# Ching Nam HANG

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Yam Pak Charitable Foundation School of Computing and Information Sciences Saint Francis University, 2 Chui Ling Lane Tseung Kwan O, New Territories, Hong Kong

## Education City University of Hong Kong

Ph.D. in Computer Science, 2024

B.S. in Computer Science, Data Science Stream (First Class Honors), 2019

## Experience Saint Francis University

Programme Leader of HD in Crime and Security Science, 6/2025 – Present Assistant Professor of Computing and Information Sciences, 8/2024 – Present Affiliated Research Scholar, Data Science Research Centre, 11/2023 – Present

## Caritas Institute of Higher Education

Lecturer, School of Computing and Information Sciences, 11/2023 – 7/2024

## City University of Hong Kong

Research Assistant, 9/2023 - 10/2023

## Tencent AI Lab (Shenzhen)

Machine Learning Center Research Intern, 8/2018 – 1/2019

## City University of Hong Kong

Student Assistant, 6/2017 – 7/2018

## Nautilus Software Technologies Limited

Co-Founder, Chief Executive and Senior Software Engineer, 2018 – 2022

## Research Interests

- Network Science and Graph Analytics
- Data Mining and Machine Learning
- Artificial/Computational Intelligence
- Data Science/AI for Health-Tech and Ed-Tech

## Teaching Saint Francis University

- CIS320 Network, Cloud, and Security (Spring 2024 Present), Lecturer
- CIS245 Introduction to Data Science (Fall 2024 Present), Lecturer (course developer)

• CIS100 Emerging Technologies and Data Analysis for Workplace (Year-round 2024 – Present), Course Coordinator (a university-wide AI literacy course with over 600 students each semester)

## City University of Hong Kong

- CS6491 Convex Optimization and its Applications (2021 2022), Teaching Assistant
- GE2340 AArtificial Intelligence: Past, Present, Future (2019 2021), Teaching Assistant
- CS1102 Introduction to Computer Studies (2020), Lab Tutor

## Mentoring Experience

#### Master's Students

(Co-supervising with Prof. Dah Ming Chiu, The Chinese University of Hong Kong)

- Jiacheng Feng: Large Language Models for Paper Review (2025 Present)
- Yifan Shao: Large Language Models for Paper Review (2025 Present)

#### Undergraduate Students

(Final Year Project, Saint Francis University)

- Chun Kit Chan: Predictive Analytics for Hong Kong Horse Racing (2025 Present)
- Kin Fung Sze, Gaganajit Singh Bajwa: AI-Based Emotion Detection for Mental Health Assistance (2025 Present)
- Ka Yui Cheung, Kane Yin Mak, Ka Cheung Lee: Large Language Models for AI-Assisted Programming (2024 2025)
- Kam Wa Li: Using Large Language Models as AI Legal Advisors (2023 2024)

## Funding

#### Hong Kong RGC Faculty Development Scheme (FDS)

PI: Harnessing Large Language Models for Social Trust: Automated Fact-checking for Public Health Informatics by Large Language Models, HK\$766,115 (1/1/2026 – 31/12/2028)

# $\frac{ \mbox{Hong Kong RGC Institutional Development Scheme (IDS) Collaborative}}{ \mbox{Research Grant}}$

Co-I: Dynamic Stability Monitoring and Control of Construction Tower Cranes using Digital Triple AI and IoT, HK\$2,945,543 (1/1/2025 - 31/12/2027)

Hong Kong Science and Technology Parks Corporation (HKSTP) PIC: Incu-Tech Programme, HK\$1,290,000 (03/2020 – 09/2021)

## **Publications**

#### Journal Articles

- C. N. Hang, P. -D. Yu and C. W. Tan, TrumorGPT: Graph-Based Retrieval-Augmented Large Language Model for Fact-Checking, IEEE Transactions on Artificial Intelligence, 2025.
- C. N. Hang, P.-D. Yu, R. Morabito and C. W. Tan, Large Language Models Meet Next-Generation Networking Technologies: A Review, Future Internet, special issue on Featured Papers in the Section Internet of Things, Vol. 16, No. 10, 2024. [5-Year Impact Factor: 3.5]
- C. N. Hang, C. W. Tan and P. -D. Yu, MCQGen: A Large Language Model-Driven MCQ Generator for Personalized Learning, IEEE Access, Vol. 12, pp. 102261-102273, 2024.

