Curriculum Vitae of Edith C.H. Ngai

Edith C.H. Ngai, Associate Professor
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Brief Biography: Edith C.H. Ngai received her B.Eng, M.Phil, and Ph.D from The Chinese University of Hong Kong in 2002, 2004, and 2007, respectively. She was a postdoc at Imperial College London in 2007-2008. She was an Assistant Professor (2008-2013), then Associate Professor (2013-2020) in the Department of Information Technology, Uppsala University, Sweden. Since 2020, she has been an Associate Professor in the Department of Electrical and Electronic Engineering, The University of Hong Kong. Her research interests include Internet-of-Things, edge intelligence, and smart cities. She was a **VINNMER Fellow** awarded by Swedish Governmental Research Funding Agency VINNOVA in 2009. Her co-authored papers received a **Best Paper Award** in **QShine 2023**, B**est Paper Runner-Up Awards** in **IEEE IWQoS 2010** and **ACM/IEEE IPSN 2013**, and **Best paper candidate** in **ACM BuildSys 2024**. She was an **Area Editor** of **IEEE Internet of Things Journal** from 2020 to 2022. She is currently an **Associate Editor** in **IEEE Transactions of Mobile Computing, IEEE Network, and IEEE Transactions of Industrial Informatics**. She served as a **program chair** in **ACM womENcourage 2015** and a **TPC co-chair** in **IEEE SmartCity 2015**, **IEEE GreenCom 2022**, **IEEE/ACM IWQoS 2024**, and **IEEE CloudCom 2025**. She received **Meta Policy Research Award in Asia Pacific (2022)** and **N²Women Star in Computer Networking and Communications (2022)**. She is recognized by **Clarivate Analytics** as a **top 1% scholar in citations (2021-2025).** She is a **Distinguished Lecturer in IEEE Communications Society (2023-2024)**. She is an **ACM Distinguished Member (2025)**.

Research Interests: Internet-of-Things (IoT), mobile edge computing, edge intelligence, smart cities

Academic Qualification

- **Bachelor in Computer Engineering**, The Chinese University of Hong Kong, 2002
- **M.Sc. in Computer Science and Engineering**, The Chinese University of Hong Kong, 2004
- **Ph.D. in Computer Science and Engineering**, The Chinese University of Hong Kong, 2007
- **Post-doc** in Electrical and Electronic Engineering, Imperial College London, UK, 2008
- **Docent (Associate Professor) in Computer Communications**, Uppsala University, Sweden, 2013

Academic Appointment

2002-2004	**Research Assistant**, The Chinese University of Hong Kong
2005-2006	**Visiting Research Assistant**, Simon Fraser University, Canada
Oct 2006	**Visiting Research Assistant**, Tsinghua University, China
2007-2008	**Research Associate**, Imperial College London, United Kingdom
2008-2012	**Assistant Professor,** Uppsala University, Sweden
2009-2011	**Visiting Scholar**, UCLA, United States
2013-2020	**Associate Professor**, Uppsala University, Sweden
2015-2017	**Guest Researcher**, Ericsson Research, Sweden
2020-present	**Associate Professor**, The University of Hong Kong

Awards and Honors

2025	***ACM Distinguished Member***
2025	***Best Paper Award, Special Session on Blockchain, IEEE CloudCom***
2024	***Best Paper Candidate, ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation (BuildSys)***
2024	***Best Paper Nomination Award, INFORMS Conference on Service Science (ICSS)***
2023	***Best Paper Award, 19th EAI International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (QSHINE)***
2023-2024	***IEEE Communication Society Distinguished Lecturer***
2022	***N²Women Stars in Computer Networking and Communications*** Ten female researchers were selected for this award in the field of Computer Networking and Communications worldwide each year by N2Women (Networking Networking Women) supported by ACM and IEEE.
2022	***Meta AR/VR Policy Research Award in Asia Pacific***
2021-2025	***World's Top 1% Scholars (ranked by Clarivate Analytics)***
2020	***IEEE Access Associate Editor of the Month (August 2020)***
2020	***IVA's 100-list, The Swedish Royal Academy of Sciences and Engineering*** The Royal Swedish Academy of Engineering Sciences (IVA) selected 100 research projects across all universities in Sweden to recognise their research contribution in sustainability with significant commercial potential.
2018	***Award Winning Project "Green IoT for Smart Cities",*** UppTech Contest, Faculty of Science and Technology, Uppsala University UppTech contest awarded eight excellent research and development projects at Uppsala University across all disciplines from the Faculty of Science and Technology.
2016	***ACM Senior Member***
2015	***IEEE Senior Member***
2013	***Best Paper Award Runner-Up***, *ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN)* *IPSN* is one of the two top conferences (*IPSN* and *Sensys*) in wireless sensor networks field, acceptance rate is 24/115=21%
2010	***Best Paper Award Runner-Up***, *IEEE International Symposium on Quality of Service* (*IWQoS*), 4 out of 133 submissions *IWQoS* has served as a premier venue on Quality of Service since 1993, with acceptance rate around 18%.
2009	***VINNMER Fellow***, Swedish Governmental Agency for Innovation Systems (Vinnova), Sweden VINNMER Fellow is an award for promoting gender equality in fields which need equalizing imbalances at the level of professor or similar position. Around 20 awards are given out in Sweden each year.
2005, 2006	***Excellent Teaching Assistants of the Year*** **Award**, The Chinese University of Hong Kong
2005	**Sir Edward Youde Memorial Fellowship**, Hong Kong
2004	Bronze Award, Hong Kong Computer Society IT Excellence Competition

2003	Most Innovative Application Award, Microsoft's Asia Student .NET Competition, Microsoft Asia
2002	The Best .NET Application of the Year Award, Microsoft's Student Developer Competition, Hong Kong
2002	Dean's List in Engineering Faculty, The Chinese University of Hong Kong
2001	Silver Award, Hong Kong J2ME Open Competition

Research and Scholarship

1. Publications

[Google Scholar: Citation: 9230, H-index = 44, i10-index = 115]
https://scholar.google.com/citations?user=jFt4ZtUAAAAJ&hl=en&oi=ao

Book Chapters

B1. V. van Zoest, X. Liu, and **E. C. H. Ngai**, Data quality evaluation, outlier detection and missing data imputation methods for IoT in smart cities, in *Machine Intelligence and Data Analytics for Sustainable Future Smart Cities*, Springer Studies in Computational Intelligence, 2021.

