

HANG Ching Nam

<https://c-nhang.github.io>

cnhang3-c@my.cityu.edu.hk

Education

City University of Hong Kong

Ph.D. in Computer Science, 2019 - Present.

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

University of Missouri, Columbia, USA

Big Data Analytics Summer Experience in the USA, 2017.

Research Interests

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

Publication

Journal Articles

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, accept pending minor revision, 2023.

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, accepted for publication, 2023.

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, accepted for publication, 2023.

Conference Papers

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).

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

Teaching

- Convex Optimization and its Applications (2021 - 2022), Teaching Assistant
- Artificial Intelligence (2019 - 2021), Teaching Assistant
- Introduction to Computer Studies (2020), Lab Tutor

Entrepreneurship

Nautilus Software Technologies Limited

Co-Founder, CEO and Senior Software Engineer, 2018 - 2022

- **Incu-Tech Incubation Programme**

Amount: HK\$1,290,000

Hong Kong Science and Technology Parks, 2020 - 2021

- **Bright Future SME's Youth Creative Entrepreneurship Award**

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

- **Incu-App Incubation Programme**

Amount: HK\$860,000

Hong Kong Science and Technology Parks, 2018 - 2020

- **Technology Start-up Support Scheme for Universities (TSSSU)**

Amount: HK\$746,667

Hong Kong Innovation and Technology Commission, 2018 - 2019

Appointment

City University of Hong Kong

P/T Student Assistant, 9/2018 - 6/2019

- Android Application Developer
- Maintain MathFest App and PolyMath App (Android)
- Facilitator of Julia Robinson Mathematics Festival (HK)
- Collaboration with Shangri-La
- Customer segmentation and predictive analyses
- Research methodologies for large customer transaction dataset analysis

Tencent AI Lab (Shenzhen)

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

- Research on machine learning on large graphs
- Design and implement algorithms to solve large graph problems
- Apply graph theory knowledge to solve large graph problems
- Develop software to handle large graph data

City University of Hong Kong

Full Time Student Assistant, 6/2017 - 7/2018

- Developed and published MathFest App and PolyMath App (Android)
- Developed software for research using Python, C++, and Java
- Assisted in promoting Julia Robinson Mathematics Festival (HK)
- Helped to promote Algebra Game in Singapore International School (HK)

Knowledge Transfer Office of City University of Hong Kong

P/T Student Helper, 3/2017 - 5/2017

- Helped students to learn Mathematics through game play
- Required outstanding academic performance

Hong Kong Professional Information Security Association

Mobile App Tester, 4/2015 - 9/2015

- Tested 60 mobile apps' security issues using Burp suite
- Required good information security knowledge
- Required basic knowledge of SSL

Awards and Fellowships

Certificate of Merit, The Hong Kong ICT Awards 2020: Student Innovation
The Hong Kong Association for Computer Education, 2020

Dean's List

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

Silver Award, HKEIA Innovation & Technology Project Competition Award
Hong Kong Electronic Industries Association (HKEIA), 2019

Second Place Winner, Zoonhackathon 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

Best Poster Presentation Award (Final Year Project)
City University of Hong Kong, 2019

Honorable Mention, MIT-Amazon 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

Services	NASA Space Apps Challenge Hackathon in Hong Kong <i>Vice Chairman and Director of Data Science Innovation, 2019 - 2021</i>	
	Julia Robinson Math Festival in Hong Kong <i>Math Facilitator, 2017 - 2019</i>	
Computer Skills	Documentation:	Microsoft Office (Word, PowerPoint, Excel)
	Web Development:	CSS, JavaScript, XML, HTML, HTML5
	Programming Language:	Java, PHP, MySQL, C++, PostgreSQL, Python, Scala, Pig Latin, Visual Basic
	Networking Technique:	Network troubleshooting, Switch configuration, Router configuration, Foundation knowledge of CCNA
	Operating System:	Linux (Fedora, Kali, CentOS), Microsoft Windows, macOS
	Software:	Visual Studio, Eclipse, Packet Tracer, Android Studio, App Inventor 2, Scratch, VMware, Visual Paradigm, MobaXterm, Oracle VM VirtualBox, Adobe Photoshop, Adobe Illustrator, Jupyter Notebook, Spyder, CVXPY, MATLAB
Languages	Chinese (Written, Spoken), English (Written, Spoken), Cantonese	