

WHAT HKUST PROFESSORS ARE DOING?

Biomedical Engineering

Traditional Chinese Medicine

Alzheimer's Disease

Social Media

Lithium-ion Battery

Endoluminal Technology

Metamaterials

Computational Linguistics

Cloud Computing

LED

S&T Policy

Nano Materials

Smart & Green Building

Green Wastewater Treatment

Stem Cell

5G Technology



Science-for-Lunch

Meet the university professors
Learn the latest in science and technology
Find collaboration and commercialization opportunities

12:30 pm – 2 pm

HKUST Business School Central

15/F, Hong Kong Club Building, 3A Chater Road Central, Hong Kong

<http://science-for-lunch.ust.hk>

Science-for-Lunch is one of the community engagement programs initiated by the Institutional Advancement and Outreach Committee of the University Council.

Program Sponsor:



F&B Sponsor: CAFE DECO GROUP



2013/14 Talks



Smart Signage and Mobile Social Media for Effective Marketing 3 Oct 2013

Prof James She - *Department of Electronic and Computer Engineering*

Digital displays are everywhere, indoors and outdoors and within public transit systems, to advertise campaigns and broadcast information. However, their penetration is limited to the number of people passing by the signage location. Now a patent-pending mobile social media technology developed by HKUST-NIE Social Media Lab will break this barrier, defy the physical limitations of digital displays, and amplify their power and exposure beyond the signage location to the delight of advertisers and audience alike.

How the Brain Works, and Does Not Work 15 Nov 2013

Prof Karl Herrup - *Division of Life Science*

Alzheimer's disease is a progressive neurodegenerative condition that annually costs the healthcare system over US\$150 billion, in the US alone. There is good news: we have learned much about the disease. There is also bad news: we have no cure. The speaker will review the history of therapeutic approaches to Alzheimer's – their successes and failures – and discuss how understanding the role of inflammation, aging and other symptoms may help. He will also discuss non-pharmacological therapies that might help current sufferers.

Language Structures Thought! Learning Relationships in Big Data 13 Dec 2013

Prof Dekai Wu - *Department of Computer Science and Engineering*

Behind today's "big data" buzz lies one of the biggest challenges in artificial intelligence: how can machines automatically learn structural relationships? Thought is driven by the internal languages you use to represent your perception and conception of the environment. Chinese speakers conceive of situations differently than English speakers, for example. Visual, musical, or technical languages that you are fluent in alter the way you think. Even more strongly, in fact, the human capacity to learn from data is based on your ability to learn the relationships between various alternative languages that you use internally. How do we learn new kind of languages? How do we learn to relate these new representations to other previously familiar languages? The answers form nothing less than the key to intelligence.

Both long-term and near-term applications of these modeling advances are virtually limitless. Web translation systems, which we pioneered, are one highly visible real world example. Multilingual data mining is another. This year, we are pioneering new applications in electronic music. Foundations for a new computational technology revolution are rapidly emerging from this area of research.

Shedding Light on Materials Science Research 12 Feb 2014

Prof Benzong Tang - *Department of Chemistry*

Light is one of the seven most important creations done by the God. Light in the form of fluorescence has vital but hidden uses for the modern world. It makes the invisible visible—including the detection of explosives in security screening, environmental monitoring, biological sensing, and monitoring of spread of cancer cells. With high sensitivity, superb specificity and excellent stability, a new class of fluorogenic materials developed at HKUST with "aggregation-induced emission" characteristics have attracted worldwide attention from hospitals and biotech companies. How we commercialize these high-value-added materials is a matter of great urgency and importance.

Innovate or Die—the Fate & Future of Hong Kong-owned PRD Factories 12 Mar 2014

Prof Naubahar Sharif - *Division of Social Science*

Increasingly, Guangdong-based Hong Kong manufacturers find themselves between a rock and a hard place: hemmed in by the global recession and new policies of China which drive up the cost of imported raw materials and labor costs in new employee benefits. Global eco-friendly trends and a stronger Chinese currency also conspire to eliminate most of the cost advantages of operating in Guangdong. These Hong Kong-owned firms now face either a total shut-down or relocation to remoter regions. But hope comes in the form of innovation and R&D, conducted either independently or in collaboration with Mainland China partners.

Are We Playing God with Redesigned Genes? 9 Apr 2014

Prof King Chow - *Division of Life Science*

Modern technologies have made us understand the biological world far better, offering hope for human health, giving us a firm grasp of the mechanisms underlying diseases, enabling their early diagnosis, risk assessment, and opening up new treatment strategies. They even allow us to do the unthinkable - redesigning genes to fight infection, develop wonder drugs, improve the environment and provide cheaper energy. Is synthetic biology the cure to all our ills or are we playing God with it? Do we reject this novel technology or harness it for the benefit of humanity?

New Fuel Cells for Clean and Sustainable Energy Future 16 May 2014

Prof Tim Zhao - *Department of Mechanical Engineering*

Humanity faces both energy shortage and environmental deterioration. Creating the next generation of highly efficient and clean energy becomes the key challenge. Fuel cell is an emerging technology for electric power generation for stationary, mobile and portable applications. Direct alcohol fuel cell is a new type that converts the chemical energy of liquid methanol or ethanol directly into electricity, delivering a low-cost and high energy-conversion system that is low in emissions. It promises to replace conventional batteries and even automotive internal combustion engines, helping China and the world to meet their energy challenge. Come see a demonstration of its prototype.

The Wonderful World of 5G Wireless Systems 18 Jun 2014

Prof Vincent Lau - *Department of Electronic and Computer Engineering*

The world is now using the 4-G wireless systems. But the research community is already hard at work creating the next generation 5-G wireless systems, expected to arrive by 2020. What sets the future 5-G apart from the current 4-G? It will have a data capacity 1000 times greater, and an energy efficiency 1000 times better, translating into faster bit rate. In addition, it will support new application scenarios such as machine-to-machine communications. Such goals are not easily achievable. The talk, in layman language, will take the audience into the new vision and applications as well as technical challenges and opportunities.



“An enlightening talk and I enjoyed *face-to-face discussions* with the professor.”

“Technology has become an integral part of our lives. Science-for-Lunch has enabled me to *catch up with what is going on in the world.*”

“It is more than a lecture. The *topics are unique* and relevant to our daily life.”

“The smart materials developed by HKUST professor have *wide potential applications.* We are already in discussions with the professor on how to commercialize some of his inventions.”

Enquiries

Ms Heidy Wan Tel: (852) 2358 5019 Email: science.for.lunch@ust.hk

<http://science-for-lunch.ust.hk>

How to Register

1. Visit Science-for-Lunch website <http://science-for-lunch.ust.hk> and register online
2. Registration opens one month before the talk
3. Confirmation notification will be sent to you by email about one week before the talk

* *Seats are first-come-first-served.*

* *Priority will be given to new registrants and those who have registered for two previous talks but were not offered a seat due to oversubscription.*

Recommend A Friend

Please fill in the form and we will invite your friend to future Science-for-Lunch.
Please fill in all fields.

Your information

Name

Organization

Friend's contact

Mr / Ms / Mrs / Dr / Prof

Last Name

First Name

Title

Organization

Email Address

Contact Number

Kindly be reminded to have your friends' consent to provide their contact details.

*Please scan the completed form and email to science.for.lunch@ust.hk or fax to (852) 2705 9119.
For enquiries, please contact Ms Heidy Wan at (852) 2358 5019 or email to science.for.lunch@ust.hk.*