B2. V. van Zoest, **E. C. H. Ngai**, S. S. Tripathi, and A. Suryawanshi, Development of an Integrated Decision Support System (IDSS), In *Designing Sustainable and Resilient Cities: Small Interventions for Stronger Urban Food-Water-Energy Management*, edited by Claire Coulter, Julia Brown and Alessandro Melis. New York: Routledge, 2022.

B3. V. van Zoest and **E. C. H. Ngai**, ULL Uppsala: the neighborhood of Rosendal, In *Designing Sustainable and Resilient Cities: Small Interventions for Stronger Urban Food-Water-Energy Management*, edited by Claire Coulter, Julia Brown and Alessandro Melis. New York: Routledge, 2022.

Journal Articles

J1. **E. C. H. Ngai**, J. Liu, and M. R. Lyu, An Efficient Intruder Detection Algorithm Against Sinkhole Attacks in Wireless Sensor Networks, *Computer Communications*, vol. 30, September 2007, pp. 2353-2364. (Impact factor: 5.047)

J2. **E. C. H. Ngai**, J. Liu and M. R. Lyu, An Adaptive Delay-Minimized Route Design for Wireless Sensor-Actuator Networks, *IEEE Transactions on Vehicular Technology*, vol. 58, no. 9, 2009, pp. 5083-5094. (Impact factor: 2.642)

J3. E. Gelenbe and **E. C. H. Ngai**, Adaptive Random Re-Routing for Differentiated QoS in Sensor Networks, *The Computer Journal*, vol. 53, no. 7, 2010, pp. 1052-1061. (Impact factor: 1.024)

J4. **E. C-H. Ngai**, Y. Zhou, M. R. Lyu and J. Liu, A Delay-Aware Reliable Event Reporting Framework for Wireless Sensor-Actuator Networks, *Ad Hoc Networks*, vol. 8, Issue 7, September 2010, pp. 694-707. (Impact factor: 2.907)

J5. **E. C. H. Ngai**, On Providing Sink Anonymity for Sensor Network*, Security and Communication Networks*, vol. 4, 2011, pp. 1-10. (Impact factor: 0.433)

J6. Z. Ruan, **E. C. H. Ngai**, and J. Liu, Wireless Sensor Network Deployment in Mobile Phones Assisted Environment, *Computer Networks,* vol. 55, issue 15, 2011, pp. 3224-3245. (Impact factor: 1.282)

J7. R. Shea, J. Liu, **E. C. H. Ngai**, and Y. Cui, Cloud Gaming: Architecture and Performance, *IEEE Network*, vol. 27, issue 4, Jul/Aug 2013, pp. 16-21. (Impact factor: 10.294)

J8. **E. C. H. Ngai** and I. Rodhe, On Providing Location Privacy for Mobile Sinks in Wireless Sensor Networks, *Wireless Networks,* 19(1), 2013, pp. 115-130. (Impact factor: 1.055)

J9. **E. C. H. Ngai** and P. Gunningberg, Quality-of-Information Aware Data Collection for Mobile Sensor Networks, *Pervasive and Mobile Computing*, vol. 11, Apr 2014, pp. 203-215. (Impact factor: 1.667)

J10. X. Hu, X. Li, **E. C. H. Ngai**, V. C.M. Leung, P. Kruchten, Multi-Dimensional Context-Aware Social Network Architecture for Mobile Crowdsensing, *IEEE Communication Magazine*, vol. 52, no. 6, Jun 2014, pp. 78-87. (Impact factor: 9.03)

J11. Y. Man and **E. C. H. Ngai**, Energy-Efficient Automatic Location-Triggered Applications on Smartphones, Computer Communications, *Computer Communications*, vol. 50, Sep 2014, pp. 29-40. (Impact factor: 1.35)

J12. X. Hu, T. Chu, V. Leung, **E. C. H. Ngai**, P. Kruchten, and H. Chan, A Survey on Mobile Social Networks: Applications, Platforms, System Architectures, and Future Research Directions, *IEEE Communications Surveys & Tutorials*, Nov 2014, pp.1557-1581. (Impact factor: 33.84)

J13. X. Hu, J. Deng, J. Zhao, W. Hu, **E. C. H. Ngai**, R. Wang, J. Shen, M. Liang, X. Li, V. Leung, Y.-K. Kwok, SAfeDJ: A Crowd-Cloud Co-design Approach to Situation-aware Music Delivery for Drivers, *ACM Transactions on Multimedia Computing Communications and Applications*, Article 21, Oct 2015, 24 pages. (Impact factor: 1.59)

J14. C. Zhu, V. C. M. Leung, Lei Shu and **E. C. H. Ngai**, Green Internet of Things for Smart World, in *IEEE Access*, vol. 3, pp. 2151-2162, Nov 2015. (Impact factor: 3.9)

J15. L. Zhou, X. Hu, **E. C. H. Ngai**, H. Zhao, S. Wang, J. Wei, and V. Leung, A Dynamic Graph-based Scheduling and Interference Coordination Approach in Heterogeneous Cellular Networks, *IEEE Transactions on Vehicular Technology*, 65(5): 3735-3748, May 2016. (Impact factor: 2.642)

J16. F. Bijarbooneh, W. Du, **E. C. H. Ngai**, X. Fu, and J. Liu, Cloud-Assisted Data Fusion and Sensor Selection for Internet-of-Things," in *IEEE Internet of Things Journal*, 3(3):257-268, June 2016. (Impact factor: 10.98)

J17. L. McNamara and **E. C. H. Ngai**, SADHealth: A Personal Mobile Sensing System for Seasonal Health Monitoring, *IEEE System Journal*, 12(1), 2018. (Impact factor: 1.746)

J18. Q. Liu, X. Hu, **E. C. H. Ngai**, M. Liang, V. C.M. Leung, Z. Cai, J. Yin, A Security Patch Addressing Bandwidth Request Vulnerabilities in the IEEE 802.16 Standard, *IEEE Network Magazine*, vol. 30, Issue 5, 2016. (Impact factor: 2.54)

J19. W. Wang, T. Xi, **E. C. H. Ngai**, and Z. Song, Energy-Efficient Collaborative Outdoor Localization for Participatory Sensing, *Sensors*, Jun 2016, 16(6): 762. (Impact factor: 2.245)

J20. B. Ahlgren, M. Hidell, and **E. C. H. Ngai**, Internet-of-Things for Smart Cities: Interoperability and Open Data, *IEEE Internet Computing*, vol. 20, Issue 6, Nov-Dec 2016. (Impact factor: 2.68)

