ASPIRE

ASPIRE FORUM 2025

Advancing Health & Medicine through AI & Technology

7 – 11 July 2025 | HKUST

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Symposium

10 July 2025 | 08:45 – 12:30
Chiang Chen Lecture Theater (LT-J)

Prof. Fumihiko ISHIKAWA
Institute of Science Tokyo

Prof. Young Seok JU
Korea Advanced Institute of Science and Technology

Prof. Hai QI
Tsinghua University

Tea break

Prof. Wilson GOH
Nanyang Technological University

Prof. Xiaomeng LI
The Hong Kong University of Science and Technology

Prof.dr.ir. Richard GOOSSENS
Delft University of Technology

香港科技大學 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY
Institute of SCIENCE TOKYO
KAIST
NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE
清華大學 Tsinghua University

Symposium Program

10 July 2025 | 08:45 – 12:30 | Chiang Chen Lecture Theater (LT-J)

08:45 **Welcome Address**

08:50 – 09:15 **"Visionary Initiative for Health", New Endeavor through Cross-disciplinary Effort**

Prof. Fumihiko ISHIKAWA | Professor, Department of Comprehensive Pathology, Advanced Therapeutic Sciences, Graduate School of Medical and Dental Sciences, Institute of Science Tokyo

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09:15 – 09:40 **Cancer Whole-genome Sequences for AI-driven Personalized Oncology**

Prof. Young Seok JU | Associate Professor, Graduate School of Medical Science and Engineering, Korea Advanced Institute of Science and Technology

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09:40 – 10:05 **In Search of Good Memory: From Germinal Centers to Neural Circuits**

Prof. Hai QI | Executive Vice-Chancellor (Research and Strategy) of Tsinghua Medicine, Tsinghua University

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10:05 – 10:25 **Tea Break**

10:25 – 10:50 **Bridging Minds and Machines: The Power of Human-AI Collaboration in Mental Health**

Prof. Wilson GOH | Assistant Professor, Biomedical Informatics, Lee Kong Chian School of Medicine, Nanyang Technological University

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10:50 – 11:15 **Robust AI in Ultrasound: Applications in Fetal Imaging and Cardiology**

Prof. Xiaomeng LI | Assistant Professor, Department of Electronic & Computer Engineering and Department of Computer Science & Engineering, The Hong Kong University of Science and Technology

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11:15 – 11:40 **Scaling Impact: Design, AI and Convergent Health Innovation**

Prof.dr.ir. Richard GOOSSENS | Professor of Physical Ergonomics, Delft University of Technology

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11:40 – 12:10 **Panel Discussion**

Moderator

Prof. Bertram SHI | Professor, Department of Electronic & Computer Engineering; Special Advisor to the Vice-President for Research and Development, The Hong Kong University of Science and Technology

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12:10 **Closing Remarks**

Speakers Profile

Prof. Fumihiko ISHIKAWA

Professor, Department of Comprehensive Pathology, Advanced Therapeutic Sciences,
Graduate School of Medical and Dental Sciences, Institute of Science Tokyo

Dr. Ishikawa received his MD and PhD at Kyushu University, Japan. Following completion of clinical training in hematology/oncology, he joined RIKEN as a principal investigator in 2006, studying in vivo biology of hematopoietic and leukemic stem cells. Dr. Ishikawa pioneered xenotransplantation models: "Humanized Mice" for normal human hematopoiesis/immunity and patient-derived xenograft (PDX) models for leukemia. Through multi-faceted approach to human leukemia integrating PDX models, computational chemistry, structural biology and single cell genomics, Dr. Ishikawa endeavors to find new therapeutic strategies that tailor to individual patients with highly heterogeneous pathophysiology. Since 2016, he has been contributing to global cancer research community as a Senior Editor for Cancer Research at American Association of Cancer Research. Currently, he serves as Program Director at a medical/health part of Visionary Initiative at Institute of Science Tokyo and as Advisor to RIKEN President.

Prof. Young Seok JU

Associate Professor, Graduate School of Medical Science and Engineering,
Korea Advanced Institute of Science and Technology

Prof. Ju serves as a Professor at the Graduate School of Medical Science and Engineering at KAIST (Korea Advanced Institute of Science and Technology), where he directs the Center for Somatic Mutation and Mosaicism (SMM). He received his MD (2007) and PhD (2010) from Seoul National University and conducted postdoctoral research at the Wellcome Sanger Institute. Notably, he conducted the first whole-genome analysis of a Korean individual (Nature, 2009) and discovered the KIF5B-RET fusion oncogene in lung adenocarcinomas (Genome Res, 2011). Presently, his research is primarily focused on understanding somatic mosaicism in the human body. He has authored several papers on somatic mutations acquired during early human embryogenesis (Nature, 2017, 2021), as well as on widespread LINE-1 retrotranspositions in human normal colon epithelium (Nature 2023) and mitochondrial DNA mosaicism in human normal cells (Nature Genetics 2024). Additionally, he is a co-founder of Inocras, a precision medicine company based in San Diego, USA.

