

Advanced Biomedical
Instrumentation Centre

先進生物醫學儀器中心

Advanced Biomedical Instrumentation Centre NEWSLETTER 2024 ISSUE 03



ABIC's Impactful Innovative Researches Win Awards at 49th International Exhibition of Inventions of Geneva

The Advanced Biomedical Instrumentation Centre (ABIC) achieved outstanding and encouraging results at the 49th International Exhibition of Inventions Geneva (IEIG) held from 17 to 21 April 2024, winning a total of 9 awards, including 2 Gold Medals and 7 Silver Medals. This is the second consecutive year that ABIC has participated in this prestigious international event.

ABIC's accolades have more than doubled since its participation last year, surpassing expectations!

These accomplishments of ABIC's research groups in Geneva symbolized a substantial growth in global recognition of its pioneering innovations.

Prof. Anderson Shum, ABIC Centre Director, congratulated the winners on their extraordinary achievements. "ABIC will strive and continue to make significant contributions to society through the commercialization of our innovative solutions, serving the global community with our partners and stakeholders around the world," he said, "and also appreciate our dedicated, passionate and innovative researchers."

The ABIC award-winning projects are:



Gold Medals



Splmage: Large-scale Spinning Imaging for Intelligent Rapid Cell Screening



Scalable wafer-scale ultra-flat ultra-flexible diamond membrane



Silver Medals



A thermal activation-based particle engineering technology for discovery of new drug cocrystals as inhaled therapy

Fibro-gel: Novel personalized wound dressing

Flowformer: Smart Design of Microchannel for Complex Microstructure

Inhale the Future: Embracing the Next Generation of Inhalable Nanomedicine Technologies

Making Insoluble Drugs Soluble

Saliva Mental: Dog Wellness Assessment Ball

Ultrasensitive Rapid Antigen Tests

The First Workshop Between ABIC and University of New South Wales



Dr. David Tsai

Prof. Nigel Lovell

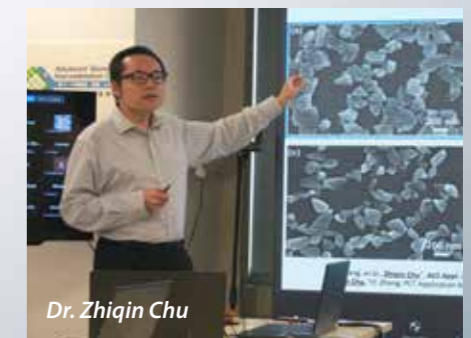
Dr. Thanh Nho Do

The workshop held on 9 May marked the first collaboration between the University of New South Wales (UNSW) and ABIC. It was an honor to have renowned scholars from UNSW joining the event. The invited UNSW speakers and their respective topics were as follows:

Dr. David Tsai,
Senior Lecturer, UNSW
"Nanoscale and Microelectronic Tools for Multi-Scale Neuroscience and Sensory Therapeutics"

Prof. Nigel Lovell,
Scientia Professor and Head of the Graduate School of Biomedical Engineering, UNSW
"The Digital Health Revolution – Convergence of Implantable, Wearable, and Telehealth Technologies"

Dr. Thanh Nho Do,
Scientia Senior Lecturer, Graduate School of Biomedical Engineering, UNSW
"Broadening Horizons of Bio-Robotic Systems in Healthcare" showcased his research in bioelectro



Dr. Zhiqin Chu

This workshop fostered robust connections and networking opportunities between both institutions, paving the way for potential future collaborations and partnerships.

Additionally, ABIC's Principal Investigator, **Dr. ZQ Chu** from the Department of Electrical and Electronic Engineering at HKU, also delivered a presentation with the topic "Breaking the Boundary of Diamond: From Jewellery to Quantum and Beyond".

Pitching Corner 2024: A Platform for Our Young Researchers to Shine

Pitching Corner Success!

We had the privilege of witnessing eight exceptional projects during the Pitching Corner, each showcasing their potential for commercialization and translatability.

We were honored to have an esteemed panel of judges evaluating ABIC shortlisted projects.



Our judges included:
(from left) front row: Prof. Andreas Bausch (TUM), Mr. Emmanuel Hui (CEO of Tiger Jade Pebble Accelerator), Prof. David Mooney (Harvard SEAS), Ir. Dr Alfred Tan (Deputy Director, TTO HKU)
back row: Mr. Tianyi Qin (Investment Principal at Zhenfund) and Ir. Andrew Young (Associate Director of Sino Group - Innovation)

The winners of the Pitching Corner are:



▲ **Most Favorite Pitching Award:**

The "Saliva Mental: Dog Wellness Assessment Ball" developed by Prof. Anderson Shum's team - Dr. Qiaoyi Wang, Mr. Song Chi and Dr. Ziyu Han Eric received the most votes from the attendees.

Congratulations to the Winners!

▼ **Professional Judges' Choice Award:**

The "Image-based Single-cell Screening Assay Platform" developed by Prof. Kevin Tsia's team - Dr. Dickson Siu, Dr. Kelvin LEE, impressed our professional judges the most, earning them the prestigious Talent Pitching Award.