J21. C. Zhang, J. Liu, F. Chen, C. Yong, **E. C. H. Ngai**, and Y. Hu, Dependency- and Similarity-Aware Caching for HTTP Adaptive Streaming, *Multimedia Tools and Applications*, Jan 2017, pp. 1-22. (Impact factor: 1.53)

J22. L. Zhang, D. Fu, J. Liu, **E. C. H. Ngai**, W. Zhu, On Energy-Efficient Offloading in Mobile Cloud for Real Time Video Applications, *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 27, Issue 1, Jan 2017, pp.170-181. (Impact factor: 2.615)

J23. **E. C. H. Ngai**, B. Ohlman, G. Tsudik, E. Uzun, M. Wahlisch, and C. A. Wood, Can We Make a Cake and Eat it Too? A Discussion of ICN Security and Privacy*, ACM SIGCOMM Computer Communication Review,* vol. 47, Issue 1, 2017, pp. 49-54. (Impact factor: 3.81)

J24. Y. Tian, W. Wang, J. Wu, Q. Kou, Z. Song, and **E. C. H. Ngai**, Privacy Preserving Social Tie Discovery Based on Cloaked Human Trajectories, *IEEE Transactions on Vehicular Technology*, vol. 66, Issue 2, 2017, pp. 1619-1630. (Impact factor: 2.642)

J25. W. Li, C. Zhu, L. Yang, L. Shu, **E. C. H. Ngai**, and Y. Ma, Subtasks Scheduling for Distributed Robots in Cloud Manufacturing, *IEEE Systems Journal*, vol. 11, Issue 2, Jun 2017, pp. 941-950. (Impact factor: 1.746)

J26. P. Sathyamoorthy, **E. C. H. Ngai**, X. Hu, and V. C.M. Leung, Profiling Energy Efficiency and Data Communications for Mobile Internet of Things, *Wireless Communications and Mobile Computing*, Nov 2017. (Impact factor: 1.899)

J27. G. Xu, **E. C. H. Ngai**, and J. Liu, Ubiquitous Transmission of Multimedia Sensor Data in Internet-of-Things, *IEEE Internet-of-Things Journal*, vol. 5, Issue 1, Feb 2018, pp. 403-414. (Impact factor: 5.863)

J28. Y. Tian, X. Li, A. K. Sangaiah, **E. C. H. Ngai**, Z. Song, L. Zhang, and W. Wang, Privacy-Preserving Scheme in Social Participatory Sensing Based on Secure Multi-Party Cooperation*, Computer Communications*, vol. 9, Apr 2018, pp. 167-178. (Impact factor: 2.613)

J29. W. Huang, Y. Zhou, X. Xie, D. Wu, M. Chen, and **E. C. H. Ngai**, Buffer State is Enough: Simplifying the Design of QoE-Aware HTTP Adaptive Video Streaming, *IEEE Transactions on Broadcasting*, vol. 64, Issue 2, Jun 2018, pp. 590-601. (Impact factor: 3.909)

J30. J. Zhang, X. Hu, Z. Ning, **E. C. H. Ngai**, L. Zhou, J. Wei, J. Cheng, B. Hu, Energy-latency Trade-off for Energy-aware Offloading in Mobile Edge Computing Networks, *IEEE Internet-of-Things Journal*, vol. 5, Issue 4, Aug 2018, pp. 2633-2645. (Impact factor: 10.98)

J31. X. Wang, Z. Ning, X. Hu, **E. C. H. Ngai**, L. Wang, B. Hu, R. Y.-K. Kwok, A City-Wide Real-Time Traffic Management System: Enabling Crowdsensing in Social Internet of Vehicles, *IEEE Communications Magazine,* vol. 56, issue 9, Sep 2018, pp. 19-25. (Impact factor: 10.4)

J32. S. Kaivonen, **E. C. H. Ngai**, Real-time air pollution monitoring with sensors on city bus, *Digital Communications and Networks*, vol. 6, issue 1, Feb 2020. (invited paper, impact factor: 6.348)

J33. W. Chen, Z. Zheng, **E. C. H. Ngai**, P. Zheng, and Y. Zhou, Exploiting Blockchain Data to Detection Smart Ponzi Schemes on Ethereum, *IEEE Access*, issue 7, pp. 37573-37386, 2019. (Impact factor: 3.557)

J34. J. Zhang, L. Zhou, Q. Tang, **E. C. H. Ngai**, X. Hu, H. Zhao, and J. Wei, Stochastic Computation Offloading and Trajectory Scheduling for UAV-Assisted Mobile Edge Computing, *IEEE Internet of Things Journal* 6(2): 3688-3699, 2019. (Impact factor: 10.98)

J35. J. Zhang, X. Hu, Z. Ning, **E. C. H. Ngai**, L. Zhou, J. Wei, J. Cheng, B. Hu, and V. C. M. Leung: Joint Resource Allocation for Latency-Sensitive Services Over Mobile Edge Computing Networks with Caching, *IEEE Internet of Things Journal* 6(3): 4283-4294, 2019. (Impact factor: 9.936)

J36. J. Fang, T. Wang, C. Li, X. Hu, **E. C. H. Ngai**, B.-C. Seet, J. Cheng, Y. Guo, and X. Jiang: Depression Prevalence in Postgraduate Students and Its Association with Gait Abnormality, *IEEE Access* 7: 174425-174437, 2019. (Impact factor: 4.096)

J37. C. Zhu, X. Li, V. Leung, L. Yang, **E. C. H. Ngai**, L. Shu, Towards Pricing for Sensor-Cloud*, IEEE Transactions on Cloud Computing*, vol. 8, issue 4, 2020. (Impact factor: 4.27)

J38. Q. Wen, C. Zhan, Y. Gao, X. Hu, **E. C. H. Ngai**, and B. Hu, Modeling Human Activity with Seasonality Bursty Dynamics, *IEEE Trans. Industrial Informatics* 16(2): 1130-1139, 2020. (Impact factor: 9.112)

J39. X. Liu, **E. C. H. Ngai**, and D. Zachariah, Scalable Belief Updating for Urban Air Quality Modeling and Prediction, *ACM Transactions on Data Science*, 2(1), Dec. 2020.

