



# HKU Research Postgraduate Symposium cum Award Presentation Ceremony

9 March 2026

*The Symposium has been supported by the Postgraduate Students Conference/Seminar Grants  
of the Research Grants Council, Hong Kong.*

Sponsoring organisation



# Message from the Vice-President and Pro-Vice-Chancellor (Research)



Research has always been a cornerstone of HKU's development and global reputation. Our students are at the forefront of this endeavour, serving as a driving force behind pioneering ideas and impactful discoveries. We are committed to attracting talented individuals and providing enriching learning experiences to cultivate the next generation of researchers. The HKU Research Postgraduate Symposium exemplifies our ongoing dedication to fostering the exchange of knowledge, encouraging collaboration across disciplines and promoting the cross-fertilisation of ideas. We invite the research community to take this opportunity to actively engage in meaningful intellectual dialogue and to build robust networks, paving the way for future collaborations.

To further strengthen our research capabilities, HKU is expanding its efforts in innovation, technology transfer and knowledge exchange. A key milestone in this journey is the upcoming completion of our Tech Landmark, a state-of-the-art facility designed to enhance our infrastructure and empower our researchers to push the boundaries of exploration and achieve new heights in their work. By fostering a vibrant and collaborative research environment, we aim to cultivate an energetic, forward-thinking community committed to excellence and continuous advancement.

The outstanding achievements celebrated today demonstrate the dedication and passion of our research students and their supervisors. I extend my heartfelt congratulations to all award recipients for their exceptional contributions and to supervisors for their invaluable guidance. Your efforts play a crucial role in advancing HKU's research endeavours and strengthening our reputation as a leader in innovation and knowledge creation.

Looking ahead, I am confident that with our ongoing commitment to research excellence and knowledge sharing, HKU will continue to make a positive impact on the wider community and beyond.

**Professor Stephanie Ma**  
Vice-President and Pro-Vice-Chancellor (Research)

# Message from the Dean of Graduate School



HKU recognises the importance of fostering a dynamic research environment that encourages curiosity, critical thinking and the pursuit of excellence. A vibrant academic atmosphere inspires students to explore new frontiers and ignites collaborations that drive progress and innovation. The HKU Research Postgraduate Symposium serves as an invaluable platform for our students to showcase ideas, share insights and forge connections with peers from diverse fields, cultivating innovative ideas and enabling talented researchers to thrive.

Driven by passion and perseverance in their research pursuits, our students have made significant discoveries and impactful contributions. I am proud to commend their outstanding work and dedication. As we celebrate their research aspirations today, I encourage all our research students to continue exploring boldly, embracing challenges and striving for excellence. Every question asked and every experiment conducted brings us closer to new understanding and breakthroughs. Let your curiosity and determination guide you towards achieving greater heights in your academic and research journeys.

Congratulations to all awardees on your remarkable achievements. I would also like to extend my sincere appreciation to our key supporters who have played a vital role in nurturing our young researchers. My heartfelt gratitude to The University of Hong Kong Foundation for Educational Development and Research and the Mrs Li Ka Shing Fund for their unwavering support over the years. A deep thanks also to all our supervisors, whose guidance and support have been instrumental in our students' success. The event has been enhanced with the enthusiasm and hard work of the Student Organising Committee. With the collective effort of our research community, HKU will continue to advance its thriving academic environment, fostering an enduring culture of discovery and excellence.

**Professor Max Shen**  
Dean, Graduate School

# Message from the Student Organising Committee

On behalf of the Student Organising Committee, I am delighted to extend the warmest welcome to all participants of the HKU Research Postgraduate Symposium cum Award Presentation Ceremony 2026.

The Symposium is a flagship platform that highlights the research journey of our postgraduate community and helps foster interdisciplinary exchange. As the current organisers and past participants, we deeply value this opportunity not only to connect and engage in intellectual dialogues with peers from diverse disciplines but also to foster personal growth.

This year, we are thrilled to have Professor Cui Huang, a distinguished clinician-scientist specialising in aesthetic and restorative dentistry, as our keynote speaker. Further highlights include poster presentations by HKU Presidential PhD Scholars and awardees of the Publication and Innovation Awards, the alumni sharing session and the award presentation ceremony. All these elements showcase HKU's diverse and excellent research and drive interdisciplinary exploration.

We are very grateful for the support provided by the Postgraduate Students Conference/Seminar Grants of the Research Grants Council, Hong Kong, the motivating guidance of our advisors, Professor Dong-Yan Jin and Professor David Li, and the invaluable partnership of the Graduate School. A special thanks goes to Colgate for their generous support for the Symposium.

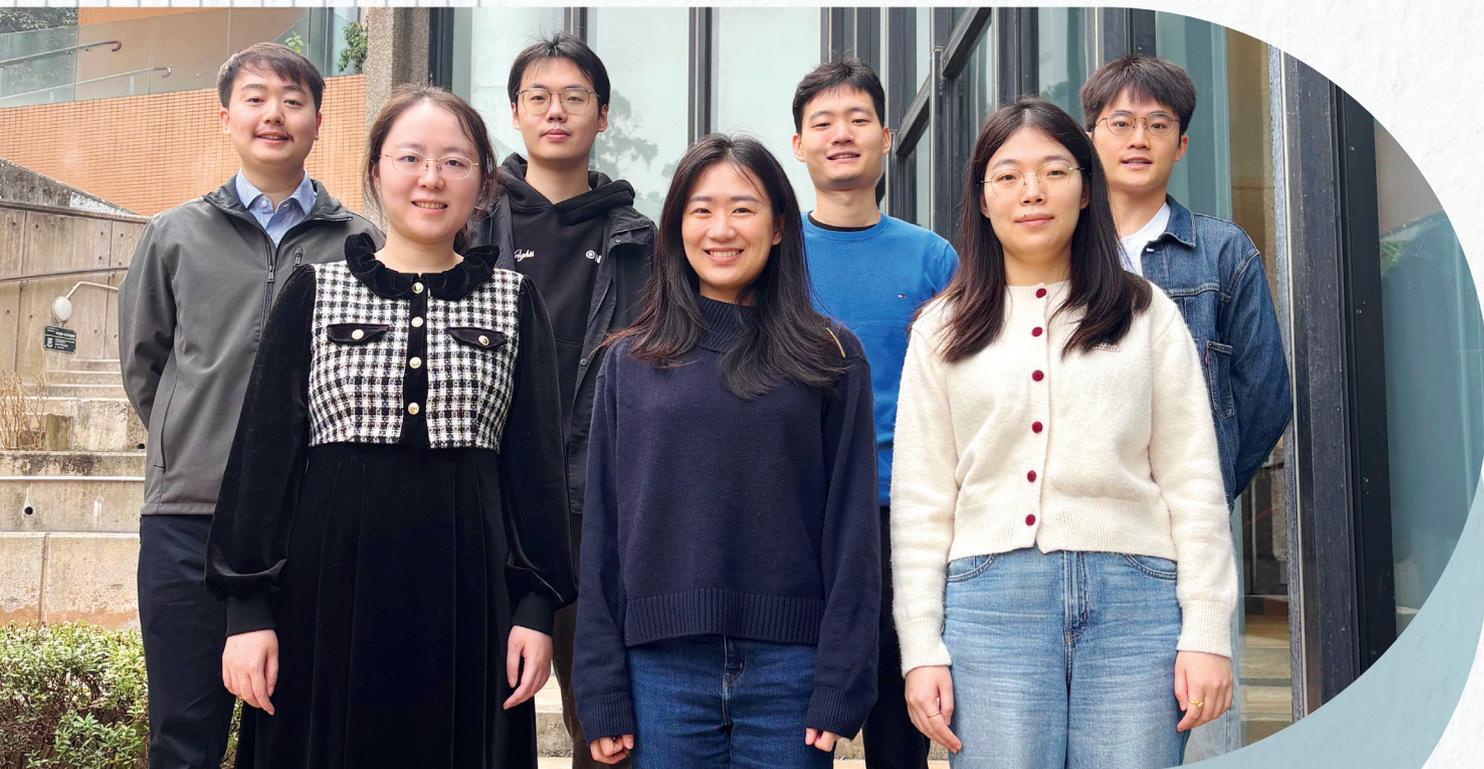
Congratulations to all the awardees, and we sincerely hope that everyone finds this day stimulating and memorable. Let's embrace this opportunity to share, connect and draw inspiration from one another.



