Polytechnic University PQ713a, Mong Man Wai Building Hung Hom, Kowloon, Hong Kong	<i>Email:</i> wanyulin@comp.polyu.edu.hk <i>Phone:</i> (852)27664900 <i>Web:</i> https://wanyu-lin.github.io
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PERSONAL INFORMATION	<i>Citizenship</i> Chinese
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RESEARCH INTERESTS	Data privacy and trustworthy machine learning on graphs, privacy-preserving graph neural networks, model explanations for graph neural networks, social media analytics with graph neural networks.
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EDUCATION	University of Toronto , Toronto, Ontario, Canada <i>Department of Electrical and Computer Engineering</i> ◇ Ph.D. , Electrical and Computer Engineering, 2015 – 2020 ▷ <i>Dissertation:</i> “Social Media Analytics with Graph Convolutional Networks” ▷ <i>Advisor:</i> Baochun Li, Department of Electrical and Computer Engineering
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Hong Kong Polytechnic University, Hong Kong, China
Department of Computing
◇ **M.Phil.**, Computer Science, 2012 – 2015
▷ *Dissertation:* “Delay-Constrained and Energy-Efficient Distributed Algorithms for Computation-Intensive Applications in WSNs”
▷ *Advisor:* Jiannong Cao, Department of Computing

Huazhong University of Science and Technology, Wuhan, China
School of Electronic Information and Communications

◇ **B.Engr.**, Telecommunication Engineering, 2008 – 2012

RESEARCH EXPERIENCE	<i>Research Assistant</i> , supervised by Prof. Baochun Li University of Toronto , Toronto 2015 – 2020
	<i>Research Assistant</i> , supervised by Prof. Jiannong Cao Hong Kong Polytechnic University , Hong Kong 2012 – 2015

CONFERENCE PAPERS	Wanyu Lin , Hao Lan, Hao Wang, Baochun Li, “ <i>OrphicX</i> : A Causality-Inspired Latent Variable Model for Interpreting Graph Neural Networks,” in the Proceedings of the 2022 IEEE Conference on Computer Vision and Pattern Recognition (CVPR), New Orleans, Louisiana, June 19-24, 2022, Oral Presentation .
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Wanyu Lin, Hao Lan, Baochun Li, “Generative Casual Explanations for Graph Neural Networks,” in the Proceedings of the 38th International Conference on Machine Learning (ICML), July 18-24, 2021 (acceptance ratio: 21.4%)

Wanyu Lin, Baochun Li, “*Medley*: Predicting Social Trust in Time-Varying Online Social Networks,” in the Proceedings of IEEE International Conference on Computer Communications (INFOCOM), May 10-13, 2021 (acceptance ratio: 19.9%).

Wanyu Lin, Zhaolin Gao ¹, Baochun Li, “*Guardian*: Evaluating Trust in Online Social Networks with Graph Convolutional Networks,” in the Proceedings of IEEE International Conference on Computer Communications (INFOCOM), Toronto, Canada, July 6-9, 2020 (acceptance ratio: 20%).

Wanyu Lin, Zhaolin Gao, Baochun Li, “Shoestring: Graph-Based Semi-Supervised Learning with Severely Limited Data,” in the Proceedings of the 2020 IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Seattle, Washington, June 16-18, 2020 (acceptance ratio: 22%).

Wanyu Lin, Shengxiang Ji ², Baochun Li, “Adversarial Attacks on Link Prediction Algorithms Based on Graph Neural Networks,” in the Proceedings of the 15th ACM ASIA Conference on Computer and Communications Security (ACM ASIACCS), Taipei, Taiwan, June 1-5, 2020 (acceptance ratio: 21.7%).

Wanyu Lin, Xu Yuan, Baochun Li, Cong Wang, “Multi-Client Searchable Encryption over Distributed Key-Value Store,” in the Proceedings of the IEEE International Conference on Smart Computing (SMARTCOMP), Hong Kong, China, May 29-31, 2017.

Wanyu Lin, Jiannong Cao, Xuefeng Liu, “*E³*: Towards Energy-Efficient Distributed Least Squares Estimation in Sensor Networks,” in the Proceedings of the IEEE/ACM International Symposium on Quality of Service (IWQoS), Hong Kong, China, May 26-27, 2014.

JOURNAL PAPERS

Ziqi He, Lei Yang, **Wanyu Lin**, Weigang Wu, “Improving Accuracy and Convergence in Group-based Federated Learning on Non-IID Data,” in IEEE Transactions on Network Science and Engineering (TNSE), 2022.

Wanyu Lin, Baochun Li, “Status-Aware Signed Heterogeneous Network Embedding with Graph Neural Networks,” in IEEE Transactions on Neural Networks and Learning Systems (TNNLS), February 2022.

Wanyu Lin, Helei Cui, Baochun Li, Cong Wang, “Secure Similarity Search with Efficient Updates for Distributed High-Dimensional Datasets,” in IEEE Transactions on Parallel and Distributed Systems (TPDS), vol. 32, no. 5, pp. 1072-1084, May 2021.

Wanyu Lin, Jiannong Cao, Xuefeng Liu, “Distributed Least Squares Estimation Algorithms Design for Sensor Networks,” Ad Hoc & Sensor Wireless Networks, Vol. 43 Issue 1/2, p85-108. 24p, 2019.