[5-Year Impact Factor: 3.9] (Featured Article)

C. N. Hang, P.-D. Yu, S. Chen, C. W. Tan and G. Chen, *MEGA: Machine Learning-Enhanced Graph Analytics for Infodemic Risk Management*, IEEE Journal of Biomedical and Health Informatics, Vol. 27, No. 12, pp. 6100-6111, 2023.

[5-Year Impact Factor: 7.0] [Acceptance Rate: 14.4%]

- C. N. Hang, Y. -Z. Tsai, P. -D. Yu, J. Chen and C. W. Tan, Privacy-Enhancing Digital Contact Tracing with Machine Learning for Pandemic Response: A Comprehensive Review, Big Data and Cognitive Computing, special issue on Digital Health and Data Analytics in Public Health, Vol. 7, No. 2, 2023. [5-Year Impact Factor: 4.2] (Best Paper Award)
- M. F. Wong, S. Guo, C. N. Hang, S. W. Ho and C. W. Tan, Natural Language Generation and Understanding of Big Code for AI-Assisted Programming: A Review, Entropy, special issue on Statistical Machine Learning with High-Dimensional Data and Image Analysis, Vol. 25, No. 6, 2023. [5-Year Impact Factor: 2.2] (Editor's Choice)

## Conference / Workshop Papers

- C. N. Hang, P. -D. Yu, C. W. Tan and D. M. Chiu, When Ideas Go Viral: Measuring Scholarly Novelty and Viral Influence via Citation Network Analysis, IEEE Global Communications Conference (GLOBECOM), 2025.
- C. N. Hang, P. -D. Yu, C. W. Tan and D. M. Chiu, Beyond Search: Measuring LLM Performance for Scientific Literature Discovery, IEEE International Conference on Teaching, Assessment and Learning for Engineering (TALE), 2025.

- C. N. Hang and S. M. Ho, Personalized Vocabulary Learning through Images: Harnessing Multimodal Large Language Models for Early Childhood Education, IEEE Integrated STEM Education Conference, 2025.
- C. N. Hang, P. -D. Yu and C. W. Tan, TrumorGPT: Query Optimization and Semantic Reasoning over Networks for Automated Fact-Checking, 58th Annual Conference on Information Sciences and Systems (CISS), 2024.
- C. W. Tan, S. Guo, M. F. Wong and C. N. Hang, Copilot for Xcode: Exploring AI-Assisted Programming by Prompting Cloud-based Large Language Models, IJCAI Symposium on Advances and Open Problems in Large Language Models (LLM@IJCAI'23), 2023.
- J. Li, C. W. Tan, C. N. Hang and X. Qi, A Chatbot-Server Framework for Scalable Machine Learning Education through Crowdsourced Data, ACM Conference on Learning at Scale, 2022.
- C. W. Tan, L. Ling, P. -D. Yu, C. N. Hang and M. F. Wong, *Mathematics Gamification in Mobile App Software for Personalized Learning at Scale*, IEEE Integrated STEM Education Conference, 2020.
- C. -Y. Kuo, C. N. Hang, P. -D. Yu and C. W. Tan, Parallel Counting of Triangles in Large Graphs: Pruning and Hierarchical Clustering Algorithms, IEEE High Performance Extreme Computing Conference, 2018. (Honorable Mention Award)

#### **Book Chapters**

- **C. N. Hang**, P. Yu and C. W. Tan, *Parallel Counting of Subgraphs in Large Graphs: Pruning and Hierarchical Clustering Algorithms*, in Online Social Networks: Perspectives, Applications and Developments, Nova Science Publishers, 2020.
- M. F. Wong, **C. N. Hang** and C. W. Tan, *The Pagerank Bipartite Graph Ranking: Online Chat Group Recommendation*, in Online Social Networks: Perspectives, Applications and Developments, Nova Science Publishers, 2020.

