HONG KONG ENGINEERING SCIENCE AND TECHNOLOGY (HKEST) AWARD 2024-25
BRIEFING SESSION CUM DISTINGUISHED LECTURES

Date: 5 December 2024, Thursday
Time: 10:00 am - 12:00 noon
Venue: HJ304, 3/F, Core J, PolyU
Language: English

Register Now!

EVENT PROGRAMME

9:30	Registration
10:00 - 10:05	Opening Remarks
10:05 - 10:10	Group Photo
10:10 - 10:50	Distinguished Lecture 1: Advancement of fiber science and innovation for human well being **Prof. Jinlian HU** Chair Professor of Department of Biomedical Engineering, CityU
10:50 - 11:30	Distinguished Lecture 2: Digitizing biomedical analyses **Prof. Anderson Ho Cheung SHUM** Vice-President (Research), Chair Professor of Chemical and Biomedical Engineering, CityU
11:30 - 12:00	Briefing Session of HKEST Award 2024-25
12:00	Closing

Distinguished Lecture 1

Prof. Jinlian HU

Chair Professor of Department of
Biomedical Engineering,
City University of Hong Kong

LECTURE TOPIC

Advancement of fiber science and innovation for human well being

Abstract

The integration of scientific inquiry with practical applications heralds a new era of innovation in fiber and materials technology. Embarking on a transformative narrative, the speaker will illuminate a path of evolution, transitioning from the intricacies of textile structure and mechanics to pioneering ventures in shape memory fibers, artificial spider silk, and nanofiber materials—all aimed at enhancing human well-being. This presentation will highlight pivotal scientific breakthroughs in shape memory fibers, artificial spider silk, and nanofiber materials, showcasing collaborative efforts with industry for inventive applications. Notably, these fibers, fundamental elements in textiles and industrial products, offer boundless potential for groundbreaking applications in fields like artificial skin, wearable electronics, high-performance ropes, and smart fashion, underscoring their versatility and significance in cutting-edge innovation.

Distinguished Lecture 2

Prof. Anderson Ho Cheung SHUM

Vice-President (Research), Chair Professor of Chemical and Biomedical Engineering, City University of Hong Kong

LECTURE TOPIC

Digitizing biomedical analyses

Abstract

Biomedical analyses are important for fundamental biological studies and clinical applications, such as diagnostics. Advances in biochemical and analytical techniques have provided valuable tools for biologists and clinicians in achieving more precise and reliable biomedical analyses. Besides designing new biochemical assays, digitizing assays, for instance, through microfluidic compartmentalization, has also been proven effective in elevating the precision and sensitivity of biomedical analyses. In addition, inspired by all-aqueous phase separation processes in biological systems, all-aqueous formulation also exhibits promise in further enhancing the specificity and sensitivity of biomedical diagnoses and in designing new vehicles for such analyses. In this talk, I will share our works in using microfluidic tools to develop platforms for not just single-cell analyses, but also for investigation of interactions between pairs of single targets. In addition, I will discuss advances in designing all-aqueous compartments and structures that promise to advance biomedical analyses.