**Mr Yingheng LIU**

PhD Candidate, Faculty of Dentistry  
Chairperson, Student Organising Committee for the  
HKU Research Postgraduate Symposium 2026

# Student Organising Committee



**Top row (from left to right)**

Mr Yang LI, Mr Yi ZHANG, Mr Seung Mann BAE, Mr Yingheng LIU

**Bottom row (from left to right)**

Miss Yonghe TI, Ms Jiusi GUO, Miss Lu LI

## Chairperson

**Mr Yingheng LIU, PhD**  
Faculty of Dentistry

## Vice-Chairperson

**Miss Yonghe TI, PhD**  
Faculty of Education

## Secretary

**Ms Jiusi GUO, PhD**  
Faculty of Dentistry

## Members

**Mr Seung Mann BAE, PhD**  
Faculty of Law

**Miss Lu LI, PhD**  
School of Chinese

**Mr Chengyue WU, PhD**  
School of Computing and Data  
Science

**Mr Zheming CAO, PhD**  
Department of Sociology

**Mr Yang LI, PhD**  
School of Biomedical Sciences

**Mr Yi ZHANG, PhD**  
Department of Real Estate and  
Construction

**Mr Haotian FENG, PhD**  
Faculty of Business and Economics

**Mr Xubin REN, PhD**  
HKU Musketeers Foundation  
Institute of Data Science

## Advisors

**Professor D. Jin**  
Senior Associate Dean,  
Graduate School

**Professor X.D. Li**  
Associate Dean, Graduate School

# Poster Presentation

To showcase the learning progress of research postgraduate students and promote the exchange of knowledge and ideas, awardees of the HKU Presidential PhD Scholar (HKU-PS) Programme admitted in 2024–25 and recipients of the HKU Foundation Publication Award for Research Postgraduate Students 2025 and the Research Postgraduate Student Innovation Award 2025–26 will share their research projects and interim findings through two poster presentation sessions. Students are divided into 15 groups, with 8 groups presenting in Session A and 7 groups in Session B.

## Session A (1:00 – 2:40 p.m.)

<b>Group 1</b>	Faculty of Arts/ Faculty of Social Sciences
<b>Group 3</b>	Faculty of Architecture/ Faculty of Business and Economics/ Faculty of Education
<b>Group 5</b>	Li Ka Shing Faculty of Medicine
<b>Group 7</b>	Li Ka Shing Faculty of Medicine
<b>Group 9</b>	Faculty of Science
<b>Group 11</b>	Faculty of Engineering
<b>Group 13</b>	Faculty of Engineering/ School of Computing and Data Science
<b>Group 15</b>	School of Computing and Data Science

## Session B (2:40 – 4:25 p.m.)

<b>Group 2</b>	Faculty of Business and Economics/ Faculty of Social Sciences
<b>Group 4</b>	Faculty of Architecture/ Faculty of Business and Economics/ Faculty of Law
<b>Group 6</b>	Li Ka Shing Faculty of Medicine
<b>Group 8</b>	Faculty of Dentistry / Li Ka Shing Faculty of Medicine
<b>Group 10</b>	Faculty of Science
<b>Group 12</b>	Faculty of Engineering/ School of Computing and Data Science
<b>Group 14</b>	Faculty of Engineering/ HKU Musketeers Foundation Institute of Data Science

Please scan for the  
student lists



## Best Poster Presentation Awards and Poster Presentation Merit Awards

In each group, the top two presenters will receive the poster presentation awards. The awards include a certificate and a cash prize of HK\$1,000 for the Best Poster Presentation Awards, and HK\$500 for the Poster Presentation Merit Awards. The results will be announced during the award presentation session.

Note: Recipients of the HKU Foundation Publication Award for Research Postgraduate Students and the Research Postgraduate Student Innovation Award will not be eligible to compete for the poster presentation awards.

# Keynote Speech

## Unlocking the Perfect Smile:

## Integrating Aesthetic Dentistry with Biomimetic Innovations



### Professor Cui Huang

Professor and Director  
Department of Prosthodontics  
School & Hospital of Stomatology  
Wuhan University

#### Biography

Professor Cui Huang is a distinguished clinician–scientist in stomatology, specialising in aesthetic and restorative dentistry. Her pioneering research integrates advanced materials, biomimetic mineralisation, and digital dentistry to create innovative, patient–centred clinical solutions that enhance oral health outcomes.

Professor Huang earned her PhD in Prosthodontics from Wuhan University and a MDS in Conservative Dentistry from the University of Hong Kong. She currently serves as Chair of the Aesthetic Dentistry Division of the Chinese Stomatological Association (2025–2028) and Honorary Professor at the University of Hong Kong (2020–2026). She is also an active editorial board member for the *Journal of Dentistry* and *Journal of Prosthodontic Research*.

Globally acclaimed, Professor Huang ranks among the World's Top 2% Scientists (2023–2024) and received the 2025 William J. Gies Award from the International Association for Dental Research for her research on rapid intrafibrillar mineralisation strategies. In education, she founded the “Luoji Morning Lesson” platform, engaging over 70,000 dental professionals worldwide in continuing education. Her multidisciplinary work fosters collaboration and clinical translation, with numerous publications in top international journals advancing prosthodontics and bioengineering.

#### Abstract

A radiant and perfect smile extends beyond mere aesthetics. It is a cornerstone for boosting confidence in every interaction and unlocking doors in social and professional realms. Yet, tooth defects remain a widespread challenge, impairing functions like chewing and pronunciation while compromising smile aesthetics and overall quality of life. Modern aesthetic dentistry artfully restores harmony of tooth shape, color, alignment and gingival contour, empowered by digital innovations and multidisciplinary collaboration across restorative, periodontal, and orthodontic fields.

However, the longevity of any aesthetic restoration depends fundamentally on the health and stability of the underlying tooth structure, especially dentin. The inherent biological complexity of dentin, characterised by permeable tubules and a dynamic collagen matrix, presents a critical clinical challenge. It is often the hidden cause of post-treatment hypersensitivity, secondary caries, and weakened bonding strength, ultimately jeopardising the durability of the aesthetic outcomes.

To address this core issue, our research draws inspiration from nature's principles, advancing a series of biomimetic mineralisation strategies. Key innovations include deep tubular occlusion for long-lasting desensitisation, hierarchical dentin reconstruction, and rapid pre-bonding methods to stabilise collagen within one minute, fitting seamlessly into clinical workflows. By integrating these with aesthetic practices, we aim to reinforce the critical interfaces between tooth and restoration, creating smiles that are not only visually captivating but also biologically enduring. It is our hope that these efforts will translate the bio-inspired innovations from the laboratory to the clinic, bridging the gap between advanced science and sustainable aesthetic health.

# Selection Committee for Research Postgraduate Student Awards

The Selection Committee for Research Postgraduate Student Awards considers applications/nominations of research postgraduate (RPg) student awards, including the HKU Foundation First Year Excellent PhD Award, HKU Foundation Publication Award for Research Postgraduate Students, Research Postgraduate Student Innovation Award, Li Ka Shing Prizes, and HKU Foundation Award for Outstanding Research Postgraduate Students, and recommends awards for approval by the Graduate School.

## Non-STEM Panel

### Professor C. Cheng

Department of Psychology (Chairperson)

### Professor D.R. Carless

Faculty of Education

### Professor K.W. Chau

Department of Real Estate and Construction

### Professor M.C.L. Chau

Faculty of Business and Economics

### Professor R.T.H. Ho

Department of Social Work and Social Administration

### Professor C.M. Hutton

School of English

### Professor T.S. Veitch

Faculty of Law

## STEM Panel

### Professor E.Y.M. Lam

Department of Electrical and Electronic Engineering (Chairperson)

### Professor W.K. Ching

Department of Mathematics

### Professor C.H. Chu

Faculty of Dentistry

### Professor B.J. Cowling

School of Public Health

### Professor X.D. Li

Department of Chemistry

### Professor Y. Li

Department of Mechanical Engineering

### Professor E.S.W. Ngan

School of Clinical Medicine

## Innovation Award Panel

### Professor E.Y.M. Lam

Department of Electrical and Electronic Engineering (Chairperson)

### Professor M.C.L. Chau

Faculty of Business and Economics

### Professor W.K. Ching

Department of Mathematics

### Professor R.T.H. Ho

Department of Social Work and Social Administration

### Professor E.S.W. Ngan

School of Clinical Medicine

### Dr M. Tang

Technology Transfer Office

# HKU Foundation First Year Excellent PhD Award 2024-25

The HKU Foundation First Year Excellent PhD Award was established from the academic year 2023-24. Up to fifteen awards may be made each year to PhD students who have excellent performance during the probationary period. The awards are funded by The University of Hong Kong Foundation for Educational Development and Research.

## Mr Xueliang CHEN

Faculty of Education

## Mr Quang Cuong DOAN

Department of Urban Planning and Design

## Mr Guoqiang DU

Department of Civil Engineering

## Miss Jialin LAI

Department of Chemistry

## Ms Sijia LI

Department of Social Work and Social Administration

## Mr Yunhao LI

School of Clinical Medicine

## Dr Tong Wah LIM

Faculty of Dentistry

## Mr Jiaqi MIAO

Department of Mechanical Engineering

## Dr Jingya PU

Faculty of Dentistry

## Mr Kam Hung TSUI

School of Clinical Medicine

## Mr Xin YU

Department of Electrical and Electronic Engineering

## Miss Luyun ZHAO

Department of Urban Planning and Design

# Research Postgraduate Student Innovation Award 2025–26

The Research Postgraduate Student Innovation Award was established in 2022 to promote innovation and interdisciplinary research. Up to ten awards may be made each year to students with the most exciting and innovative research ideas.