J40. X. Liu, **E. C. H. Ngai**, and J. Liu, Secure Information Fusion using Local Posterior for Distributed Cyber-Physical Systems, *IEEE Transactions on Mobile Computing*, 20(5): 2041-2054, May 2021.

J41. V. van Zoest, F. E. Gohary, **E. C. H. Ngai**, and C. Bartusch, Demand Charges and User Flexibility – Exploring Differences in Electricity Consumer Types and Load Patterns Within the Swedish Commercial Sector, *Applied Energy*, 302, Nov. 2021.

J42. T. Pitsillos, A. K. Wikström, A. Skalkidou, B. Derntl, M. Hallschmid, N. D. Lutz**, E. C. H. Ngai**, I. Sundström Poromaa, and A. Wikman, Association Between Objectively Assessed Sleep and

Depressive Symptoms During Pregnancy and Post-partum, *Frontiers in Global Women's Health*, 2: 807817, Jan. 2022.

J43. H. Lu, S. Xu, X. Hu, **E. C. H. Ngai,** Y. Guo, W. Wang, B. Hu Postgraduate Student Depression Assessment by Multimedia Gait Analysis, *IEEE MultiMedia*, 2022. (Impact factor: 4.35)

J44. S. Li, **E. C. H. Ngai**, and T. Voigt, Byzantine-Robust Aggregation in Federated Learning Empowered Industrial IoT, *IEEE Trans. on Industrial Informatics*, 2022. (Impact factor: 10.215)

J45. S. Li, **E. C. H. Ngai**, F. Ye, T. Voigt, Auto-weighted Robust Federated Learning with Corrupted Data Sources, *ACM Trans. on Intelligent Systems and Technology*, 2022. (Impact factor: 4.654)

J46. C.-W. Yau, S. Jewsakul, M.-H. Luk, A. P. Y. Lee, Y.-H. Chan, **E. C. H. Ngai**, P. W. T. Pong, K.-S. Lui, J. Liu, NB-IoT Coverage and Sensor Node Connectivity in Dense Urban Environments: An Empirical Study, *ACM Transaction on Sensor Networks*, 18(3): 49:1-49:36, 2022. (Impact factor: 2.469)

J47. M.-H. Luk, C.-W. Yau, P. W. T. Pong, A. P. Y. Lee, **E. C. H. Ngai**, and K.-S. Lui, High-Resolution Tap-based IoT System for Flow Data Collection and Water End-Use Analysis, *IEEE Internet of Things Journal*, 9(22): 22822-22835, 2022. (Impact factor: 10.98)

J48. Z. Jiang, K. M. Yip, X. Zhang, J. Deng, W. Wong, H. K. So, **E. C. H. Ngai**, Identifying the High-Risk Population for COVID-19 Transmission in Hong Kong Leveraging Explainable Machine Learning, *Healthcare*, 2022. (Impact factor: 3.16)

J49. Z. Jiang, X. He, C. Lu, B. Zhou, X. Fan, C. Wang, X. Ma**, E. C. H. Ngai**, and L. Chen, Understanding Drivers' Visual and Comprehension Loads in Traffic Violation Hotspots Leveraging Crowd-Based Driving Simulation, *IEEE Transactions on Intelligent Transportation Systems*, 2022. (Impact factor: 6.492)

J50. S. Xu, J. Fang, X. Hu, **E. C. H. Ngai**, W. Wang, Y. Guo, V. C. M. Leung, "Emotion Recognition from Gait Analyses: Current Research and Future Directions," in *IEEE Transactions on Computational Social Systems*, 11(1): 363-377, 2024, doi: 10.1109/TCSS.2022.3223251. (Impact factor: 4.747)

J51. S. Li, **E. C. H. Ngai**, and T. Voigt, An Experimental Study of Byzantine-Robust Aggregation Schemes in Federated Learning, *IEEE Transactions on Big Data*, 10(6): 975-988, 2024. (Impact factor: 4.271)

J52. Z. Ning, H. Chen, **E. C. H. Ngai**, X. Wang, L. Guo and J. Liu, Lightweight Imitation Learning for Real-Time Cooperative Service Migration, *IEEE Transactions on Mobile Computing*, 23(2): 1503-1520, 2024, doi: 10.1109/TMC.2023.3239845, 2023. (Impact factor: 6.075)

J53. Z. Jiang, R. Zhou, X. Zhang, J. Lin, R. Zhao, L. Chen, K. M. Yip, J. Lam, H.-K. So, W. Wong, P. Ip, and **E. C. H. Ngai**, A Data-Driven Context-Aware Health Inference System for Children during School Closures, *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, 7(1): 18:1-18:26, 2023. (Impact factor: 4.96)

J54. S. Jewsakul and **E. C. H. Ngai**, ENORA: Empowering Energy-neutral Operation in LoRa Networks

via Embedded Intelligence, *IEEE Network*, 37(4): 127-134, 2023. (Impact factor: 10.294)

J55. R. Zhou, J. Yu, T. Li, H. Zhao, and **E. C. H. Ngai**, Radio2Text: Streaming Speech Recognition using mmWave Radio Signals, *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, 7(3): 142:1-142:28, 2023. (Impact factor: 4.96)

J56. Z. Jiang, V. van Zoest, W. Deng, **E. C. H. Ngai**, and J. Liu, Leveraging Machine Learning for Disease Diagnoses based on Wearable Devices: A Survey, *IEEE Internet of Things Journal*, 10(24): 21959-21981, 2023. (Impact factor: 9.936)

J57. Z. Jiang, H. Chen, R. Zhou, J. Deng, X. Zhang, R. Zhao, C. Xie, Y. Wang and **E. C.H. Ngai**, HealthPrism: A Visual Analytics System for Exploring Children's Physical and Mental Health Profiles with Multimodal Data*, IEEE Transactions on Visualization and Computer Graphics*, 30(1): 1205-1215, 2024.

J58. X. Liu, Y. Wang, H. Gao, **E. C. H. Ngai**, B. Zhang, C. Wang, and W. Wang, A Coverage-Aware Task Allocation Method for UAV-Assisted Mobile Crowd Sensing, *IEEE Transactions on Vehicular Technology*, 73(7): 10642-10654, 2024.