¹First-year undergraduate research intern

²Second-year undergraduate research intern

SCHOLARLY TALKS	Generative Casual Explanations for Interpreting Graph Neural Networks	March 2022
	<i>Seminar, University of Glasgow and International Centre for Mathematical Sciences</i>	
	Medley: Predicting Social Trust in Time-Varying Online Social Networks	May 2021
	<i>IEEE INFOCOM, Virtual Conference</i>	
	Social Media Analytics with Graph Neural Networks	March 2021
	<i>Seminar, The Hong Kong Polytechnic University</i>	
	Adversarial Attacks on Link Prediction Algorithms Based on Graph Neural Networks	October 2020
	<i>ACM AsiaCCS, Virtual Conference</i>	
	Guardian: Evaluating Trust in Online Social Networks with Graph Convolutional Networks	July 2020
	<i>IEEE INFOCOM, Virtual Conference</i>	
	Shoestring: Graph-Based Semi-Supervised Learning with Severely Limited Data	June 2020
	<i>IEEE CVPR, Virtual Conference</i>	
	Distributed Least Squares Estimation Algorithms Design for Sensor Networks	2015
	<i>Wuhan University, Wuhan, China</i>	
	Towards Energy-Efficient Distributed Least Squares Estimation in Sensor Networks	May 2014
PROFESSIONAL SERVICES	<i>IEEE IWQoS, Hong Kong, China</i>	
	<ul style="list-style-type: none"> ◇ Main Organizer: ICLR 2022 Workshop on “PAIR²Struct: Privacy, Accountability, Interpretability, Robustness, Reasoning on Structured Data.” ◇ Technical Program Committee: EAI QSHINE 2021, IEEE MSN 2021, IEEE SmartMM 2017 ◇ Conference Helper: ACM CCS 2018, IEEE ICNP 2017, IEEE IWQoS 2014 ◇ Reviewer for Journal Manuscript Submissions: TIST, IEEE TAI, IEEE TIFS, IEEE TKDE, IEEE TNSE, IEEE Access ◇ Reviewer for Conference Manuscript Submissions: ICLR, ICML, NeurIPS, INFOCOM, ACM Multimedia, USENIX HotCloud, ACM NOSSDAV, ACM MMSys, ACM/IEEE IoTDI, IFIP Networking, IEEE IWQoS, IEEE IC2E, WiOpt 	
HONORS AND AWARDS	<ul style="list-style-type: none"> ◇ INFOCOM Student Conference Award, IEEE Communications Society, 2020. ◇ SGS Conference Grant, School of Graduate Studies, University of Toronto, 2020. 	

- ◇ Doctoral Completion Award, Department of ECE, University of Toronto, 2019 - 2020.
- ◇ University of Toronto Fellowship, Department of ECE, University of Toronto, 2015 - 2019.
- ◇ Edward S. Rogers Sr. Graduate Scholarships, University of Toronto, 2015 - 2019.
- ◇ Master of Philosophy Studentship, Hong Kong Polytechnic University, 2012 - 2015.
- ◇ Guan Zhigang Scholarship, Huazhong University of Science and Technology, Hong Kong Alumni Association, 2014.
- ◇ Outstanding Graduates Award, Huazhong University of Science and Technology, 2012.
- ◇ National Encouragement Scholarship, Huazhong University of Science and Technology, 2010 & 2011.
- ◇ Outstanding Individual Scholarship, Huazhong University of Science and Technology, 2010 & 2011.
- ◇ Outstanding Student Scholarship, Huazhong University of Science and Technology, 2010 & 2011.
- ◇ Self-Renewal Scholarship, Huazhong University of Science and Technology, 2008 & 2009.

TEACHING EXPERIENCE

Instructor

Feb. 2021 – Present

The Hong Kong Polytechnic University, Hong Kong
COMP 6434: Big Data Analytics and Artificial Intelligence.

Instructor Assistant

Sept. 2020 – Dec. 2020

University of Toronto, Toronto
Conduct online TA training sessions and assist the instructor in online course management.

Teaching Assistant

2016 – 2020

University of Toronto, Toronto

- ▷ ECE 421: Introduction to Machine Learning **Fall 2020**
- ▷ ECE 244: Programming Fundamentals (C++) **Fall 2017, Fall 2018, Fall 2019, Fall 2020**
- ▷ APS 105: Computer Fundamentals (C) **Winter 2018, Winter 2019, Summer & Winter 2020**
- ▷ ECE 110: Electrical Fundamentals **Winter 2016, Summer 2016, Winter 2017**
- ▷ ECE 341: Dynamic Systems and Control **Fall 2016**

MENTORING

Hao Zhang, undergraduate student at *University of Toronto*

Sept. 2019 – Apr. 2020

Thesis title: “Applications of Convolutional Networks in the Context of Social Networks”

Anas Akram Musharraf, undergraduate student at *University of Toronto* **Sept. 2019 – Apr. 2020**

Thesis title: “Explaining Graph Neural Networks”

REFERENCES

Baochun Li, IEEE Fellow, Professor
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Email: bli@ece.toronto.edu
Web: <http://iqua.ece.toronto.edu/bli/>

Jiannong Cao, IEEE Fellow, Chair Professor
Dean of Graduate School
Otto Poon Charitable Foundation Professor in Data Science
Chair Professor of Distributed and Mobile Computing
Distinguished Member of ACM
Senior Member of CCF
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Ben Liang, IEEE Fellow, Professor
L. Lau Chair in Electrical and Computer Engineering
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