## **Mr Nicholas Tze Yin KWOK, School of Biomedical Sciences**

**Project title:** Mobile Only Blood Pressure & SPO2 Measurement App

## **Miss Jingwen LI, Faculty of Dentistry**

**Project title:** Development and Global Deployment of an AI-Based Platform for Dynamic Risk Prediction of Oral Potentially Malignant Disorders

## **Miss Yanyan LI, Department of Electrical and Electronic Engineering**

**Project title:** Wearable e-Nose for Breath Monitoring

## **Miss Joana LIU, Faculty of Education**

**Project title:** Swallowing Gym: Gamified Swallowing Exercises for Elderly

## **Mr Zihan LIU, Department of Earth and Planetary Sciences**

**Project title:** AI-assisted 3D Multi-physics Coupling GPU-accelerated Hybrid Finite-Discrete Element Method Software for Geomechanical Safety Modelling

## **Mr Hui WANG, Department of Geography**

**Project title:** Towards Stress-Minimizing Urban Soundscapes: Integrating Physiological Computing and Artificial Intelligence for Smart Environmental Modulation

## **Ms Qinrui XIAHOU, Faculty of Business and Economics**

**Project title:** AI, Belief Calibration, and Human Decision-Making: Evidence from a Large-Scale Field Experiment with Taxi Drivers

## **Miss Ruijie YI, Department of Chemistry**

**Project title:** One-step Amide Synthesis Driven by Green Energy from C-Rich Biomass Waste using Non-Precious Bimetallic Nanosheets as Electrocatalysts in Aqueous Media

## **Miss Luyun ZHAO, Department of Urban Planning and Design**

**Project title:** UrbAeroNet: A Morphology-Aware Generative Planning Framework for the Strategic Rollout of Sustainable Urban Low-Altitude Logistics Networks

## **Mr Jie ZHONG, Faculty of Dentistry**

**Project title:** Augmenting OSCC Immunotherapy: An Injectable Nanocomposite Hydrogel Blocks ESCRT Repair to Enhance GSDME Pyroptosis



# HKU Foundation Publication Award for Research Postgraduate Students 2025

The HKU Foundation Publication Award for Research Postgraduate Students was established in 2022-23. Up to twenty awards may be made each year to research postgraduate students who have published a journal article of exceptional quality. The awards are funded by The University of Hong Kong Foundation for Educational Development and Research.

## Miss Wing Yin AU, School of Public Health

Effect of wearable activity trackers on physical activity in children and adolescents: a systematic review and meta-analysis. Whitney W Au, Francesco Recchia, Daniel Y Fong, Stephen H S Wong, Derwin K C Chan, Catherine M Capiro, Clare C W Yu, Sam W S Wong, Cindy H P Sit, Patrick Ip, Ya-Jun Chen, Walter R Thompson, Parco M Siu, *The Lancet Digital Health*, 2024, 6(9), pp625-639.

## Miss Weixin CHEN, School of Biomedical Sciences

Hyperglycemia-triggered lipid peroxidation destabilizes STAT4 and impairs anti-viral Th1 responses in type 2 diabetes. Victor Gray, Weixin Chen, Rachael Julia Yuenyinn Tan, Jia Ming Nickolas Teo, Zhihao Huang, Carol Ho-Yi Fong, Tommy Wing Hang Law, Zi-Wei Ye, Shuofeng Yuan, Xiucong Bao, Ivan Fan-Ngai Hung, Kathryn Choon-Beng Tan, Chi-Ho Lee, Guang Sheng Ling, *Cell Metabolism*, 2024, 36(12), pp2511-2527.

## Mr Xueliang CHEN, Faculty of Education

Pathways to digital reading literacy among secondary school students: A multilevel analysis using data from 31 economies. Xueliang Chen, Ya Xiao, *Computers & Education*, 218(2024), 105090.

## Dr Zhuo CHENG, Department of Chemistry

Rule-based omics mining reveals antimicrobial macrocyclic peptides against drug-resistant clinical isolates. Zhuo Cheng, Bei-Bei He, Kangfan Lei, Ying Gao, Yuqi Shi, Zheng Zhong, Hongyan Liu, Runze Liu, Haili Zhang, Song Wu, Wenxuan Zhang, Xiaoyu Tang & Yong-Xin Li, *Nature Communications*, 15, 4901(2024).

## Dr Jian FENG, Faculty of Business and Economics

Economic Links from Bonds and Cross-Stock Return Predictability. Jian Feng, Xiaolin Huo, Xin Liu, Yifei Mao, Hong Xiang, *Journal of Financial Economics*. Accepted for publication on December 4, 2024.

## Dr Bowen GAN, Department of Civil Engineering

Ultra-permeable silk-based polymeric membranes for vacuum-driven nanofiltration. Bowen Gan, Lu Elfa Peng, Wenyu Liu, Lingyue Zhang, Li Ares Wang, Li Long, Hao Guo, Xiaoxiao Song, Zhe Yang & Chuyang Y. Tang, *Nature Communications*, 15, 8656(2024).

## Miss Mengyue GAO, Department of Chemistry

Dinuclear Cyclometalated Pincer Nickel(II) Complexes with Metal-Metal-to-Ligand Charge Transfer Excited States and Near-Infrared Emission. Mengyue Gao, Wai-Pong To, Glenna So Ming Tong, Lili Du, Kam-Hung Low, Zhou Tang, Wei Lu and Chi-Ming Che, *Angewandte Chemie International Edition*, 2025, 64(2), e202414411. Published online on September 25, 2024.

## Mr Yuan GAO, School of Biological Sciences

Parental histone transfer caught at the replication fork. Ningning Li, Yuan Gao, Yujie Zhang, Daqi Yu, Jianwei Lin, Jianxun Feng, Jian Li, Zhichun Xu, Yingyi Zhang, Shangyu Dang, Keda Zhou, Yang Liu, Xiang David Li, Bik Kwoon Tye, Qing Li, Ning Gao & Yuanliang Zhai, *Nature*, 627, 890-897(2024).

## Dr Yu GUO, Department of Mechanical Engineering

Engineering ultrafast exciton dynamics to boost organic photovoltaic performance. Yu Guo, Guangchao Han, Jing Guo, Haotian Guo, Yang Fu, Xiaodan Miao, Zhen Wang, Dongsheng Li, Shuixing Li, Xiaomin Xu, Xinhui Lu, Hongzheng Chen, Yuanping Yi and Philip C. Y. Chow, *Energy & Environmental Science*, 2024, 17(22) pp8776-8786.

### **Miss Yixin HUANG, School of Biomedical Sciences**

Molecular architecture of coronavirus double-membrane vesicle pore complex. [Yixin Huang](#), Tongyun Wang, Lijie Zhong, Wenxin Zhang, Yu Zhang, Xiulian Yu, Shuofeng Yuan & Tao Ni, *Nature*, 2024, 633, pp224-231.

### **Dr Fangzhou JIN, Faculty of Education**

Modeling AI-assisted writing: How self-regulated learning influences writing outcomes. [Fangzhou Jin](#), Chin-Hsi Lin, Chun Lai, *Computers in Human Behavior*, 165(2025), 108538. Published online on December 12, 2024.

### **Mr Dongyu LI, Department of Electrical and Electronic Engineering**

Ligands Optimization Governed by Solubility Principles for Pure Blue Emission in Mixed-Halide Perovskite LEDs. [Dongyu Li](#), Benzhen Lyu, Jiayun Sun, Qi Xiong, Hanwen Zhu, Zhengyan Jiang, Dezhong Zhang, Chunyu Liu, Wallace C. H. Choy, *ACS Energy Letters*, 2024, 9(7), pp3261-3268.

### **Mr Yehui LI, Department of Electrical and Electronic Engineering**

Introducing edge intelligence to smart meters via federated split learning. [Yehui Li](#), Dalin Qin, H. Vincent Poor & Yi Wang, *Nature Communications*, 15, 9044(2024).

### **Miss Zaolan LIANG, School of Public Health**

A(H2N2) and A(H3N2) influenza pandemics elicited durable cross-reactive and protective antibodies against avian N2 neuraminidases. [Zaolan Liang](#), Xia Lin, Lihong Sun, Kimberly M. Edwards, Wenjun Song, Hailiang Sun, Yanmin Xie, Fangmei Lin, Shiman Ling, Tingting Liang, Biying Xiao, Jiaqi Wang, Min Li, Chin-Yu Leung, Huachen Zhu, Nisha Bhandari, Raghavan Varadarajan, Min Z. Levine, Malik Peiris, Robert Webster, Vijaykrishna Dhanasekaran, Nancy H. L. Leung, Benjamin J. Cowling, Richard J. Webby, Mariette Ducatez, Mark Zanin & Sook-San Wong, *Nature Communications*, 15, 5593(2024).

### **Mrs Lijuan LIU, Department of Chemistry**

NIR-II emissive anionic copper nanoclusters with intrinsic photoredox activity in single-electron transfer. [Li-Juan Liu](#), Mao-Mao Zhang, Ziqi Deng, Liang-Liang Yan, Yang Lin, David Lee Phillips, Vivian Wing-Wah Yam & Jian He, *Nature Communications*, 15, 4688(2024).

### **Dr Shunhe LIU, Department of Chemistry**

Total Syntheses of Streptomycin and Klebsazolin Using Biomimetic On-Resin Ring-Closing Amidine Formation. [Shunhe Liu](#), Yang Tang, Sheng Chen, Xuechen Li and Han Liu, *Angewandte Chemie International Edition*, 2024, 63(38), e202407952.

