

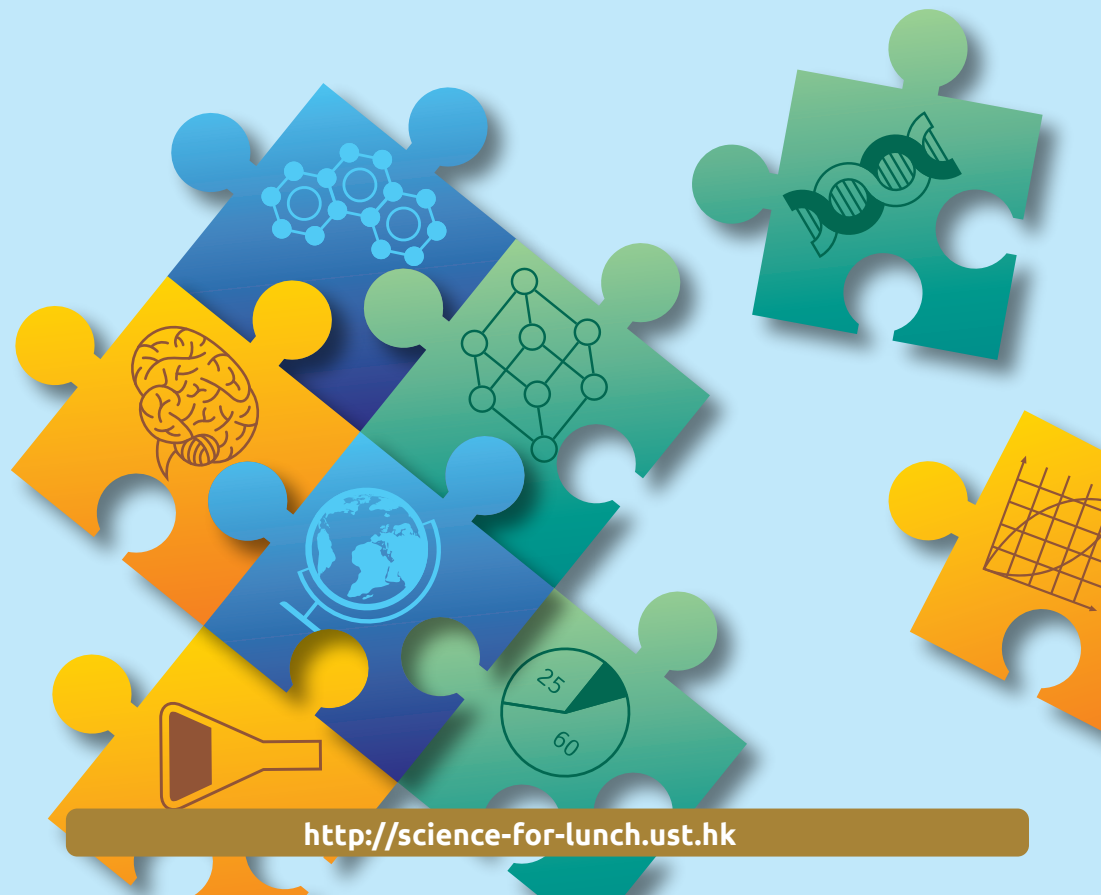
HKUST opened its doors in 1991 and we are celebrating 25th Anniversary in 2016. As part of the celebration, Science-for-Lunch will feature special talks focusing on some of our key strategic areas including Data Science, Autonomous Systems & Robotics, Design Thinking & Entrepreneurship, Sustainability, and Public Policy. There is also a highlight talk by President Prof Tony F Chan on applications of Mathematics in our daily life.



# Science-for-Lunch<sup>TM</sup>

## 25<sup>th</sup> Anniversary Special Series

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



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

# 2015/2016 Talks

## Big Data + Science = Data Science

9 Sep 2015

Prof Qiang Yang

*New Bright Professor of Engineering, Chair Professor and Head of Department of Computer Science and Engineering*



Do you know that the data collected by humans over the past two years is so ‘big’ that it dwarfs all the books ever written? This ‘big data’ phenomenon revolutionizes our thinking not because of its immense volume, but rather by what we can learn from it through the use of increasingly powerful analytic tools. What does big data mean for future scientific discoveries? How will business, educational institutions, governments and society evolve in this new era? The speaker explains the nature of big data and the resulting data science, and highlights key concepts based on the achievements of HKUST’s Data Science projects. Big data applications in online shopping, charity, health analysis and risk management will be shared with the audience.

## New Approaches to “Hushing the Plane”

14 Oct 2015

Prof Xin Zhang

*Swire Professor of Aerospace Engineering, Department of Mechanical and Aerospace Engineering*



Whether you are an aviation enthusiast or not, come join this talk to learn about the environmental and health impact of flying and the latest noise reduction methods and technology. Noise generated during aircraft take-off and just prior to landing in particular is not only an environmental hazard but also adversely affects aircraft performance. The problem is particularly acute in Asia Pacific as development is often coupled with a lack of regulation. HKUST recently introduced a new degree program in aerospace engineering, and will soon be in possession of a state-of-the-art aeroacoustic research tunnel. The speaker who is an expert in aerodynamics and aeroacoustics will share with you some interesting information which you may not know about aircrafts and give an overview of his work at HKUST.

