***Program Title:***

International Workshop on Large AI Models for Biomedicine

***Organizing Units:***

HKUST Collaborative Center for Medical and Engineering Innovation,

Center for Medical Imaging and Analysis,

Department of Computer Science and Engineering,

The Hong Kong University of Science and Technology (HKUST)

***Organizers:***

Prof. Hao Chen, HKUST

Prof. Jiguang Wang, Padma Harilela Associate Professor, HKUST

Prof. Kai Liu, Cheng Professor of Science, HKUST

Prof. Xiaofang Zhou, Otto Poon Professor of Engineering & Chair Professor of CSE, HKUST

***Date:*** July 12, 2025

***Venue:***

HKUST Jockey Club Institute for Advanced Study, Lo Ka Chung Building, Lee Shau Kee Campus, The Hong Kong University of Science & Technology, Clear Water Bay, Kowloon, Hong Kong, China

This workshop is held at the Institute for Advanced Study building on the beautiful seaside campus of The Hong Kong University of Science and Technology. Inaugurated in 1991, HKUST is a university dedicated to the advancement of learning, with special emphasis on research education and close collaboration with business and industry. The University occupies an impressive 60-hectare site on the northern end of Clear Water Bay Peninsula. Situated on the slopes along the shore, the campus grounds are terraced to afford buildings on all levels with unobstructed panoramic views of the sea. Here you will find the latest technology, facilities and a unique environment for educational and research activities. For more details about the University, please visit the website at [https://hkust.edu.hk](https://hkust.edu.hk/).

***Registration:***

[International Workshop on Large AI Models for Biomedicine - Registration Form (google.com)](https://docs.google.com/forms/d/e/1FAIpQLSdykMBeSm2pyWT3xgLmg5Z6iRjh3aZd8bQ74JmiGBIwxA-PmQ/viewform)

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| **Time** | **Session** |
| 9:00-9:10 | **Opening Remarks** |
| 9:10-9:35 | **Invited Talk:**  *Prof. Ruijiang Li (Stanford University)* |
| 9:35-10:00 | **Invited Talk: (TBD)**  *Prof. Pranav Rajpurkar (Harvard University) (remote)* |
| 10:00-10:25 | **Invited Talk: TBD**  *Local Speaker* |
| 10:25-10:35 | Coffee Break |
| 10:35-11:00 | **Invited Talk: (TBD)**  *Prof. Dong Liang (SIAT, Chinese Academy of Sciences)* |
| 11:00-11:25 | **Invited Talk: (TBD)**  *Prof.* *Wang Xin (CUHK)* |
| 11:25-11:50 | **Invited Talk: *TBD***  *Prof. Ouyang Xiaomin (HKUST)* |
| 11:50-12:15 | **Invited Talk: TBD**  *TBD* |
| 12:15-14:00 | Lunch |
| 14:00-14:25 | **Invited Talk: (TBD)**  *Dr. Cheong Kin Ronald Chan (CUHK/Hospital Authority)* |
| 14:25-14:50 | **Invited Talk: (TBD)**  *TBD* |
| 14:50-15:15 | **Invited Talk: TBD**  *TBD* |
| 15:15-15:25 | Coffee Break |
| 15:25-15:50 | **Invited Talk: (TBD)**  *TBD* |
| 15:50-16:15 | **Invited Talk: (TBD)**  *TBD* |
| 16:15-17:00 | ***Panel Discussion***  *Moderator: Prof. Hao Chen*  *Panelists:* **(TBD)**  *- Prof. Pranav Rajpurkar*  *- Prof. Ruijiang Li*  *- TBD*  *- TBD*  *- Local Speaker TBD*  *Local Speaker TBD* |
| 17:00-17:30 | Closing |

**Confirmed speakers**

Ruijing Li (Stanford, business=economy + honorarium, 王茜接机)

Pranav (Harvard, remote)

Ronald Chan (CUHK)

Dong Liang (SIAT, 志愿者接送)