### **Dr Yawei WANG, School of Public Health**

Clinical profile analysis of SARS-CoV-2 community infections during periods with omicron BA.2, BA.4/5, and XBB dominance in Hong Kong: a prospective cohort study. [Yawei Wang](#), Hau Chi So, Nicole Ngai Yung Tsang, Siu Kan Kwok, Benjamin J Cowling, Gabriel M Leung, Dennis Kai Ming Ip, *The Lancet Infectious Diseases*, 2025, 25(3), pp276-289. Published online on October 14, 2024.

### **Dr Ling YANG, Department of Mechanical Engineering**

Selective directional liquid transport on shoot surfaces of *Crassula muscosa*. [Ling Yang](#), Wei Li, Jiaoyuan Lian, Hengjia Zhu, Qiyu Deng, Yiyuan Zhang, Jiaqian Li, Xiaobo Yin, and Liqiu Wang, *Science*, 2024, 384(6702), pp1344-1349.

### **Mr Lipeng YIN, Department of Psychology**

Gender differences in the associations between parental phubbing, fear of missing out, and social networking site addiction: A cross-lagged panel study. [Lipeng Yin](#), Pengcheng Wang, Heng Li, Ningning Mao, Huahua Hu, Mark D. Griffiths, *Technology in Society*, 78(2024), 102668.

### **Miss Siwei ZHANG, Department of Urban Planning and Design**

CascadeDumpNet: Enhancing open dumpsite detection through deep learning and AutoML integrated dual-stage approach using high-resolution satellite imagery. [Siwei Zhang](#), Jun Ma, *Remote Sensing of Environment*, 313(2024), 114349.

# Dissertation Year Fellowship

The Dissertation Year Fellowship is a prestigious programme to enable selected outstanding final year PhD students to pursue an additional year of training at the University to bring his/her doctoral research to a higher level before graduation. Only outstanding full-time PhD students who have the thesis rated as top 10% by the Thesis Examining Committee can compete for the Fellowship.

## **Mr Mingze BAI**

Department of Urban Planning and Design

## **Ms Nok Yan CHANG**

Department of Physics

## **Ms Ling CHE**

Faculty of Education

## **Mr Haojun CHEN**

Faculty of Business and Economics

## **Mr Wendi DUAN**

Department of Chemistry

## **Mr Haozhou GONG**

Faculty of Business and Economics

## **Mr Weihang GONG**

Department of Urban Planning and Design

## **Miss Yaowen HU**

Department of Civil Engineering

## **Miss Xin HUANG**

School of Public Health

## **Mr Chi Hang HUI**

Department of Earth and Planetary Sciences

## **Miss Chit Yu Elsie IU**

School of Biological Sciences

## **Mr Haodong JI**

Department of Civil Engineering

## **Mr Xianqi JIANG**

Department of Civil Engineering

## **Mr Ravi KISHAN**

Faculty of Dentistry

## **Mr Jonathan Wai King KONG**

School of Biomedical Sciences

## **Mr Hao LI**

Faculty of Education

## **Mr Qidong LI**

School of Clinical Medicine

## **Miss Zhen LIANG**

Faculty of Business and Economics

## **Mr Shijie LIN**

School of Computing and Data Science

## **Miss Mingyang LIU**

School of Chinese

## **Mr James Michael George NIANIAS**

Department of Physics

## **Mrs Christina PARTSALAKI**

Centre of Buddhist Studies

## **Ms Vidhyashree RAJASEKAR**

Faculty of Dentistry

## **Mr Upendra Kumar SAH**

Department of Civil Engineering

## **Mr Abeer SHARMA**

Faculty of Law

## **Mr Zhihong SHI**

Department of Physics

## **Mr Jintao SU**

Department of Earth and Planetary Sciences

## **Mr Yueyang WANG**

Department of Physics

## **Mr Dongjun WEI**

Faculty of Business and Economics

## **Miss Miao YU**

Faculty of Business and Economics

## **Mr Li ZHANG**

Department of Civil Engineering

## **Miss Xiaomeng ZHANG**

Faculty of Education

## **Mr Xinqu ZHANG**

Department of Sociology

## **Mr Yichi ZHANG**

Department of Pharmacology and Pharmacy

## **Mr Zijian ZHANG**

Department of Physics

## **Mr Jiaccairang ZHOU**

Centre of Buddhist Studies

# HKU Presidential PhD Scholar Programme 2025-26

The HKU Presidential PhD Scholar Programme was established by the University in 2019 to attract top candidates from around the world to pursue full-time PhD studies at HKU. The programme offers the most prestigious scholarship package to selected students.

## FACULTY OF ARCHITECTURE

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### Department of Real Estate and Construction

Ms Lingyun BU\*  
Mr Jize ZHANG

### Department of Urban Planning and Design

Miss Qijia CHEN\*  
Mr Boyu HAN\*  
Miss Mengzhuomei WANG\*  
Mr Dian XIA  
Mr Yucheng ZHANG\*  
Mr Shuwen ZHENG

## FACULTY OF ARTS

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### Centre of Buddhist Studies

Mr Bin LIU\*

### School of Chinese

Mr Hou Lon CHANG\*  
Miss On Kiu CHEUNG\*  
Ms Chenxinyue LI\*  
Ms Ruochen QIN\*  
Miss Zifan QIU\*  
Miss Dan WANG\*  
Miss Xinjie WANG\*

### School of Humanities

Mr Michael Osmund Clanchy REYNOLDS\*

## FACULTY OF BUSINESS AND ECONOMICS

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Miss Rouyu CHEN\*  
Miss Yuxuan HU\*  
Mr Maoran LIN\*  
Miss Shuang MA\*  
Mr Junzhang WANG\*  
Mr Zekai WANG\*

## FACULTY OF DENTISTRY

---

Miss Xiaoyu CHEN\*  
Ms Ling JI  
Miss Qianhui LI\*  
Miss Haoyan WU\*  
Mr Zhihe YANG

## FACULTY OF EDUCATION

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Miss Jiaxin CHEN\*  
Miss Claudia FINI\*  
Ms Lang JU\*  
Ms Yuet Ki NING  
Miss Ruike TANG  
Mr Tsz Hei Aaron WAN\*  
Miss Yujing ZHANG\*

## FACULTY OF ENGINEERING

---

### Department of Civil Engineering

Mr Wangwei LIU\*  
Miss Yixuan MA\*  
Mr Mingyu WANG\*  
Mr Jiahao XU

### Department of Data and Systems Engineering

Mr Xianqi CAO  
Miss Ruoyu CHEN\*  
Mr Hongyu RUI  
Miss Zhe WANG  
Mr Yuming XU\*  
Miss Feier YAN  
Mr Chengkun ZHANG

### Department of Electrical and Electronic Engineering

Miss Wen CAO  
Mr Zhekai CHEN  
Mr Yunqi FU\*  
Mr Junqi GE\*  
Mr Zhihuan JIANG\*  
Mr Boqun KOU\*  
Mr Yuemin LI\*  
Mr Guoxin LIN\*  
Mr Tianjia LIU\*  
Ms Shihan MENG

Mr Baiqian QI\*  
Mr Bowen QIU\*  
Miss Yiqin SU\*  
Miss Xiaorong WANG  
Mr Xian WU\*  
Mr Zhanfeng XU  
Mr Bochao ZHANG  
Mr Chengwei ZHANG

#### **Department of Mechanical Engineering**

Miss Tianyu FU\*  
Mr Bo HU\*  
Mr Chunlin LI\*  
Mr Fangyu LIU\*  
Mr Weihang LU\*  
Miss Sifan YU

### **FACULTY OF LAW**

---

Miss Yu JI\*  
Mr Ryan MAK\*

### **LI KA SHING FACULTY OF MEDICINE**

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#### **School of Biomedical Sciences**

Miss Jingyi CUI\*  
Miss Tamara Chek Chi LI\*  
Ms Xiang LI\*  
Mr Yichen LIU  
Miss Nga Man LOOI\*  
Mr Jiamu QIAO  
Miss Michelle Agatha TJOA\*  
Miss Bowen WAN  
Mr Guanchen WU  
Ms Jiamin YANG\*  
Mr Guowei ZHANG\*  
Mr Zetian ZHANG  
Miss Qianlin ZHUO

#### **School of Chinese Medicine**

Mr Chun Fung KWOK\*

#### **School of Clinical Medicine**

Miss Jin Ying CHANG\*  
Mr Sitong CHEN\*  
Miss Cin Ting CHEUK\*  
Mr Yunlong DONG\*  
Ms Grace Lynn GUAN\*  
Ms Jiin LEE\*  
Miss Qinnan SHEN  
Mr Kai YUAN\*  
Mr Ming ZHONG

#### **School of Nursing**

Miss Jie WU\*

#### **Department of Pharmacology and Pharmacy**

Mr Jinming XING  
Miss Yu ZHANG  
Miss Su ZHOU\*  
Mr Haoming ZHU

#### **School of Public Health**

Miss Rusi LONG\*  
Miss Taoyang WANG\*  
Miss Yani WU\*

### **FACULTY OF SCIENCE**

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#### **School of Biological Sciences**