Prof. Hai QI

Executive Vice-Chancellor (Research and Strategy) of Tsinghua Medicine, Tsinghua University

Dr. Qi received Bachelor of Medicine from the Beijing Medical University and Ph.D. in Experimental Pathology from the University of Texas Medical Branch at Galveston. After postdoctoral training at NIH with Dr. Ronald Germain, he joined Tsinghua University in 2009, where he is currently a Professor in Immunology. His group studies how durable humoral immune memory is developed, maintained and recalled to action. Dr. Qi is an HHMI International Research Scholar, a New Cornerstone Investigator, and has received numerous awards including a Tan Jiazhen Life Science Innovation Award, a Shulan Medicine Young Scholar Award, an Outstanding Achievement Award for Higher Education Scientific Research by the Ministry of Education, and an AAI-BD Biosciences Investigator Award by American Association of Immunologists.

Speakers Profile

Prof. Wilson GOH

Assistant Professor, Biomedical Informatics, Lee Kong Chian School of Medicine, Nanyang Technological University

Dr. Goh is the Chief Data Scientist at the Centre of AI in Medicine (C-AIM) at Nanyang Technological University and a Senior Lecturer (Associate Professor) at Imperial College London. Dr. Goh's research focuses on leveraging complex multimodal clinical datasets to develop and deploy AI solutions within hospital environments, with a particular emphasis on mental health. His recent work has expanded into implementation science, where he explores data governance issues and investigates how clinicians trust and interact with AI systems. Through his research, Dr. Goh aims to bridge the gap between AI innovation and practical, effective application in healthcare settings.

Prof. Xiaomeng LI

Assistant Professor, Department of Electronic & Computer Engineering and Department of Computer Science & Engineering, The Hong Kong University of Science and Technology

Prof. Li is an Assistant Professor in the Department of Electronic and Computer Engineering and the Department of Computer Science and Engineering at The Hong Kong University of Science and Technology. She also serves as the Associate Director of the HKUST Center for Medical Imaging and Analysis. Prior to joining HKUST, she conducted postdoctoral research at Stanford University and earned her Ph.D. from the Department of Computer Science and Engineering at The Chinese University of Hong Kong. Her research focuses on the interdisciplinary field of artificial intelligence algorithm innovation and clinical applications in medicine. She is dedicated to leveraging artificial intelligence to enhance diagnostic efficiency, optimize clinical treatment environments, and promote the development of patient-centered precision medicine. With extensive research experience in this domain, Dr. Li has authored or co-authored over 80 high-quality journal and conference papers as the first or corresponding author. Her work has been published in prestigious journals such as Nature Communications, IEEE Transactions on Medical Imaging, and Medical Image Analysis, as well as in top-tier computer science conferences including CVPR, NeurIPS, ICCV, MICCAI, and ICLR. Several of her papers were selected for oral presentations at ICCV and MICCAI (with acceptance rates below 3%). Prof Li and her team have achieved outstanding results in multiple international medical imaging competitions, including winning championships in the International Liver Tumor Segmentation Challenge, the Intervertebral Disc Localization and Segmentation Challenge, and the MICCAI Endoscopic Surgical Video Analysis EndoVis-SynISS Challenge. She has also received prestigious awards such as the MICCAI 2020 NIH Award and the MICCAI DeCaF Best Paper Award. She holds 10 international and Chinese patents, demonstrating the translational potential and innovative value of her research contributions.

Prof.dr.ir. Richard GOOSSENS

Professor of Physical Ergonomics, Delft University of Technology

Prof. Goossens is Full Professor of Physical Ergonomics at TU Delft and a leading figure in healthcare innovation through design and technology. He directs the Convergence Health & Technology initiative, uniting medical, engineering, and social sciences to promote lifelong health, equity, and personalized care. A pioneer in human-centered healthcare design, he founded the Medisign track and chairs the TU Delft Health Initiative, representing over 1200 researchers. With a strong focus on co-creation and system transformation, his work spans projects such as the Surgeons Cockpit and Consultation Room of the Future. Internationally recognized, he holds adjunct positions in Australia and China, and was knighted in the Order of the Lion of the Netherlands for his academic contributions. He has supervised over 20 PhDs, authored 140+ papers, and helped secure major funding and partnerships across academia, industry, and healthcare, making him a key driver of innovation in the Dutch and international health ecosystem.