Wang Xin (CUHK)

Ouyang Xiaomin (HKUST)

Li Zheng (CUHK)

Cheng Yang (AstraZeneca)

Dennis Lee (HA)

TBD:

Qin Cheng (ICL, TBD)

Zhang Qian (HKUST, TBD)

Shen Dinggang (Shanghai Tech, TBD)

Liu Huafeng (Zhejiang, TBD)

**Prof. Hao Chen** is an Assistant Professor at Department of Computer Science and Engineering, Department of Chemical and Biological Engineering and Division of Life Science, Hong Kong University of Science and Technology (HKUST). He leads the SMART Lab focusing on Trustworthy Artificial Intelligence (AI) for Healthcare. He has 200+ publications (Google Scholar Citations 27K+, h-index 66) in toptier conferences and journals including MICCAI, IEEE-TMI, Medical Image Analysis, CVPR, ICCV, AAAI, Radiology, Nature Communications, Lancet Digital Health, Nature Machine Intelligence, JAMA, etc. He has received several premium awards such as 2023 Asian Young Scientist Fellowship, 2019 MICCAI Young Scientist Impact Award, 2023 Prestigious Achievement Award of OMIA-X, and several Best Paper Awards. He was reported as one of the six researchers who are shaping the future of artificial intelligence by Nature Index 2020. He also led the team winning 15+ medical grand challenges.

**Prof. Pranav Rajpurkar**, PhD, is an Assistant Professor at Harvard University and a researcher in the field of medical artificial intelligence. With a focus on medical image interpretation, Dr. Rajpurkar's research lab strives to develop AI models that can match the proficiency of top-tier medical doctors. His research group is at the forefront of developing "Generalist Medical AI" systems that can closely resemble doctors in their ability to reason through a wide range of medical tasks, incorporate multiple data modalities, and communicate in natural language. He has written over 100 academic articles with more than 24K citations in notable journals like Nature, NEJM, and Nature Medicine. His work has been recognized by MIT Tech Review's Innovator Under 35 in 2023, Nature Medicine Early-career Researcher To Watch in 2022, and the Google Research Scholar Program in 2023, Forbes 30 Under 30 in 2022. Dr. Rajpurkar leads educational initiatives including the Harvard-Stanford Medical AI Bootcamp Program, and CS197: AI Research Experiences at Harvard. Before joining Harvard in 2021, he earned his B.S.,

**Prof. Ruijiang Li** is an Associate Professor (Research) of Radiation Oncology (Radiation Physics) at Stanford University. He leads a lab focused on the development and application of novel machine learning and deep learning approaches for medical imaging analysis and precision oncology. His research aims to discover imaging-based biomarkers for cancer detection, diagnosis, treatment response prediction, and prognosis, with the goal of transforming cancer care. His work spans radiology, histopathology, and genomic data integration to advance personalized cancer therapy. Prof. Li has authored numerous high-impact publications in top-tier journals and conferences, including *Nature*, *Nature Communications*, *Lancet Digital Health*, *Nature Machine Intelligence*, *JAMA Network Open*, *Radiology*, and *Journal of Clinical Oncology*. His research has contributed to advancements in AI-driven cancer diagnostics, prognosis prediction, and treatment optimization. He has received prestigious awards such as the NIH/NCI Pathway to Independence Award (K99/R00), IDEA-TECH Award from Sanofi, and multiple honors from ASTRO and AAPM for his contributions to radiation oncology and medical physics. Prof. Li is actively involved in professional organizations, serving on advisory committees for ASTRO and AAPM.