Ms Zhima CHEN  
Miss Sheung Yu GUO\*  
Mr Tianxiao HAO  
Mr Muhammad HEEMBOO\*  
Ms Ekaterina TRUSOVA\*  
Mr Weifeng XIE

#### **Department of Chemistry**

Mr Ho Chi LEUNG  
Ms Jieyin LIU  
Mr Yudi LU  
Mr Yilin SUN  
Mr Mengtian ZHANG

#### **Department of Earth and Planetary Sciences**

Ms Sonya Pearl LIU\*  
Mr Kunxiang PENG  
Miss Chunyuan YANG  
Ms Duo YANG\*  
Ms Sarah YANG\*  
Mr Zhili ZENG\*

#### **Department of Mathematics**

Mr Jiatong HE\*  
Mr Guoming LI\*  
Mr Likun LIN\*  
Mr Sanyang LIU  
Mr Cheng SHOU\*  
Mr Yuanzhe TAO

#### **Department of Physics**

Mr Rong DU  
Mr Kunyuan HONG  
Mr Yiheng JIANG\*  
Mr Kah Chun LAI  
Mr Hairui LYU  
Mr Shengzhu WANG\*

### **FACULTY OF SOCIAL SCIENCES**

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#### **Department of Geography**

Mr Ka Yiu NG\*  
Miss Shujie ZHANG\*  
Miss Yanying ZHU\*

## **Journalism and Media Studies Centre**

Mr Fankai DAI

## **Department of Politics and Public Administration**

Mr Haozhe ZHANG

## **Department of Psychology**

Ms Si CHEN\*

Miss Hei Lam Michelle TSANG\*

## **SCHOOL OF COMPUTING AND DATA SCIENCE**

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Mr Chengke BU

Mr Liwen CHEN\*

Mr Xuelin CHEN

Miss Kaixin DING

Miss Xianzhe FAN\*

Miss Xiaoyuan HAN\*

Mr Xuhan HAN

Mr Entong HE\*

Mr Ziyi HE\*

Mr Yitong LI

Mr Zonggen LI\*

Mr Fengyuan LIU

Mr Yuxiang LU

Ms Yanru SONG\*

Mr Kailing WANG

Mr Kaixuan WANG\*

Mr Longde WANG\*

Mr Jingqi XIAO

Mr Hongru YAN

Mr Luning YANG

Mr Mingtian YANG\*

Mr Zixuan YAO\*

Mr Xiangran ZHANG

Mr Xingjian ZHANG

Mr Yuqi ZHANG\*

Mr Liwei ZHENG

Mr Zihan ZHOU

## **HKU MUSKETEERS FOUNDATION INSTITUTE OF DATA SCIENCE**

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Mr Junzhou FANG

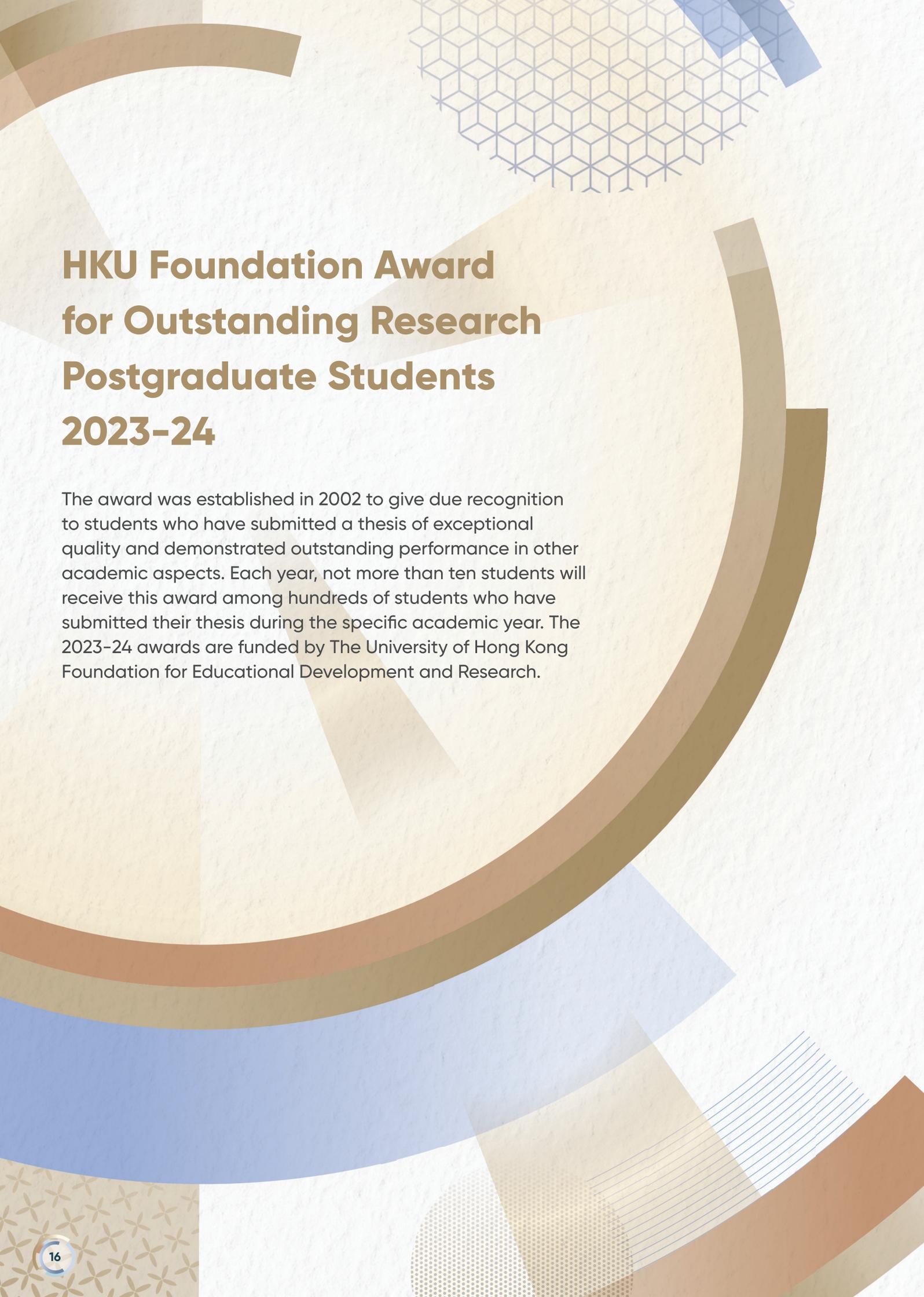
Ms Wai Yan MAN\*

Mr Haolun WANG\*

Mr Xusen XIAO

Mr Jianyu ZHANG

\* Also awardee of the Hong Kong PhD Fellowship Scheme funded by the Research Grants Council



# **HKU Foundation Award for Outstanding Research Postgraduate Students 2023-24**

The award was established in 2002 to give due recognition to students who have submitted a thesis of exceptional quality and demonstrated outstanding performance in other academic aspects. Each year, not more than ten students will receive this award among hundreds of students who have submitted their thesis during the specific academic year. The 2023-24 awards are funded by The University of Hong Kong Foundation for Educational Development and Research.



**Mr Ho Hei AU**  
MPhil, School of Humanities

**Supervisors**

**Professor H.Y. Chan, School of Humanities**  
**Professor G. Biancorosso, School of Humanities**

**Thesis Title**

**Reevaluating the Complex: A Fresh Perspective on the Cantonese Tone-Melody Mapping Mechanism**

Mr AU's MPhil thesis investigates the mechanism through which Cantonese speech tones are preserved in musical contexts. It critiques the prevailing "optimal mapping interval" framework and proposes a novel theoretical model that reconceptualizes Cantonese tone-melody mapping as a continuous perceptual process involving the simultaneous identification of all tone levels. By analysing musical examples, experimental data, and existing literature, the study offers new insights and establishes a unified framework that addresses unresolved challenges in previous research.

During his postgraduate studies, Mr Au has also developed an active compositional career. His orchestral-choral work *Hark! The Midnight Bell Echoes* was premiered by the Hong Kong Philharmonic Orchestra in 2024. He has collaborated with various musical groups and ensembles as both composer and conductor, including HKU MUSE, the Hong Kong New Music Ensemble, the Hong Kong University Philharmonic Orchestra, and the HKU Chamber Singers, presenting performances and recordings of his compositions.



**Dr Wai Fong CHAN**  
PhD, School of Biomedical Sciences

**Supervisors**

**Professor S.L. Wong, School of Biomedical Sciences**  
**Professor J. Huang, School of Biomedical Sciences**

**Thesis Title**

**High Throughput Screening Technologies for the SARS-CoV-2 Induced Syncytium Formation**

Dr CHAN's PhD thesis work established high-throughput screening technologies to rapidly assess the impact of SARS-CoV-2 mutations on disease severity, involving multidisciplinary research teams from the Microfluidics and Soft Matter Group of the Department of Mechanical Engineering, HKU, as well as the Department of Microbiology, HKU. His research used innovative screening methods and advanced genetic techniques to identify the specific genetic and cellular factors responsible for promoting syncytia formation, a cell-cell fusion phenomenon commonly observed in severely ill patients. This research is crucial for developing effective interventions and treatments to block the fusion and potentially restrict virus spread, and was published in *Nature Biomedical Engineering*.