## Building the Entrepreneurship Ecosystem for Hong Kong - Using IoT as an example

17 Nov 2015

Prof Michael Sung

*Director of Center for Industry Engagement and Internship, Associate Director of the Entrepreneurship Center*



The innovation of Internet of Things (IoT)-connected smart devices coupled with big-data analytics technologies promises to ignite the next industrial revolution. Hong Kong can make the most of its proximity to the global electronic and product manufacturing hub in the Pearl River Delta, both in terms of creating IoT devices as well as being a major consumer of these products. The speaker outlines initiatives to strategically align HKUST’s resources to enable smart hardware innovation in Hong Kong and beyond. These include design-thinking programs and competitions to optimize product concepts for commercialization; a manufacturing platform to enable prototyping and low-volume manufacturing; internationally leveraged product innovation; and entrepreneurial resources such as long-term venture mentor resources to guide startups.

## Ten Billion: Implications of Future Population Changes for China and the World

18 Feb 2016

Prof Jack A Goldstone

*Elman Family Professor of Public Policy, Director of Institute for Public Policy*



By 2050, in just 35 years, our world will be completely different. China will be grappling with the consequences of half a century of workforce decline. Europe will be much older, far less white and less Christian. Developing countries will be mainly urban, rather than rural. Africa will have grown enormously - Nigeria alone will have twice as many people as Western Europe - and the continent as a whole will have a population almost as large as that of India and China combined. These changes will pose enormous challenges in regard to migration, economic growth and stable governance. Rising to these challenges will require new forms of international and intergovernmental cooperation, and innovative policies based on embracing this new world. The speaker will share his insights on what these innovative policies could be.

## A New Era in Robotics: Now and Future

10 Mar 2016

Prof Michael Wang

*Departments of Mechanical & Aerospace Engineering and Electronic & Computer Engineering, Director of HKUST Robotics Institute*



Robots are moving from research labs into industry and into our daily lives, frequently featuring in technology headlines described as “the next big thing”. This talk will start with a brief review, taking a look the current state of the field of robotics and the challenges it faces, followed by a rundown of exciting developments at the newly established HKUST Robotics Institute. Through a series of vignettes covering our frontier research efforts on robotics, such as autonomous systems and unmanned vehicles, smart manufacturing and human-robot interaction, we will take the audience on a journey through this fascinating topic.

## How Can Hong Kong Adapt for Climate Change?

12 May 2016

Prof Alexis Lau

*Division of Environment and Department of Civil and Environmental Engineering, Associate Director of Institute for the Environment*



The adverse impact of climate change is becoming more noticeable in every part of the world, particularly coastal and low-lying areas such as the Pearl River Delta. The delta is increasingly prone to flooding because of rising sea levels and frequent occurrence of heavy rain and extreme weather; business operations and hence the region’s economy could potentially be paralyzed. Hong Kong’s resilience is at risk because of its heavy reliance on water and food supplies from the delta, and the fact that the area plays a key role in the supply chain of many industries. The speaker will talk about the potential problems, both environmental and economic, that could be brought about by climate change in the delta, including Hong Kong. He will also share his insights on how we can adapt in order to live with climate change so as to safeguard our lives and businesses.

# What's Math got to do with it? 關你“MATH”事

15 Jun 2016

Prof Tony F Chan

President of HKUST



Mathematics is one of the most inscrutable scientific disciplines. Not only is the language of math difficult for a lay person to penetrate, it is also often not obvious why it is relevant to everyday life. In fact, math is both ubiquitous and central to many technologies that we rely on every day. A fair number of math applications are known to most people, but others are less obvious to us, such as the role it plays in medical devices, finance & business analytics, architecture, logistics and even Hollywood movies. In this talk, Prof Chan talks about the math behind some life-changing findings. He also cites examples of some unexpected roles that math plays in our everyday lives.

## How to Register

1. Please contact Miss Fanny Yue at 2358 5019 or email to [science.for.lunch@ust.hk](mailto:science.for.lunch@ust.hk) for registration or enquiry.
2. Registration opens one month before the talk.
3. Confirmation notification will be delivered to guests by email.
4. For more information, please visit Science-for-Lunch website <http://science-for-lunch.ust.hk>.

\* Registration is required.

## Recommend A Friend

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

### 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](mailto:science.for.lunch@ust.hk) or fax to (852) 2705 9119.

The personal data collected (i.e. name, contact details, and other relevant information) will be used by the University for promotion of our events and news. The data will be only used after owner's consent. In any circumstances, the University will not transfer the personal data to a third party for direct marketing purpose.

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

Science-for-Lunch gathers the inspirational scientists in the *specific fields and research collaboration*.

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

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*.

Professor does a great job of tying technology and creativity together to *deliver the oft-stated innovation*. We are happy to work together and make it happen.

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

Venue

**HKUST Business School Central**

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

Time

**12:30 pm – 2 pm**

Special thanks to



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