J59. R. Ma, Z. Zhang, Y. Ma, X. Hu**, E. C. H. Ngai**, and V. C. M. Leung, An Improved Pulse Coupled Neural Networks Model for Semantic IoT, *Digital Communications and Networks*, 10(3): 557-567, 2024

J60. L. Lin, Z. Jiang, H. Lin, **E. C. H. Ngai**, James Lam, On Quotients of Stochastic Networks over Finite Fields*, IEEE Transactions on Control of Network Systems*, 11(2): 878-889, 2024. (Impact factor: 4.347)

J61. Y. Du, Y. Ren, N. Wong, and **E. C. H. Ngai**, Hyperdimensional Computing with Multi-Scale Local Binary Patterns for Scalp EEG-Based Epileptic Seizure Detection, *IEEE Internet of Things Journal*, 11(15): 26046-26061, 2024.

J62. P. Cheng, Z. Cong, **E. C.H. Ngai**, J. Liu, and B. Li, "HALO: HVAC Load Forecasting with Industrial IoT and Local-Global-Scale Transformer," *IEEE Internet of Things Journal*, 11(17): 28307-28319, 2024.

J63. J. Xu, Z. Chen, Z. Ma, J. Liu and **E. C.H. Ngai**, Improving Consumer Experience with Pre-Purify Temporal-Decay Memory-Based Collaborative Filtering Recommendation for Graduate School Application, *IEEE Transactions on Consumer Electronics*, 2024.

J64. X. Chen, Z. Jiang, Y. Ding, **E. C.H. Ngai**, and S. Yang, Anomaly Detection using Isomorphic Analysis for False Data Injection Attacks in Industrial Control Systems, *Journal of Franklin Institute*, 361(13): 107000, 2024.

J65. R. Ma, Z. Zhang, Y. Ma, X. Hu, **E. C. H. Ngai**, and V. C. M. Leung, An Improved Pulse Coupled Neural Networks Model for Semantic IoT, *Digital Communications and Networks*, 10(3): 557-567, 2024.

J66. H. Chen, R. Zhou, Y.-H. Chan, Z. Jiang, X. Chen, and **E. C. H. Ngai**, LiteChain: A Lightweight Blockchain for Verifiable and Scalable Federated Learning in Massive Edge Networks, *IEEE Transactions on Mobile Computing*, 24(3): 1928-1944, 2025.

J67. Y. Wang, H. Gao, **E. C. H. Ngai**, K. Niu, T. Yang, B. Zhang, and W. Wang, A Coverage-Aware High-Quality Sensing Data Collection Method in Mobile Crowd Sensing, *IEEE Transactions on Mobile Computing*, 24(4): 3025-3040, 2025.

J68. Z. Jiang, A. Y. L. Chan, D. Lum, K. H. T. Y. Wong, J. C. N. Leung, P. Ip, D. Coghill, R. S. Wong, **E. C. H. Ngai**, and I. C. K. Wong, Wearable Signals for Diagnosing Attention-Deficit/Hyperactivity Disorder in Adolescents: A Feasibility Study, *Journal of American Academy of Child & Adolescent Psychiatry Open*, 2024.

J69. S. Jewsakul and **E. C. H. Ngai**, RACEME: Embedded Intelligence for Correlation-driven Predictive Energy-harvesting Management in LoRa Networks, *ACM Transactions on Sensor Networks*, 2025.

J70. H. Chen, W. Deng, S. Yang, J. Xu, Z. Jiang, **E. C.H. Ngai**, J. Liu, X. Liu, Towards Edge General Intelligence via Large Language Models: Opportunities and Challenges" *IEEE Network Magazine*, January, 2025.

J71. Y. Du, J. Chen, Z. Liu, N. Wong, C. Zhang, Z. Ding, J. Liu, and **E. C. H. Ngai**, Valence-Arousal Disentangled Representation Learning for Emotion Recognition in SSVEP-Based BCIs, *IEEE Journal of Biomedical and Health Informatics*, Mar. 2025.

J72. M. Yang, **E. C. H. Ngai**, X. Hu, B. Hu, J. Liu, E. Gelenbe, V. C.M. Leung, Digital Phenotyping and Feature Extraction on Smartphone Data for Depression Detection, *Proceedings of the IEEE*, Feb 2025.

J73. R. Zhao, J. Yu, T. Li, Z. Jiang, C. Zhang, C. Wu, H. Zhao, **E. C.H. Ngai**, SPACE: Speaker Adaptation for Acoustic Eavesdropping using mmWave Radio Signals, *IEEE Transactions on Mobile Computing*, Aug 2025.

J74. Y.-H. Chan**, Edith C.H. Ngai**, Exploiting features and logits in heterogeneous federated learning, *Computer Networks,* Vol. 264, 2025.

J75. J. Xu, Z. Chen, S. Yang, J. Li, W. Wang, X. Hu, S. Hoi, and **E. C. H. Ngai**, A Survey on Multimodal Recommender Systems: Recent Advances and Future Directions, *IEEE Transactions on Multimedia*, Oct. 2025.

J76. J. Xu, Z. Chen, W. Wang, X. Hu, J. Liu, and **E. C. H. Ngai**, LOBSTER: Bilateral Global Semantic Enhancement for Multimedia Recommendation, *Information Fusion*, 127: 103778, 2026.

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C68. Z. Jiang, C. Xie, **E. C. H. Ngai**, A Health Profiling Framework for Children Leveraging Multimodal Learning Based on Ambient Sensor Signals, *ICASSP Workshops*, Rhodes Island, Jun 2023.

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C74. Z. Jiang, L. Lin, X. Zhang, J. Luan, R. Zhao, L. Chen, J. Lam, K. M. Yip, H. K. So, W. H. S. Wong, P. Ip, **E. C. H. Ngai**, A Data-Driven Context-Aware Health Inference System for Children during School Closures, *ACM UbiComp/IMWUT*, 2023, Cancun, Mexico, Oct 2023.

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C76. S. Li, **E. C.H. Ngai**, F. Ye, L. Ju, T. Zhang, T. Voigt, Blades: A Unified Benchmark Suite for Byzantine Attacks and Defenses in Federated Learning, *ACM/IEEE International Conference on Internet of Things Design and Implementation (IoTDI*), Hong Kong, May 2024.

C77. Y.-H. Chan, R. Zhou, R. Zhao, Z. Jiang, **E. C.-H. Ngai**, Internal Cross-layer Gradients for Extending Homogeneity to Heterogeneity in Federated Learning, *International Conference on Learning Representations (ICLR)*, Vienna, Austria, May 2024.

C78. X. Zhang, R. Zhao, Z. Jiang, Z. Sun, U. Ding, **E. C.H. Ngai**, and S. Yang, AOC-IDS: Autonomous Online Framework with Contrastive Learning for Intrusion Detection, *International Conference on Computer Communications (INFOCOM)*, Vancouver, Canada, May 2024.