Since completing his PhD, Dr Chan has been pursuing his academic career as a Post-doctoral Fellow at the Centre for Oncology and Immunology, HKU, where he focuses on developing high-throughput platforms to investigate the interplay between immunology and synthetic biology.



**Dr Qimao GAN**  
PhD, Department of Civil Engineering

**Supervisor**  
Professor C. Tang, Department of Civil Engineering

**Thesis Title**  
**Tailoring Polyamide Morphology of Thin Film Composite Membranes Based on Nanofoaming Theory Towards Enhanced Performance for Water Purification**

Dr GAN's thesis focuses on tailoring thin film composite (TFC) reverse osmosis (RO) membranes for desalination and water reuse, a research area of critical importance to freshwater production and environment protection. Specifically, the reaction-morphology-performance relationship in TFC RO membranes—an important topic that has been debated by membrane researchers for decades—was systematically investigated. As a result, an innovative “nanofoaming mechanism” was proposed. This novel mechanism allows Dr Gan to establish a theoretical framework for guiding RO membrane design towards enhanced desalination and water reuse.

After his PhD, Dr Gan has been pursuing his academic career as a Post-doctoral Fellow in the Department of Civil Engineering at HKU. In his future research plan, he intends to further extend this nanofoaming mechanism to another type of TFC membranes—nanofiltration (NF). Such TFC NF membranes offer great potential for not only freshwater production but also resource recovery such as recovering lithium ions from saline lake brine.



**Dr Beibei HE**  
PhD, Department of Chemistry

**Supervisors**  
Professor Y.P. Li, Department of Chemistry  
Professor H. Sun, Department of Chemistry

**Thesis Title**  
**Genome Mining of Uncharted Ribosomally Synthesized and Post-translationally Modified Peptides**

Dr HE's PhD research pioneered a new computational strategy for drug discovery from microbial genomes. By focusing on the underlying “biosynthetic logic” within DNA rather than traditional methods, his work uncovered an untapped reservoir of natural products with unique chemical structures. This provides a powerful new engine for discovering therapeutics, particularly in the urgent fight against antimicrobial resistance.

Building on this foundation, Dr He now serves as the Leader of the AI Protein Computation and Design Platform at BGI-Research. He orchestrates a full-stack innovation pipeline that integrates protein discovery, AI-driven engineering, and de novo design. This powerful system uncovers novel gene-editing tools, accelerates industrial enzyme optimization, and creates entirely new protein therapeutics for the most complex medical challenges.

Dr He's aspiration is to build this platform into a “self-driving lab”—a core engine for BGI's R&D that will empower the next generation of breakthroughs in medicine and synthetic biology.



**Mr Hyun Woo KIM**  
MPhil, School of Clinical Medicine

**Supervisors**

**Professor G.K.H. Shea, School of Clinical Medicine**  
**Professor K.Y.H. Kwan, School of Clinical Medicine**

**Thesis Title**

**Human Bone Marrow-derived Mesenchymal Stem Cell (BM-MSC) and Neurosphere (BM-NS) Transplantation as an Adjunct to Decompression in a Rat Degenerative Cervical Myelopathy (DCM) Model**

Mr KIM's research focuses on regenerative stem cell science, chronic spinal cord injury, and blood-spinal cord barrier mechanics. His MPhil thesis explored the therapeutic efficacy of neural stem cells, derived from bone marrow, evaluated their potential for blood-spinal cord barrier protection, and assessed the neuro-regenerative effects. Findings from Mr Kim's research pave the way for further optimization of stem cell therapy in the context of spinal cord ailments and insights into the role of the blood-spinal cord barrier during neurological recovery.

Upon completing his MPhil, Mr Kim returned to South Korea and is currently applying to PhD positions, mainly in the USA and the UK. He intends to pursue an academic career in the area of regenerative medicine, and he has research interests in areas such as ageing, developmental biology, and bioinformatics. On the outlook of future biomedical research, Mr Kim is positive: "I believe one of the areas that will have the most amount of change in the coming years will be biomedical research, driven by recent advances in large language models and robotics. I hope the use of such technology can be focused on improving our lives, chiefly through healthcare innovations and health span extension."



**Dr Maosu LI**  
PhD, Department of Urban Planning and Design

**Supervisors**

**Professor A.G.O. Yeh, Department of Urban Planning and Design**  
**Professor F. Xue, Department of Real Estate and Construction**

**Thesis Title**

**Quantification and Automatic Computation of 3D Window Views in High-rise, High-density Cities Based on City Information Models and Machine Learning**

Dr LI's research focuses on artificial intelligence and three-dimensional (AI + 3D) window view assessment. His PhD thesis—awarded the IEEE GRSS Excellent PhD Dissertation Award (First Prize)—established a theoretical framework of window view characteristics, an urban-computing paradigm, and three automatic quantification methods. The research enables urban-scale window-view applications in housing, planning, and health, opening a new vertical perspective of landscape analytics.

This window view research has garnered Dr Li 15 honours, including the Gold Medal at the 49th International Exhibition of Inventions Geneva (2024), the HKU Foundation Publication Award (2023), the HKU Research Postgraduate Student Innovation Award (2023), First Prize in the ICUI Smart Cities Innovation Competition (2022), and the Esri Young Scholars Award (Hong Kong, 2021). Dr Li has authored 10+ papers and holds a patent (US/CN/PCT). His innovative research has supported collaborations with MIT, UCL, NUS, HKU, and CityU.

Dr Li is currently an Assistant Professor at the Hong Kong University of Science and Technology (Guangzhou). He aims to deepen research in AI + 3D smart-city applications, including multi-perspective landscape-view assessment, AI-driven planning decision-support tools, and simulations for the low-altitude economy.

**HKU Foundation Award for Outstanding Research Postgraduate Students 2023-24**



**Dr Junqing LIU**  
PhD, Faculty of Dentistry

**Supervisors**

**Professor C. Zhang, Faculty of Dentistry**  
**Professor W.L. Dissanayaka, Faculty of Dentistry**

**Thesis Title**

**Three-dimensional Cobalt-based Nanocomposite Hydrogel Scaffolds Enhance Vasculogenesis and Neurogenesis**

Dr LIU's PhD research addresses a central challenge in regenerative medicine: rebuilding blood vessels and nerves together in damaged tissues. She developed an innovative three-dimensional, electrically conductive hydrogel that mimics hypoxia by controllably releasing cobalt ions. Her work showed that this scaffold significantly promotes vascular network formation and, when paired with electrical stimulation, enhances the neural differentiation of dental stem cells. In vivo studies confirmed that the scaffold pre-forms vascular networks that rapidly anastomose with host vessels and support nerve tissue formation. This research provides a promising platform for complex tissue engineering, with strong potential to restore damaged tissues, particularly in dentistry.

After graduating with her PhD, Dr Liu began her academic career as a Post-doctoral Fellow at Sun Yat-sen University. She has published over twenty journal articles. Looking ahead, she aims to advance programmable biological scaffolds and microenvironments to translate dental stem cell-based, neurovascularized constructs into clinical practice.



**Dr Zhengcheng LIU**  
PhD, Faculty of Business and Economics

**Supervisors**

**Professor B. Li, Faculty of Business and Economics**  
**Professor K.S.J. Kung, Faculty of Business and Economics**

**Thesis Title**

**Essays in Political Economy and Bureaucracy**

Dr LIU's thesis studies how bureaucratic organization influenced governance performance in imperial China, offering implications that remain relevant today. Drawing on historical archival data and causal inference techniques, his research investigates the role of recruitment, internal appointments, and authority allocation in shaping government performance. His thesis provides three key empirical findings: (1) merit-based recruitment of managers improved government performance in multiple tasks, highlighting the importance of meritocratic bureaucracy by competitive and open recruitment as a cornerstone of effective public organizations; (2) for the internal selection of middle-ranking officers, discretion can be beneficial relative to rigid rules and procedures; and (3) centralizing fiscal authority aimed at monitoring lower agents can have negative unintended consequences, due to creating new incentive issues for the monitor.

Having completed his PhD at HKU, Dr Liu joined the School of Economics at Zhejiang University as an Assistant Professor, where he continues his intellectual journey in studying the interplay between institutions and economic development.



## Dr Chong SHENG

PhD, Department of Earth and Planetary Sciences

### Supervisor

Professor J.J.J. Jiao, Department of Earth and Planetary Sciences

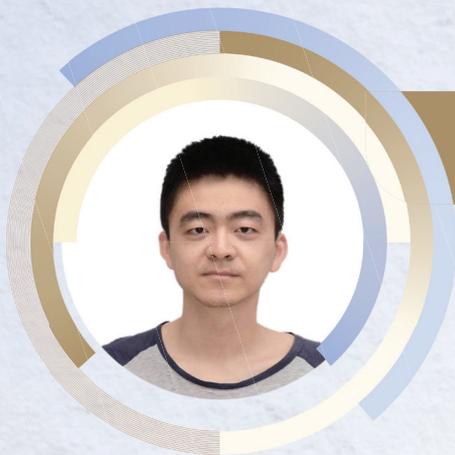
### Thesis Title

Offshore Freshened Groundwater in the Subaqueous Paleo-Delta of the Pearl River in the Northern South China Sea

Dr SHENG's research focuses on offshore groundwater, an unconventional yet potentially important freshwater resource for coastal cities. His PhD thesis systematically investigated the occurrence, dynamics, hydrochemical characteristics, and evolutionary history of the offshore groundwater system from Hong Kong to the northern margin of the South China Sea. The findings hold significant academic value and societal relevance, offering new insights into coastal hydrological processes and the potential utilization of offshore freshwater resources.