**Prof. Dong Liang** is a Full Professor and Vice Director of the Paul C. Lauterbur Research Center for Biomedical Imaging at the Shenzhen Institutes of Advanced Technology (SIAT), Chinese Academy of Sciences. He also leads research at the Research Center for Medical AI, focusing on compressed sensing (CS), magnetic resonance imaging (MRI), and machine learning for biomedical applications. With 100+ publications in top-tier journals and conferences, his work advances fast MRI reconstruction, AI-driven medical imaging, and computational diagnostics. He is a recipient of multiple awards, including the first prize of the National Science and Technology Progress Award (2021). Prof. Liang holds prestigious editorial roles, including Associate Editor of IEEE Transactions on Medical Imaging and Editorial Board Member of Magnetic Resonance in Medicine—two leading journals in medical imaging. His research bridges cutting-edge AI methodologies with clinical imaging to improve speed, accuracy, and diagnostic capabilities.

**Dr. Cheong Kin Ronald Chan** is a Consultant at the Hospital Authority, NTEC (Pathology), and Lab Director of North District Hospital, as well as an Honorary Clinical Associate Professor at the Department of Anatomical and Cellular Pathology, The Chinese University of Hong Kong. He leads the Pathology Artificial Intelligence Development and Assessment Laboratory. Dr. Chan has published numerous papers in reputable journals and conferences, contributing significantly to the fields of digital pathology and artificial intelligence. His work includes over 30 publications, with notable journals such as Diagnostic Cytopathology, The Oncologist, and Advanced Science. He has received several awards, including the Teachers of the Year Awards from the Faculty of Medicine, CUHK in 2021 and 2023. Dr. Chan has also been involved in multiple grants related to digital pathology and AI, serving as Principal Investigator on several key projects.

**Dr. Wenjia Bai** is a Senior Lecturer in Artificial Intelligence in Medicine, jointly appointed at the Department of Computing and the Department of Brain Sciences at Imperial College London. He is a faculty member of the Biomedical Image Analysis (BioMedIA) Group and leads the Medical Vision group at the Data Science Institute. Dr. Bai completed his B.Eng and M.Eng in Automation at Tsinghua University, both with Distinction, and earned his D.Phil in Engineering Sciences from the University of Oxford under the supervision of Prof. Sir Michael Brady. He worked with Prof. Daniel Rueckert before starting his Lectureship position in 2018 and became a Senior Lecturer in 2022. Dr. Bai has published over 150 peer-reviewed journal and conference articles, accumulating over 14,000 citations and an H-index of 54. His publications span top computing conferences (MICCAI, ECCV, ICML, NeurIPS), major medical imaging journals (IEEE Transactions on Medical Imaging, Medical Image Analysis), and high-impact general journals (Nature, Nature Medicine, Nature Cardiovascular Research, Nature Communications). The imaging phenotypes he shared with the UK Biobank community have contributed to numerous publications in Nature Research journals and have aided in discovering novel genetic and phenotypical associations with disease outcomes.

**Prof. Xiaohong** **Tang** is currently an Associate Professor specializing in Semiconductor Photonics and Electronics. Prior to his tenure at NTU, he worked as a Lecturer at the University of Electronic Science & Technology of China (UESTC) and as a Process/Product Engineer at Agilent Technologies (formerly Hewlett Packard) in Singapore. At NTU, Prof. Tang leads the metal-organic vapor phase epitaxy (MOVPE) group, focusing on scientific research in compound semiconductor epitaxy growth and semiconductor photonic and microelectronic devices. He has served as Principal Investigator and Co-Principal Investigator on numerous major research projects funded by organizations such as the Singapore Defence Science and Technology Agency (DSTA), the Agency for Science, Technology and Research (A\*STAR), the Ministry of Education (MOE) of Singapore, and the Defense Advanced Research Projects Agency (DARPA) of the United States. Dr. Tang is a member of the Materials Research Society (MRS) and the Optical Society of America (OSA).

**Prof. Hongmin Cai** is a Professor at the School of Future Technology, South China University of Technology, China. He received his B.S. and M.S. degrees in Mathematics from Harbin Institute of Technology, Harbin, China, in 2001 and 2003, respectively, and his Ph.D. degree in Applied Mathematics from Hong Kong University in 2007. Prof. Cai is a Senior Member of IEEE and his research interests encompass various topics including Clustering Performance, Spectral Clustering, Deep Learning, Laplacian Matrix, Neural Network, Affinity Matrix, Latent Space, Multi-view Data, Brain Networks, Graph Convolutional Network, Latent Representation, and Singular Value Decomposition. He is also involved in research areas such as bioinformatics and text mining.