C79. S. Yang, X. Zheng, J. li, J. Xu, X. Wang**, E. C. H. Ngai**, ReCDA: Concept Drift Adaptation with Representation Enhancement for Network Intrusion Detection, *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (ACM KDD)*, Bacelona, Spain, Aug 2024.

C80. W. Liu, H. Chen, and **E. C.H. Ngai**, BF-Meta: Blockchain-enhanced Privacy-preserving Federated Learning for Metaverse, *IEEE International Conference on Metaverse Computing, Networking, and Applications (IEEE MetaCom),* Hong Kong, China, Aug 2024.

C81. J. Chen, Y. Du, **E. C.H. Ngai**, J. Liu, IEconformer: A Robust Convolutional Transformer for EEG-based Fatigue Driving Detection, INFORMS Conference on Service Science (ICSS), Macau, China, Jun 2024. **(Best Paper Nomination Award)**

C82. S. Yang, X. Zheng, J. Li, J. Xu, and **E. C.H. Ngai**, Multi-Scale Contrastive Attention Representation Learning for Encrypted Traffic Classification, *ACM International Conference on Information and Knowledge Management (CIKM)*, 2024. (Full paper)

C83. J. Xu, Z. Chen, J. Li, S. Yang, H. Wang, and **E. C. H. Ngai**, AlignGroup: Learning and Aligning Group Consensus with Member Preferences for Group Recommendation, *ACM International Conference on Information and Knowledge Management (CIKM)*, October,2024.

C84. C. Pan, F. Wang, C. Zhang, J. Li, **E. C. H. Ngai**, and J. Liu, Every Little Bit Helps: A Semantic-aware Tail Label Understanding Framework, *IEEE/ACM International Symposium on Quality of Service (IWQoS)*, June 2024.

C85. Sukanya Jewsakul and **Edith C.H. Ngai**, FioRa: Energy Neutrality-aware Multicast Firmware Distributions in Energy-harvesting LoRa Networks, *ACM International Conference on Systems for Energy-Efficient Buildings (BuildSys),* 2024**. (Best Paper Candidate)**

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C94. R. Zhao, Z. Jiang, X. Zhang, C. Chang, H. Chen, W. Deng, L. Jin, X. Qi, X. Qian, **E. C.H. Ngai**, NoteIt: A System Converting Instructional Videos to Interactable Notes Through Multimodal Video Understanding, *ACM Symposium on User Interface Software and Technology (UIST 2025),* Oct-Nov 2025.

C95. J. Xu, Z. Chen, J. Li, S. Yang, W. Wang, X. Hu, and **E. C. H. Ngai**, Enhancing Graph Collaborative Filtering with FourierKAN Feature Transformation, *ACM Conference on Information and Knowledge Management (CIKM)*, Nov. 2025.

C96. S. Yang, X. Zheng, J. Li, J. Xu, and **E. C. H. Ngai**, CoLD: Collaborative Label Denoising Framework for Network Intrusion Detection, *Network and Distributed System Security Symposium (NDSS)*, Feb. 2026.

C97. J. Xu, Z. Chen, W. Wang, X. Hu, S.-W. Kim, and **E. C. H. Ngai**, COHESION: Composite Graph Convolutional Network with Dual-Stage Fusion for Multimodal Recommendation, *ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)*, April, 2025.

C98. C. Pan, D. Song, **E. C. H. Ngai**, and C. Zhang, MCLS-AI: Bridging Activity Identification and Multipath RFID Signals via Contrastive Learning, *IEEE International Conference on Digital Signal Processing (DSP)*, June, 2025.

C99. C. Xu, Y. Jin, S. Ma, R. Qian, H. Fang, J. Liu, X. Liu, **E. C. H. Ngai**, W. I. Atlas, K. M. Connors, and M. A. Spoljaric, Exploring Multimodal Foundation AI and Expert-in-the-Loop for Sustainable Management of Wild Salmon Fisheries in Indigenous Rivers, *International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 9954-9962, Aug. 2025.

2. Patents

- Hong Kong Short-term Patent No.: HK30070756, "CITY SMART WATER AUDITING SYSTEM AND SMART METER ANALYZER, granted on 28 October 2022, (duration) 8 years commencing on 24 August 2022.
- Network traffic anomaly detection method, device, readable storage medium and terminal device, China Patent, application number 202410045543.9, 2024 (pending).

3. Standards

- Technical specification for the collection, processing, transmission and privacy protection of 5G core network signaling data, T/GDAQI 172—2025, Guangdong Association Of Quality Inspection, commencing on 1 May 2025.
- Technical specification for abnormal data generation and signaling flow detection in 5G communication networks, T/GDAQI 173—2025, Guangdong Association Of Quality Inspection, commencing on 1 May 2025.
- Standards for Non-Intrusive and Contactless Psychological State Monitoring, T/GDAQI 174—2025, Guangdong Association Of Quality Inspection, commencing on 1 May 2025.
- Feature Requirements of Psychological Counseling Dialogue Robot, T/GDAQI 175—2025, Guangdong Association Of Quality Inspection, commencing on 1 May 2025.
- Technical specification of edge network resource intelligent scheduling UAV-assisted wireless charging, T/GDAQI 176—2025, Guangdong Association Of Quality Inspection, commencing on 1 May 2025.

Professional Activities

Journal Editors:

- Area Editor, IEEE Internet-of-Things Journal (Apr 2020-Oct 2022)
- Associate Editor, IEEE Transactions on Mobile Computing (Oct 2023-present)
- Associate Editor, IEEE Network Magazine (Sep 2024-present)
- Associate Editor, IEEE Transactions on Industrial Informatics (Jun 2017-present)
- Associate Editor, IEEE Internet-of-Things Journal (Jun 2018-Mar 2020)
- Associate Editor, Elsevier Ad Hoc Networks (Nov 2021- present)
- Associate Editor, Elsevier Computer Networks (Feb 2023- present)
- Chair in Advanced Cloud Service Area, Springer International Journal in Cloud Computing (Oct 2021-2024)

Journal Guest Editorial:

- Guest Editor, Special Issue on User-Generated Content in Web3 (2025), ACM Transactions on Multimedia Computing, Communications, and Applications
- Guest Editor, Special Issue on Edge Intelligence in 6G networks (2024), IEEE Network
- Guest Editor, Special Issue on Neuromorphic Computing Technologies for Consumer Electronics (2023), IEEE Transactions on Consumer Electronics
- Lead Guest Editor, Section Issue on Green Communications and Networking with Machine Intelligence for Smart Cities (2022), IEEE Transactions on Green Communications and Networking
- Guest Editor, Special Section on Pervasive Edge Computing for Industrial Internet of Things (2020), IEEE Transactions on Industrial Informatics
- Guest Editor, Special Section on Data-Driven IoT for Smart Cities (2020), IEEE Transactions on Network Science and Engineering
- Guest Editor, Special Issue on Towards Intelligent Internet of Medical Things and Its COVID-19 Applications and Beyond (2020), IEEE Internet of Things Journal
- Lead Guest Editor, Special Issue on Artificial Intelligence (AI)-Empowered Intelligent Transportation Systems (2020), IEEE Access
- Lead Guest Editor, Special Issue on IoT for Smart Cities and Urban Informatics (2016), IEEE Transactions on Industrial Informatics
- Guest Editor, Special Issue on Cloud Computing for IoT (2015), IEEE Internet of Things Journal
- Guest Editor, Special Issue on Quality of Service for Heterogeneous Wireless Networks (2014), Springer Mobile Networks and Applications (MONET)
- Guest Editor, Special Issue on Design, Implementation, and Evaluation of Wireless Sensor Network Systems (2010), EURASIP Journal on Wireless Communications and Networking

Steering Committee Member:

- IEEE/ACM International Symposium on Quality of Service (IEEE/ACM IWQoS) (CCF Rank B) 2025-2026
- IEEE Infocom Workshop on Smart Cities and Urban Informatics (SmartCity), 2015-2016

TPC Co-chair:

- ACM/IEEE Symposium on Edge Computing (SEC) 2026
- AI & ML-based Smart Design Track, IEEE International Conference on Mobile Ad-Hoc and Smart Systems (MASS) 2026
- IEEE Infocom Workshop on Embodied Intelligence Networks 2026
- IEEE Globecom Workshop on Mutual Facilitation of Generative Artificial Intelligence and Mobile Communications 2025
- IEEE International Conference on Cloud Computing Technology and Science (CloudCom 2025)
- IEEE/ACM International Symposium on Quality of Service (IEEE/ACM IWQoS 2024) (CCF Rank B)
- Sensing for Smart Cities and Villages Track, IEEE Applied Sensing Conference (IEEE APSCON 2023)
- IEEE International Conference on Green Computing and Communications (IEEE GreenCom 2022)

- Network Algorithms & Performance Evaluation Symposium, International Conference on Computing, Networking, and Communications (ICNC 2018)
- International Conference on Smart X (Smart X 2017)
- ICIN Workshop on IoT Infrastructures and Data Analytics for Smart Cities (IIDASC 2017)
- IEEE International Conference on Internet of Things (iThings 2016)
- IEEE International Conference on Smart City (IEEE Smart City 2015)
- EAI International Conference on Smart Urban Mobility Services (SUM 2015)
- IEEE Infocom First International Workshop on Smart Cities and Urban Informatics (SmartCity 2015)
- IEEE Sensor Networks Track, International Conference on Intelligent Sensors, Sensor Networks and Information Processing (IEEE ISSNIP 2015) g
- International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (QShine 2014)
- Swedish National Computer Networking Workshop (SNCNW 2012)

Program Chair:

- ACM womENcourage 2015
  The ACM-W Europe womENcourage Conference is a scientific event aimed at networking and exploring career opportunities for women in computer science and related disciplines. The number of participants was around 200 people from all over Europe and other places during 24-26 September 2015 in Uppsala, Sweden.

Co-organiser:

- Dagstuhl Seminar on Information-centric Networking and Security, Jun 2016

Recent TPC services:

- IEEE Infocom 2020-2026, ICDCS 2021-2024, SenSys 2022-2024, EWSN 2021-2024, Globecom 2020-2025, IPSN 2024

Review Panel Services:

2025	Selection committee, IEEE/ACM IWQoS Best Paper Awards
2024-2025	Selection committee, IEEE Network Best Paper Awards
2020-2021	Reviewer, NSERC – Computer Science Discovery Grant, Canada
2020-2022, 2024	Selection committee, TCGCC Editor Nomination for IEEE Systems
2016, 2022-25	Selection committee, IEEE IoTJ Best Paper Awards
2015-2016	Review Panel, Area NT-13, Swedish Research Council (VR), Sweden
2015-2016	Review Panel, VINNOVA Strategic Innovation Programme on IoT, Sweden

Keynote/Plenary/Invited Talks in International/Regional Conferences and Events

Keynotes:

- "Autonomous Network Intrusion Detection Systems with Adaptive Network Traffic Analysis," IEEE International Symposium on Parallel Computing and Distributed Systems (PCDS 2025), 11-13 December 2025, Singapore.
- "Edge General Intelligence for Smart Applications," International Conference on Information Engineering, Optics, and Computer Applications (IEOCA 2025), 21-23 November 2025, Hong Kong.

- "Building Resilient AI: Exploring Robustness and Heterogeneity in Federated Learning," The Sixth International Workshop on Intelligent Cloud Computing and Networking (ICCN 2024), in conjunction with IEEE INFOCOM, Vancouver, Canada, 20 May 2024.
- "Information-centric and ubiquitous data collection for Internet-of-Things applications," Keynote speech, NSERC DIVA Workshop on Vehicular Networks and Intelligent Transportation, Ottawa, Canada, 12 Nov 2013.

Plenary:

- "AI and QoS: Challenges and Opportunities," Panel chair in IEEE/ACM International Symposium on Quality of Service (IWQoS 2024), Guangzhou, China, 20 June 2024.
- "The Journey towards smart cities: Where are we now," Panelist, Hong Kong Science Park, Hong Kong IdeaLab, China, 28 May 2021.
- "Opportunities and challenges of globally networked sensors and cameras," Panelist in IEEE International Conference on Cloud Computing (CloudCom), Vancouver, Canada, 2 Dec 2015.

Tutorials:

- "Tutorial: Towards Robust and Heterogeneous Federated Learning," The 3rd Workshop on Machine Learning on Edge in Sensor Systems (SenSys-ML 2024), in conjunction with CPS-IoT Week, 13 May 2024, Hong Kong, China.