Awards and Fellowships

Best Paper Award

Big Data and Cognitive Computing, 2025

Outstanding Academic Performance Award (Ph.D. Studies)
City University of Hong Kong, 2023

## Certificate of Merit (Undergraduate Dissertation), The Hong Kong

ICT Awards 2020: Student Innovation

The Hong Kong Association for Computer Education, 2020

## Bright Future SME's Youth Creative Entrepreneurship Award

The Hong Kong General Chamber of Small and Medium Business, 2020

## Silver Award (Undergraduate Dissertation), HKEIA Innovation &

Technology Project Competition Award

Hong Kong Electronic Industries Association (HKEIA), 2019

## Best Poster Presentation Award (Undergraduate Dissertation)

City University of Hong Kong, 2019

## Dean's List

City University of Hong Kong, Sem A of 2016/2017 and Sem B of 2018/19

## Second Place Winner, Zoohackathon 2019: Combating Wildlife Trafficking

Through Innovation and Technology

The United States Department of State, 2019

#### Merit Prize and Video Award - Best Video Shooting

HSBC Future Skills Development Project - InnoTech Solutions Pitching, 2019

## ASM Pacific Technology Scholarship

City University of Hong Kong, 2019

#### Talent Development Scholarship

HKSAR Government Scholarship Fund, 2019

# Honorable Mention, MIT/Amazon/IEEE Graph Challenge 2018

Massachusetts Institute of Technology (MIT), Amazon, IEEE, 2018

## Second Prize, 2018 Intel Cup Undergraduate Electronic Design Contest

Intel, 2018

#### Mr Clement Cheuk Scholarships

City University of Hong Kong, 2018

## Shanghai Commercial Bank Scholarships

City University of Hong Kong, 2018

## Microware Scholarship

City University of Hong Kong, 2018

#### Reaching Out Award

HKSAR Government Scholarship Fund, 2017

# Excellent Academic Performance Scholarships for CSE Students City University of Hong Kong, 2017

## The Department of Computer Science Entrance Grants

City University of Hong Kong, 2017

## Professional Services

#### Journal Editor

• JMIRx Med

#### Journal Reviewer

- IEEE Transactions on Cognitive Communications and Networking
- IEEE Transactions on Learning Technologies
- IEEE Access
- Journal of Medical Internet Research (JMIR)
- ACM Transactions on Software Engineering and Methodology
- BMC Archives of Public Health, Health Information Systems
- Artificial Intelligence Review
- Scientific Reports
- Electronics
- Mathematics
- Education Sciences
- Big Data and Cognitive Computing
- Applied Sciences
- Signal, Image and Video Processing
- Natural Language Processing Journal
- Journal of Educational Data Mining
- The Hong Kong Journal of Social Work
- Information Sciences
- Neurocomputing
- Publications
- Healthcare Analytics
- Expert Systems with Applications
- Intelligent Systems with Applications
- Journal of Theoretical and Applied Electronic Commerce Research
- Knowledge and Information Systems
- Neural Processing Letters
- Current Research in Physiology
- Archives of Computational Methods in Engineering
- Heliyon
- Future Internet
- Journal of Big Data

- Multimedia Systems
- SoftwareX
- Robotics
- Information
- Journal of Industrial Information Integration
- Information Processing and Management
- Discover Applied Sciences
- Journal of Cleaner Production
- Information Processing in Agriculture
- Journal of ICT Research and Applications
- Journal of Autonomous Intelligence
- Journal of Ambient Intelligence and Smart Environments

## **Technical Program Committee Member**

- ACL 20th Workshop on Innovative Use of NLP for Building Educational Applications (BEA), 2025
- The 18th International Conference on Educational Data Mining (EDM 2025), 2025
- 2025 IEEE Global Engineering Education Conference (EDUCON 2025)
- The International Conference on Foundation and Large Language Models (FLLM2024), 2024
- ACL 19th Workshop on Innovative Use of NLP for Building Educational Applications (BEA), 2024
- $\bullet$  The 17th International Conference on Educational Data Mining (EDM 2024), 2024
- The International Symposium on Foundation and Large Language Models (FLLM2023), 2023
- ACL 18th Workshop on Innovative Use of NLP for Building Educational Applications (BEA), 2023

## Conference Reviewer

- IEEE International Conference on Teaching, Assessment and Learning for Engineering 2025 (TALE 2025)
- IEEE Frontiers in Education 2024, 2025 (FIE 2024, 2025)
- $\bullet$  The 6th International Conference on Informatics Engineering & Information Science (ICIEIS 2024)

## Vice Chairman and Director of Data Science Innovation

NASA Space Apps Challenge Hackathon in Hong Kong, 2019 – 2021

## **Math Facilitator**

Julia Robinson Math Festival in Hong Kong, 2017 – 2019

Languages

Chinese (Written, Spoken), English (Written, Spoken), Cantonese (Native)