

*Press Release*

## **Hong Kong Engineering Science and Technology (HKEST) Award Ceremony successfully held at PolyU**

(Hong Kong, 3 June 2023) –The Hong Kong Academy of Engineering Sciences (HKAES) successfully held the 2022 Hong Kong Engineering Science and Technology (HKEST) Award Ceremony cum Distinguished Lectures at The Hong Kong Polytechnic University (PolyU) to recognize and commend outstanding contributions and excellence of individuals or teams aged 45 or below in the field of engineering science and technology (EST) in Hong Kong. The event, co-organized by PolyU, attracted over 250 guests from the HKSAR Government, academia and technology and engineering community, and over 20 HKAES Fellows attended the ceremony.

The inaugural HKEST Award saw three individuals and one team nominated, assessed and ultimately selected for their contributions to a wide range of fields including materials, biomedical engineering and artificial intelligence. The awardees are, in alphabetical order:

• **Ir Prof. Anderson Ho Cheung SHUM**

Professor, Department of Mechanical Engineering, The University of Hong Kong

• **Prof. Xiaogang WANG**

Professor, Department of Electronic Engineering, The Chinese University of Hong Kong and Co-founder of SenseTime Group

• **Prof. Zijian ZHENG**

Chair Professor of Soft Materials and Devices, The Hong Kong Polytechnic University

• **Gense Technologies Limited (Team)**

Dr. Russell Wade CHAN, Co-founder and Chief Technology Officer; Mr Justin Pak Heng CHAN, Co-founder and Chief Executive Officer; and Dr Eddie Chung San WONG, Co-founder and Chief Operations Officer

Ir Prof. The Hon Dong Sun, JP, Secretary for Innovation, Technology and Industry of the HKSAR Government, delivered the opening remarks as a guest of honor. “HKSAR government shares the same vision of promoting technological advancement and nurturing innovation and technology talents and published the Hong Kong I&T development blueprint last December, which establishes a clear development process on systematic, strategic planning for Hong Kong’s I&T development. I’m confident that all the winners today would make good use of the R&D results and innovation solutions to bring substantial benefits to our society and make significant and positive changes to our life.” said Prof. Sun.

Ir Dr Alex Chan, FHKEng, SBS, Senior Vice President of the HKAES and Chairman of the Organizing Committee of the HKEST Award, congratulated the awardees for their remarkable achievements and contributions, and said that the event has provided an excellent platform to showcase Hong Kong's outstanding talents in the field of EST, and has made positive contributions to the promotion of science and technology innovation in Hong Kong. "By organizing this event, our aim is to recognize and draw attention to the remarkable achievements of Hong Kong's talent in EST research and applications, thus continue to bring more new development opportunities for the city's innovation and technology. This will further advance its progress towards becoming an international I&T center and better integrating into the overall development of the country."

Afterwards, Ir Prof. Jin-Guang Teng, MCAS, FHKEng, JP, President of the Hong Kong Academy of Engineering Sciences and President of The Hong Kong Polytechnic University, introduced the vision of the HKAES. He encouraged the young generation to join the I&T industry and contribute their wisdom and strength to the overall enhancement of innovation development in Hong Kong and the Greater Bay Area. Ir Prof. Teng introduced and read the citations of each awardee and the awards were presented by Ir Prof. The Hon Sun together with President Teng and Senior Vice President Chan.

The event also featured keynote speeches by Ambassador George Hara, Group Chairman and CEO of DEFTA Partners and Chairman of the Board, Alliance Forum Foundation, on the topic of "The world is moving towards 'Public Interest'". He pointed out that in today's world, there are significant challenges that we are facing, such as stagnant economic development, an enlarged wealth gap, and short-term investment vision. To overcome these challenges and achieve long-term sustainable growth, it's critical to establish a robust and well-educated middle class globally. This can serve as a solid foundation for a healthy economy and a more equitable distribution of wealth.

Prof. Jinsong Leng, MCAS, Dean of the School of Future Technology, Harbin Institute of Technology, shared insight on Shape Memory Polymer Composites: Programmability, 4D Printing and Applications in his keynote speech. "Currently, there are several shape memory polymers available, including epoxy, cyanate ester, styrene, polyimide, polylactic acid, and polyurethane, which boast adjustable glass transition temperatures. Our team has developed a diverse range of shape memory smart structures, which have already been utilized in aerospace, biomedical, 4D printing, and other industries. These materials hold great potential for future advancements in smart products across numerous fields of science and technology."

Two awardees of The 14th Guanghua Engineering Science and Technology Award presented lectures in the Distinguished Lecture session. Ir Prof. Yuguo Li, Chair Professor of Building Environment, Department of Mechanical Engineering of HKU, discussed in detail how research on the building ventilation and indoor environment can uncover the causes of disease transmission and develop scientific preventive and control measures on the topic of "Environmental Studies of SARS CoV-2 transmission". He pointed out that the required minimum dilution for avoiding airborne infection remains undetermined and poorly understood. Studying new transmission mechanisms can pave the way for not only specifying the minimum dilution but identifying new intervention strategies at community level.

Ir Prof. Kwai Man Luk, Head and Chair Professor of Department of Electrical Engineering, City University of Hong Kong shed light on the topic of Magneto-electric dipole: Advanced antenna technology for wireless connectivity. He discussed how the technology of magneto-electric (ME) dipole has been developed for mobile communications, global navigation receivers, radars, sensors, medical imaging systems and wireless power transfer systems. In comparison to conventional antennas, ME dipoles boast numerous distinguishing features, such as wide bandwidth, low cross-polarization, low back radiation, and consistent gain and beamwidth across operating frequencies.

The HKEST awardees shared their research processes, experiences, and insights from their respective research fields. Ir Prof. Anderson Ho Cheung Shum, Professor of Mechanical Engineering, HKU shared perspectives on generation, manipulation and application of liquid drops. Prof. Xiaogang Wang, Professor of Department of Electronic Engineering from CUHK & Co-founder and Chief Scientist of SenseTime Group gave a fresh outlook on the future development of Artificial General Intelligence (AGI) and its impact on human life. Prof. Zijian Zheng, Chair Professor of Soft Materials and Devices from PolyU discussed his research effort on developing soft and permeable electronics for wearable, skin-attached, and implantable applications. Dr Russell Wade Chan, Mr Justin Pak Heng Chan and Dr Eddie Chung San Wong from Gense Technologies Ltd. provided views on biomedical imaging for telemedicine.

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