Throughout his research postgraduate studies, Dr Sheng demonstrated outstanding research performance, which led to him being awarded the Ringo Yu Prize from the HKIE Geotechnical Division. Dr Sheng has published several first-author papers in prestigious journals, including *Science Advances* and *Nature Communications*.

Following his PhD, Dr Sheng became a Post-doctoral Researcher at the GEOMAR Helmholtz Centre for Ocean Research in Germany, where he actively contributes to the International Ocean Drilling Program to further explore unconventional water resources in continental margins worldwide.



## Dr Peize SUN

PhD, Department of Computer Science

### Supervisors

Professor P. Luo, School of Computing and Data Science

Professor W.P. Wang, School of Computing and Data Science

### Thesis Title

Towards Object Detection in the Real World

Dr SUN's research focuses on artificial intelligence for computer vision, specifically object detection, recognition, and understanding in real-world environments. His dissertation studies three important problems related to universal object detection: (i) end-to-end object detection network architecture, (ii) object tracking in videos, and (iii) object recognition in the open world.

For end-to-end object detection, Dr Sun's research analyses the learning mechanism and introduces two advanced network architectures, Sparse R-CNN and OneNet, with competitive performance in accuracy, inference time, and training convergence for challenging object detection datasets, especially crowded scenes. The work introduces a unified framework for object detection and tracking in videos, TransTrack, using a unified query-key perspective, and proposes DanceTrack, a new dataset to inspire tracking algorithms that rely on both visual discrimination and motion analysis. For object recognition in the open world, the research demonstrates the hierarchical structure of visual concepts from open-category and open-granularity perspectives and introduces VLPpart, a detector to predict both open-vocabulary objects and their part segmentation.

Since finishing his PhD, Dr Sun has been pursuing his career in industry and is now a technical staff member at xAI, a frontier artificial intelligence company. His future focus will be on building artificial general intelligence systems.

# Li Ka Shing Prizes

## 2023-24

In 1990, Dr Li Ka Shing made a generous donation to the University. Part of the investment income earned on the donation has been used to establish the Li Ka Shing Prizes. The Prizes are awarded on the basis of academic excellence to four PhD theses and two MPhil theses annually in and after 2005-06. This Prize is highly competitive and the recipients are the best of our elite students.



## **Miss Khadija AZHAR**

**MPhil, School of English**

### **Supervisors**

**Professor D.A. Weston, School of English**

**Professor R.D. Nicholson, School of English**

**Professor J.R. Valdez, School of English**

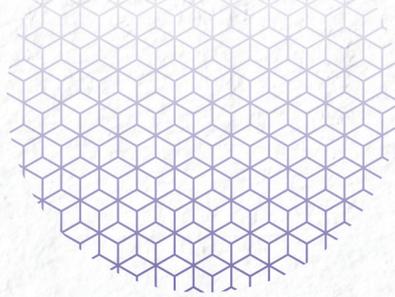
### **Thesis Title**

**Modes of Perception in the Colonial Parsi Theatre**

Miss AZHAR's MPhil research traced the history of popular theatre in late-nineteenth century Bombay, specifically the tradition of the Parsi theatre whose spectacular, over-the-top dramatic productions were particularly enjoyed by the urban population. In tracing this history, she explored interactions between various social groups, differentiated across lines of class, caste, and gender, and how these interactions revealed particular ways of seeing that constituted individual and group identities. Miss Azhar's work argued for the legitimacy of spectacle as a meaningful cultural and dramatic form, against scholarship that dismisses spectacular theatre as simplistic and uncritical.

At its core, Miss Azhar's research explores the mechanisms through which power operates in acts of looking, imagining, and in turn, representing—whether that is in a performance on stage, a performance in front of a camera, or a performance in an everyday context. In looking at these multiple modes of performing, she seeks to understand marginalised perspectives, alternative forms of knowledge, and the affective dimensions of human experience. In this work, the historical archive emerges as a dynamic site where identities, hierarchies, and modes of perception are continually negotiated.

Miss Azhar is currently pursuing doctoral research in theatre and performance studies at the University of Warwick in the UK. The project, in part, carries forward her research on ways of seeing to explore the intersections between performance and photography in late-nineteenth and early-twentieth century India.



## Mr Ho Wan CHENG

MPhil, Department of Earth and Planetary Sciences

### Supervisor

Professor M.H. Lee, Department of Earth and Planetary Sciences

### Thesis Title

On the Characterisation and Origin of the Circumprimary Retrograde Planetary Orbit in  $\nu$  Octantis

Mr CHENG's research focuses on confirming the existence of a planet in the tight binary star system  $\nu$  Octantis—which has been heavily debated since the planet hypothesis was first proposed in 2004 due to its unprecedented orbital properties and strong theoretical grounds against its formation—and on understanding the origin of the exoplanetary system.

In his MPhil study, Mr Cheng modelled observational data of  $\nu$  Octantis and performed dynamical analysis. He confirmed the existence of the planet by identifying a family of stable models absent from previous studies. After characterising the present-day orbital configuration of the system, he used the Binary Star Evolution code to explore the primordial orbital and physical properties of the binary star. He discovered that the observed planetary orbit could not have formed coevally with the stars at their early evolutionary stages. The planet must have originated from a circumbinary orbit destabilised by stellar mass loss or from a second-generation protoplanetary disc produced by stellar ejecta, unveiling the role of late-stage stellar evolution in the formation and evolution of planetary systems. Mr Cheng's work was published in *Nature*.

The backward-moving planetary orbit Mr Cheng confirmed is the first of its kind among the approximately 6,000 exoplanets discovered to date. The planet is also the first compelling case of a second-generation planet.

Mr Cheng will commence his PhD studies in Astrophysics at the University of Edinburgh, United Kingdom. He aims to acquire a better understanding of how late-stage stellar evolution shapes the formation and evolutionary history of planetary systems and, by studying exoplanets, to gain deeper insight into his favourite planet, the Earth.



## **Dr Jixiang JING**

**PhD, Department of Electrical and Electronic Engineering**

### **Supervisors**

**Professor G. Chesi, Department of Electrical and Electronic Engineering**

**Professor Z. Chu, Department of Electrical and Electronic Engineering**

### **Thesis Title**

**Towards On-chip Integration of Diamond Quantum Sensors**

Dr JING's thesis focuses on developing diamond material and its on-chip integration technology for quantum sensing applications. It provides an in-depth analysis of the use of diamond in electronic and photonic applications. The strong promise, timeliness, and novelty of the results hold significant interest for both the material science and quantum technology communities.

This thesis undertakes a comprehensive investigation into the development of optoelectronic devices and chip models utilising diamond thin films, nanodiamonds, and Gallium Nitride (GaN). Key findings include the following: (1) the creation of a monolithic GaN chip integrated with both light emitter and light detector functionalities, facilitating applications in pressure sensing, salinity content analysis, and cell activity monitoring; (2) the establishment of a mechanical exfoliation technique for the mass production of ultrathin and transferable diamond membranes at a wafer scale; and (3) the introduction of an electrostatic trapping method for the effective patterning of single nanodiamonds at a wafer scale. These findings provide valuable guidelines for future research in nanophotonic devices using diamond and related nanostructures.

Dr Jing is currently a Post-doctoral Fellow in Professor Z. Chu's team at HKU and continuing his research on diamond-based electronics and photonics.



## Dr Yuebing LIANG

PhD, Department of Urban Planning and Design

### Supervisors

Professor Z. Zhao, Department of Urban Planning and Design

Professor E.H. Schuldenfrei, Department of Architecture

Professor C.J. Webster, Department of Urban Planning and Design

Professor J. Zhou, Department of Urban Planning and Design

### Thesis Title

Planning-oriented Travel Demand Forecasting for Evolving Transportation Systems Using Deep Neural Networks

Dr LIANG's doctoral research advances data-driven urban mobility forecasting by integrating artificial intelligence (AI) with transportation planning. Her thesis develops a series of deep learning frameworks to predict how people move across cities—when, where, and along which routes—providing planners with accurate, interpretable, and actionable insights for designing future transport systems.

Traditional travel demand models often rely on fixed assumptions about traveller behaviour, limiting their ability to adapt to evolving urban environments. Dr Liang's work overcomes these challenges by introducing graph-based neural networks and inverse reinforcement learning methods that learn directly from large-scale mobility data. These approaches not only enhance prediction accuracy for new transport infrastructures but also establish theoretical connections between deep learning, spatial econometrics, and behavioural science. Collectively, her research bridges advanced machine learning with practical urban planning, supporting smarter and more sustainable mobility decisions.

Dr Liang's research philosophy is that AI should amplify, not replace, human expertise in city design. She believes that data and planning must inform each other—combining computational intelligence with human creativity to shape inclusive and resilient urban futures.