Once again, we extended our deepest gratitude to the judges, attendees, presenters, and everyone involved in making the Pitching Corner a phenomenal success.

Memorandum of Understanding (MOU) with iHealthtech, National University of Singapore

Advanced Biomedical Instrumentation Centre (ABIC) and iHealthtech, National University of Singapore, are pleased to announce signing a Memorandum of Understanding (MOU) on 25 April 2024.

Prof. Anderson Shum, ABIC Centre Director and Prof. CT Lim, iHealthtech Director, expressed their mutual hope that the MOU represents a significant milestone in advancing healthcare technology to drive meaningful innovation. By means of collaboration, both entities seek to capitalize on their respective areas of expertise to propel advancements toward state-of-the-art healthcare solutions.

This partnership will empower ABIC to develop next-generation biomedical instrumentation with enhanced capabilities and clinical impact.

The MOU was signed in the presence of distinguished witnesses: Prof. Max Shen, Vice-President and Pro-Vice-Chancellor (Research); Prof. James Goh, Emeritus Professor, Department of Biomedical Engineering, NUS and Ms. Sara Lo, COO, HKU Inno Holdings Limited.

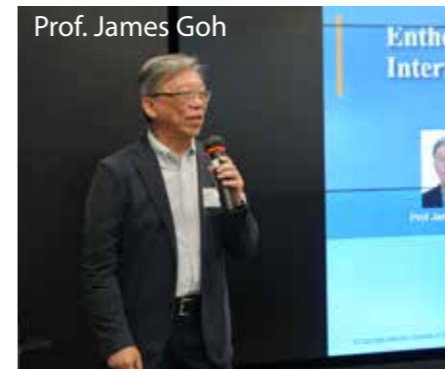


From Left: Ms Sara Lo, Prof. Anderson Shum, Prof. Max Chen, Prof. CT Lim, Prof. James Goh



ABIC Global Workshop on Biomedical Advancement 2024

On 25 April 2024, the Advanced Biomedical Instrumentation Centre (ABIC) successfully hosted a global workshop in collaboration with the National University of Singapore (NUS) and City University of Hong Kong (CityU). The workshop aimed to address cutting-edge applications and complex challenges in novel biomedicine, featuring prominent guest presenters and experts across diverse disciplines, including clinical, experimental, computational, and engineering fields.



Theme 1:

Emerging Trends in Clinical Advancement

The first track delved into the latest advancements revolutionizing clinical practices and healthcare systems worldwide. Keynote speakers shared their perspectives on breakthrough therapies, precision medicine, and the integration of artificial intelligence in patient care.

Participants emphasized the importance of forging stronger connections to accelerate the implementation of these cutting-edge solutions and ensure equitable access to transformative healthcare.



Theme 2:

Advances in Microsystem, Imaging and Soft-Electronic Interfaces: Implications for Biomedical Research and Applications

The second track of the workshop dove into the technological advancements and applications of imaging techniques and soft-electronic interfaces in the field of biomedicine. Keynote speakers presented cutting-edge research and developments in areas such as medical imaging, wearable and implantable devices, biosensors, and bioelectronic interfaces.

The discussion explored the potential of these technologies to enhance diagnosis, treatment, and monitoring of various medical conditions, as well as their impact on personalized medicine and patient care. They also addressed challenges related to the integration of these technologies into clinical practice and highlighted future directions for research and development in this field.



HKU Entrepreneurial Top Talent Meetup



Prof. Anderson Shum, HKU Associate Vice-President (Research and Innovation) and ABIC Centre Director, delivered opening remarks at HKU Entrepreneurial Top Talent Meetup on 22 Feb 2024. This meetup event not only facilitated talent recruitment for start-ups but also offered a unique opportunity to engage with shortlisted TTPS talents.

Our project leaders and representatives of spin-off companies, OptoC Technology Limited and MicroDiagnostics Limited introduced their innovative products and future directions to the talents.



Shenzhen Innovation and Technology Park Partnership Launching Ceremony

On 18 April, The Hong Kong-Shenzhen Innovation and Technology Park Limited (HSITPL) held the Hong Kong-Shenzhen Innovation and Technology Park (HSITP) Partnership Launching Ceremony and signed Memoranda of Understanding (MOUs) with some 60 partners from nine economies.

Witnessed by Chief Executive Li Ka-chiu, Acting Financial Secretary Wong Wai-lun, and Secretary for Innovation, Technology and Industry Professor Sun Dong, Hong Kong-Shenzhen Innovation and Technology Park CEO Ma Weishan and representatives of about 60 companies signed a memorandum at the launch ceremony.

Prof. Anderson Shum, ABIC Centre Director, was pleased to announce that ABIC launched the inaugural partnership with Hong Kong-Shenzhen Innovation and Technology Park (HSITP), the most strategic and influential I&T platform. This officially marked an important milestone for ABIC.