**Prof, Dinggang Shen** is the Founding Dean of the School of Biomedical Engineering at Shanghai Tech University. He is an IEEE Fellow, AIMBE Fellow, IAPR Fellow, and MICCAI Fellow. Prior to joining ShanghaiTech, he was a tenured Professor of Radiology, Biomedical Research Imaging Center (BRIC), Computer Science, and Biomedical Engineering at the University of North Carolina at Chapel Hill (UNC), USA. At UNC, he held several leadership positions, including Director of Faculty Development in the Department of Radiology, Director of the Imaging Information Center, Director of the IDEA Lab, and Director of the Image Analysis Core of BRIC. He is also the Co-CEO of Shanghai United Imaging Intelligence Co., Ltd. Professor Shen has published over 1,590 papers, achieving an H-index of 128 and accumulating more than 70,000 citations. He serves on the editorial boards of eight international journals and was the General Chair of MICCAI 2019. His research focuses on the application of machine learning and artificial intelligence in medical image computing, including early brain development, early diagnosis, and the prediction of Alzheimer's disease, as well as the diagnosis, prognosis, and radiotherapy of brain tumors, breast cancer, and prostate cancer. Professor Shen is recognized as a pioneering scientist in imaging AI research globally and was among the first to apply deep learning techniques to medical imaging in 2012.

**Prof. Xin Wang** is an Associate Professor at the Department of Surgery, Chinese University of Hong Kong (CUHK), and a Guest Associate Professor at the West China School of Basic Medical Sciences & Forensic Medicine, Sichuan University. He leads research in Biomedical Informatics, with a focus on Cancer Bioinformatics, integrating bioinformatics, systems biology, machine learning, and AI for mechanistic and translational studies in human diseases, particularly cancer. He has published 70+ papers in prestigious journals (Nature Medicine, Gastroenterology, Hepatology, Annals of Surgery, Science Advances, Nature Communications, etc.). His work is funded by the Hong Kong Research Grants Council, Shenzhen/Guangdong grants, and the National Natural Science Foundation of China.

**Prof. Xiaomin Ouyang** is an Assistant Professor at the Department of Computer Science and Engineering at the Hong Kong University of Science and Technology (HKUST), specializing in AI-powered mobile and IoT systems with a focus on machine learning for IoT, mobile computing, smart health, and cyber-physical systems. Her work emphasizes developing efficient machine learning and sensing systems for real-world applications, including deploying IoT systems to monitor digital biomarkers for Alzheimer’s Disease in clinical trials. Recognized for her contributions, she received the ACM MobiSys 2023 Best Paper Award, the ACM SIGBED China Outstanding Doctoral Dissertation Award, and was named a 2023 EECS Rising Star and a 2024 NIH mHealth Training Institute Scholar.

**Dr. Zheng LI** is currently an Associate Professor in department of Surgery and an associated member of Chow Yuk Ho Technology Centre for Innovative Medicine, department of biomedical engineering and T Stone Robotics Institute of the Chinese University of Hong Kong. He is also an adjunct associate professor of Monash University, Australia. Previously, he worked as a research assistant professor in the institute of digestive disease and as a research fellow in National University of Singapore. He is a senior member of IEEE (Institute of Electrical and Electronics Engineers), member of ASME (The American Society of Mechanical Engineers), and member of RAS (Robotics and Automation Engineering). Zheng served as the editor of BioRob 2020 and associate editor of RA-L (Robotics and Automation Letters), associate editor of ICRA (International Conference on Robotics and Automation), IROS (International Conference on Intelligent Robots and Systems), etc. He served as the reviewer of over 30 peer reviewed journals/conferences.

**Local Speaker** TBD x???