Invited talks:

- "Towards Robust AI on the Edge," Invited talk, IEEE International Conference on Smart Internet of Things (SmartIoT), Shenzhen, 16 Nov 2024.
- "Artificial Intelligence of Things for Smart Cities," IEEE Virtual Distinguished Lecture, IEEE Communication Society, Oregon Chapter, 24 Jun 2024.
- "Towards Robust and Heterogeneous Federated Learning," Invited talk, The Second Summit of Hong Kong Young Academy of Sciences, Hong Kong Science Park, 30 May 2024.
- "IoT and Machine Learning for Smart Water Auditing," Tech Talk, InnoWing II, The University of Hong Kong, 20 April 2023.
- "Journey towards smart cities: Where are we now?" Invited talk, Hong Kong Science Park • IdeaLab, co-organized by HKU, Karin Group, and HKSTP, 28 May 2021.
- "Her Story: Women in Technology," Invited talk, HKU French AI & Data Week, HKU Webinar, 8 March 2021.
- "Data privacy in the Internet-of-Things Era," Invited talk, The Glassroom Experience (in association with the Data Privacy Day), Uppsala University, Sweden, 29 Jan 2019.
- "The Internet of Things for a Sustainable Environment in Uppsala," Invited talk, Smart City Conference, Kistamässan, Stockholm, Sweden, 22 Nov 2017.
- "Green Internet-of-Things for Smart Cities," Invited talk, ACM Ada Lovelace Celebration, Uppsala, Sweden, 17 Nov 2017.
- "GreenIoT for smart city Uppsala," Invited talk, Relationsdagen, Uppsala, Sweden, 20 April 2017.
- "GreenIoT: An energy efficient IoT platform for open data and sustainable development," Invited talk, UniverCITY Conference, Stockholm, Sweden, 14 Oct 2016.
- "GreenIoT for smart cities and urban informatics," Invited talk, IBM Research Watson, New York, USA, 8 Dec 2015.
- "GreenIoT and Mobile Crowdsensing for Smart Cities," Invited talk, IBM TEC Institute, Stockholm, 22 Oct 2015.

Research External Funding

2025-2027	PI, 2,960,950HKD, "Federated Learning on Heterogeneous Edge Devices for Smart Energy Applications," Innovation and Technology Fund, ITF/383/23FP
2025-2027	Co-I, 2,427,650HKD, "Tackling Dry Weather Flows Through Smart Sensing," Innovation and Technology Fund, ITS/036/23MX (PI: Dr. May Chui in HKU)
2023-2028	Co-I, 32MHKD, Theme-based Research Scheme, HK University Grant Council "ReRACE; ReRAM AI chips on the edge" (PI: Dr. N. Wong in HKU)
2022-2025	Co-I, 946,656HKD, General Research Fund, Hong Kong University Grant Council, "Understanding the dynamic nature of the healthy aging framework: A real-time assessment of person-environment interaction using smartphone application and ecological momentary assessment" (PI: Prof. Terry Y. S. Lum in HKU)
2022-2024	PI, 450,579HKD, General Research Fund, Hong Kong University Grant Council "Federated learning with heterogenous models for edge intelligence in IoT"
2022-2024	PI, 200,000HKD, Meta AR/VR Policy Research Fund, Meta Research "*Federated learning for privacy-preserving AI in metaverse*"
2022-2025	Co-I, 4.099MHKD, Strategic Public Policy Research Funding Scheme "Harnessing the power of IoT technologies, data analytics, and advanced household profiling techniques to sustain water-conscious behaviours and to inform water-sector infrastructure planning" (PI: Prof. Danny W. F. Lam in HKU)
2020-2023	PI, 602,349HKD, General Research Fund, Hong Kong University Grant Council "Quality aware client selection for robust federated learning"
2018-2021	Co-PI, 0.88MEUR, European Commission (EU) "SimpliCITY - Marketplace for user-centered sustainability services"
2018-2021	PI, 3.52Msek, Swedish Research Council (VR) "Towards self-adaptive and resilient networked sensing systems"
2018-2021	PI, 2.48MSEK, Swedish Research Council for Sustainable Development (FORMAS) Co-PI in 1.5MEUR European Commission (EU) project "JPI Urban Europe: CRUNCH – Climate Resilient Urban Nexus Choices: Operationalising the Food-Water-Energy Nexus"
2015-2016	PI, 1.2Msek, Swedish Foundation for Strategic Research (SSF) "Securing data objects for future Internet"
2015-2017	PI, 20.5Msek (including 10Msek from Vinnova and 10.5Msek inkind from industries), Swedish Governmental Agency for Innovation Systems (Vinnova) "GreenIoT: An energy-efficient IoT platform for open data and sustainable development"

2012-2013 PI, 0.25Msek, Swedish Foundation for International Collaboration (STINT)
"Green Mobile Cloud: Energy-efficient mobile content distribution and offloading"

2012-2013 PI, 0.5Msek, Swedish Governmental Agency for Innovation Systems (Vinnova)
"An information-centric IoT infrastructure for pollution monitoring and sustainable traffic planning"

2009-2012 PI, 1.6Msek, Vinnova VINNMER programme
"Effective and secure collaborative sensing with mobile phones and sensors"

Other Research Funding

2024-2025 **PI**, 499,441HKD, UGC/HKU Knowledge Exchange (KE) Funding Exercise,
"WaterSmart Hong Kong: Controlling Water Loss and Advancing Sustainable Water Management in Non-domestic Premises through IoT Technologies and Advanced Analytics"

2023-2024 **PI**, 497,342HKD, UGC/HKU Knowledge Exchange (KE) Funding Exercise, "*WaterWise Hong Kong: Application of IoT Technologies and Data Analytics to Address Leakages and Wasteful Use in Commercial Buildings in Hong Kong"*

2023-2025 **PI**, 300,000HKD, HKU-SCF FinTech Academy
"*Incentivizing robust blockchain-FL fintech services for heterogeneous financial institutions*"

2022-2023 **PI**, 475,355HKD, UGC/HKU Knowledge Exchange (KE) Funding Exercise, "*Smart Water Detectives: Use of IT and Internet of Things (IoT) technologies to enhance awareness of water sustainability issues"*

2022-2023 **PI**, 300,000HKD, HKU-SCF FinTech Academy
"Secure blockchain-empowered federated learning for fintech"

2020-2022 **PI,** 200,000HKD, HKU-TCL AI Research Centre
"*Scalable multi-task federated learning for personalized models"*