After completing her PhD at HKU, Dr Liang worked as a Postdoctoral Associate at the Singapore-MIT Alliance for Research and Technology, where she further explored AI applications in urban systems. She is now a tenure-track Assistant Professor in the Department of Urban Planning at Tsinghua University, continuing to advance human-centred AI for urban mobility.



## **Dr Jing LING**

**PhD, Department of Geography**

### **Supervisor**

**Professor H. Zhang, Department of Geography**

### **Thesis Title**

**Monitoring Urban Impervious Surface Using Multi-source Remote Sensing in Cloud-prone Areas**

Dr LING's research improves the reliability of urban remote sensing when weather interferes. Her work tackles the problem that optical satellite images, which show colour and material differences very well, are often unusable when clouds or storms block the view. To fill those gaps, she develops targeted fusion methods that combine information from synthetic aperture radar, which can penetrate clouds using microwave signals, with whatever clear optical data are available. Key components of the methods include polarimetric scattering modelling to reduce ambiguity in radar signals, cloud-weighted dictionary learning methods that down-weight cloudy pixels, and deep network architectures for robust cross-modal recognition. These methods are designed to be understandable and repeatable, with clear preprocessing steps, simple fusion rules where appropriate, and networks that focus on the most informative features. She has tested these approaches across multiple cities and climate zones, showing measurable gains in robustness and mapping accuracy compared with single data source techniques and some existing fusion approaches. Dr Ling focuses on practical relevance—designing methods that address real observational gaps in urban monitoring—and plans to extend applications to extreme-climate and disaster scenarios where dependable spatial information is critical.

As a result of this work, Dr Ling has published multiple papers in international journals and conferences and received academic awards, including the AAG 2024 Annual Meeting Student Competition Best Paper. She currently serves as an Associate Professor at Guangdong University of Technology. She is now focused on connecting advanced remote-sensing techniques to local governance needs, leading student projects that pilot these methods with local agencies, and helping government departments deploy them to support urban management and emergency disaster response.



## Dr Ruopeng XIE

PhD, School of Public Health

### Supervisors

Professor V. Dhanasekaran, School of Public Health

Professor L.M.L. Poon, School of Public Health

Professor S.A. Valkenburg, School of Public Health

Dr D.C. Adam, School of Public Health

### Thesis Title

**Phylogenetics of Respiratory Viruses: Implications for Public Health**

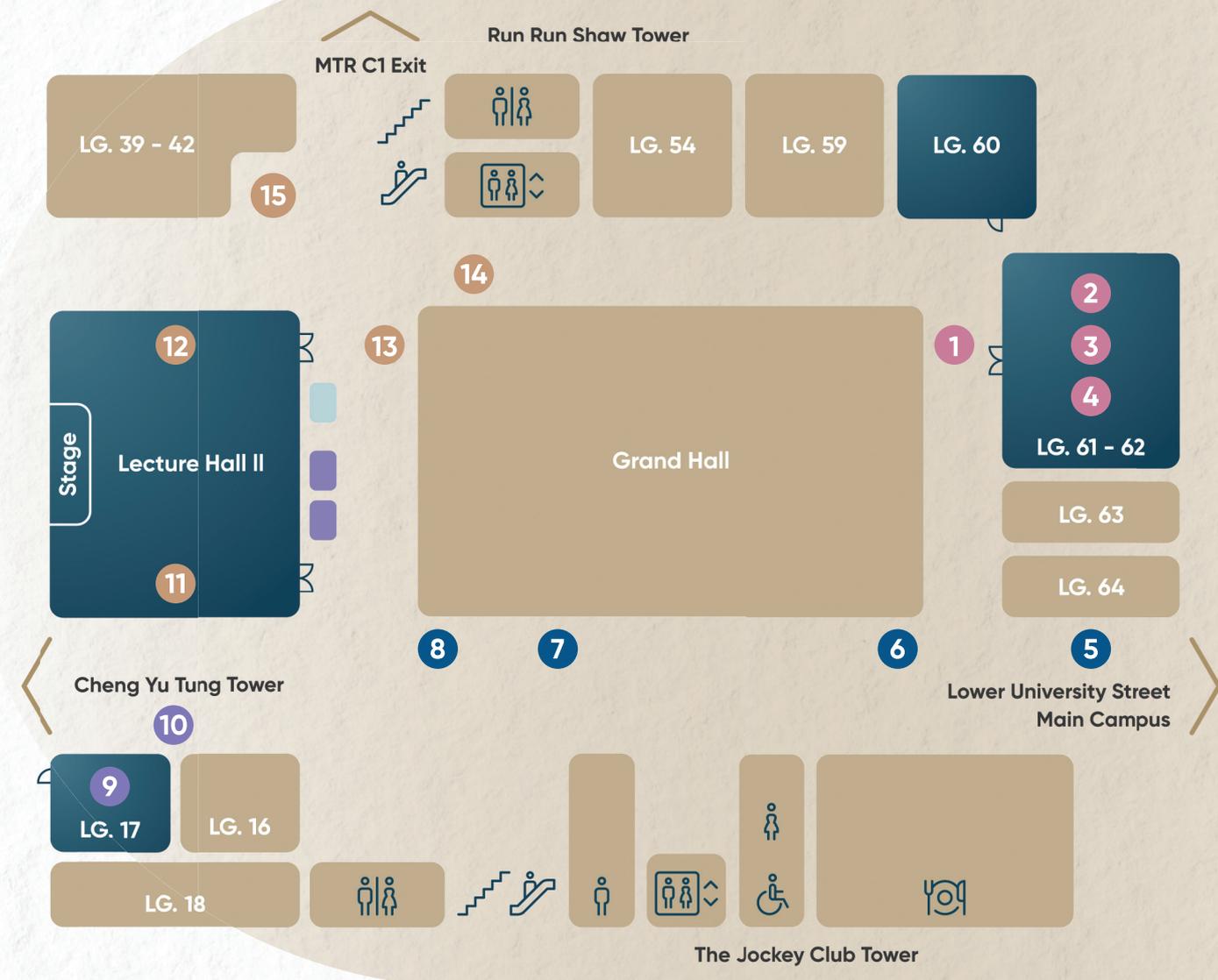
Dr XIE's research centres on understanding the evolutionary and transmission dynamics of major respiratory viruses through phylodynamics—an interdisciplinary framework that integrates genomic, epidemiological, and ecological data to elucidate how pathogens spread and evolve. His thesis examined SARS-CoV-2, seasonal influenza, and highly pathogenic avian influenza H5, providing key insights into the origins and propagation of epidemic waves, the reshaping of global influenza circulation under COVID-19 interventions, and the emergence of novel H5N1 reassortants in wild and domestic birds. Collectively, these findings deepen understanding of viral transmission dynamics and the evolutionary processes that shape outbreak behaviour. His PhD research has been published in *Nature*, *Nature Communications*, *Molecular Biology and Evolution*, and *Virus Evolution*.

Beyond his contributions to genomic epidemiology, Dr Xie addressed the computational bottlenecks inherent in phylodynamic inference. Supported by the HKU-Pasteur Fellowship and the RGC Postdoctoral Fellowship, he collaborated with colleagues at the Institut Pasteur in Paris to critically evaluate emerging deep learning-based phylodynamic approaches and developed a novel method that integrates contact-tracing data to improve inference accuracy by linking viral phylogenies with transmission networks.

Dr Xie is currently a Marie Skłodowska-Curie Postdoctoral Fellow at the University of Oxford, where he is developing deep learning-based phylodynamic tools capable of reconstructing epidemic curves in real time from genomic data. His long-term goal is to advance computational frameworks that integrate artificial intelligence with genomic epidemiology, enabling faster, more scalable, and more actionable outbreak assessments. He aims to contribute interdisciplinary solutions that strengthen global preparedness against emerging infectious diseases.

# Poster Presentation Floor Plan

## LG Level, Centennial Campus, HKU



- Registration Counter
- Catering Point

**1 Group 1**  
Faculty of Arts/  
Faculty of Social Sciences

**2 Group 2**  
Faculty of Business & Economics/  
Faculty of Social Sciences

**3 Group 3**  
Faculty of Architecture/  
Faculty of Business & Economics/  
Faculty of Education

**4 Group 4**  
Faculty of Architecture/  
Faculty of Business & Economics/  
Faculty of Law

**5 Group 5**  
Li Ka Shing Faculty of Medicine

**6 Group 6**  
Li Ka Shing Faculty of Medicine

**7 Group 7**  
Li Ka Shing Faculty of Medicine

**8 Group 8**  
Faculty of Dentistry /  
Li Ka Shing Faculty of Medicine

**9 Group 9**  
Faculty of Science

**10 Group 10**  
Faculty of Science

**11 Group 11**  
Faculty of Engineering

**12 Group 12**  
Faculty of Engineering/  
School of Computing & Data  
Science

**13 Group 13**  
Faculty of Engineering/  
School of Computing & Data  
Science

**14 Group 14**  
Faculty of Engineering/  
Institute of Data Science

**15 Group 15**  
School of Computing & Data  
Science

- Staircase
- Escalator
- Lift
- Toilet
- Restaurant



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