

Published by The Straits Times, Wednesday, 20-January-2010
http://www.straitstimes.com/PrimeNews/Story/STIStory_479523.html?sunwMethod=GET

Bringing the best of East and West



Professor Chong has 15 years of experience at A*Star and its predecessor, the National Science and Technology Board.

The provost of the new university says the academic institution will be an opening to any career its students desire, be it researcher, entrepreneur or CEO

HE EARNED his engineering stripes in Japan and the United States, picking up the nuances of two very different cultures, and a Brazilian wife along the way.

Professor Chong Tow Chong, 56, will soon be putting his assimilation skills into high gear again.

As provost of the upcoming Singapore University of Technology and Design (SUTD), he will serve as the bridge between its two partners, which are poles apart.

The venture involves the United States' famous Massachusetts Institute of Technology (MIT) and China's Zhejiang University, ranked the country's No.2 engineering institution.

'Our students will have the best of both worlds, the vigorous technical training of MIT and practical training in China through student and staff exchange,' he said.

'Besides, difference is not something that is bad. In Singapore, we are comfortable dealing with both worlds. Our collaboration with MIT and Zhejiang will bring together the best innovation cultures from the East and West in one place.'

The curriculum is distinctive because of its focus on technology and design, he explained, and would redefine traditional university education.

Students will be given not only academic and technological resources, but also the business skills to sell their own innovations. And they will learn in small clusters - working in laboratories, rather than via lectures in large groups.

Groups would be able to do a practical project, to create, say, the rival to the iPod. Their work would involve interviewing target groups to find out what they want, producing a design and actually forming a new company to market the new product.

Prof Chong is executive director of the Science and Engineering Research Council under the Agency for Science, Technology and Research (A*Star), which oversees seven physical sciences and engineering research institutes.

He also helms A*Star's Data Storage Institute (DSI), and has had some practice at getting chalk to mix with cheese in his 15 years at A*Star and its predecessor, the National Science and Technology Board.

There, he has encouraged researchers from very different disciplines: Engineers, doctors, chemists, biologists and others to come together collaboratively to speak the same language.

'My biggest achievement has been to bring the research institutes' capabilities under one integrated platform, to address the inter-disciplinary research which is critical for industry development,' he said.

'It is not easy; changing mindsets can be quite a challenging task. But I created a platform for them to come together, debate, agree to disagree and ultimately identify areas where they could together create unique solutions to solve complex problems.

'Unless we can do that, there is no reason for big companies to come here. When I first started out at DSI, there were many times I was shown the door pretty fast,' he said.

His success is reflected by groups that are now working together in areas such as medical technology, aerospace and sustainable development.

For example, researchers are developing a 'pill camera' which, when swallowed by the patient, not only takes clear photos inside the body, but can also perform surgery. To develop this device, they need expertise in areas as diverse as signal processing and materials engineering.

The soft-spoken professor has even worked his magic on traditional competitors. For example, he persuaded four aerospace giants - Boeing, EADS, Pratt & Whitney and Rolls-Royce - to come together for the first time to do research under the A*Star aerospace programme.

'Left alone, they would fight like anything, but we succeeded in bringing them to the table because we offered them something they couldn't get anywhere else,' he explained.

He aims to take the same big picture approach at his new job, where students will graduate with a degree in engineering or architecture.

'Engineering is not currently seen as the sexiest choice, but at SUTD, it will be an opening to any career you want, whether it is researcher, entrepreneur or CEO,' he said.

'In this changing world, an engineering and design background will be critical in solving problems as diverse as climate change, ageing populations and urban cities. Such talent will be critical for Singapore's future growth.'

His immediate goal is to get the university ready for its first intake in August next year. This will involve completing curriculum development, recruiting some 50 faculty members and attracting 'the best and brightest' students.

'For Singapore to stay competitive, we need young talents with sound analytical minds who can define and solve future problems that confront our economy and society,' he said.

He has walked the talk.

An accomplished researcher, an experienced administrator and a professor with the National University of Singapore's Department of Electrical and Computer Engineering, he has authored and co-authored more than 320 publications in international journals. He also holds 23 patents.

At DSI, for example, he and his team developed materials to create a type of potentially lucrative computer memory technology called phase-change memory, which increases storage capacity and is touted as a possible replacement for the ubiquitous flash memory.

The new university, which boasts former MIT engineering dean Thomas Magnanti as its founding president, will open at a temporary campus next year and take in 500 undergraduates for a start.

It will then expand to a maximum intake of about 4,000 undergraduates and 2,000 postgraduates at its permanent Changi campus, which will be completed in 2015.

Both local and foreign students will be accepted, mirroring MIT's meritocratic model.

Recounting his own experiences as an engineering undergraduate at the Tokyo Institute of Technology, Prof Chong revealed that it took him more than a year before being admitted into the inner-circle of his Japanese friends.

'The real challenge was not the language, although we had to learn not only conversational, but technical terms. It was understanding the culture and thinking, and even what words to use so as not to cause offence,' he said.

There were other challenges when he was doing his doctoral degree at MIT several years later.

'People were very easy to talk to, They welcomed you with open arms. But I got a big shock at first because I realised I had to be very independent to survive. We were doing such cutting-edge work that when I first started, I couldn't see myself graduating,' he said.

But he ended up enjoying and embracing these differences, and even met his wife, a Brazilian national of Japanese descent, when he was studying in Japan.

It is with the same verve that he is taking on his new post.

Prof Chong, who starts work in June, said that while he enjoyed his work at A*Star, he felt that in next 10 years of his working life, he could make an even bigger difference at the university.

'The most important thing is to be excited about your job. Every morning, when you look in the mirror, ask yourself if you want to go to work. That is a good test. Ultimately, I want to do something meaningful,' he said.

http://www.straitstimes.com/PrimeNews/Story/STIStory_479520.html

An accomplished teacher and researcher

PROFESSOR Chong Tow Chong becomes provost of the Singapore University of Technology and Design in June.

He will give up his current positions as executive director of the Science and Engineering Research Council and the Data Storage Institute at the Agency for Science, Technology and Research (A*Star), as well as that of professor at the National University of Singapore's (NUS) Department of Electrical and Computer Engineering.

A President's Scholar, Prof Chong has spent much of his professional career teaching and doing research in semiconductor materials and devices, processing technologies and optoelectronics.

He has received numerous educational and research awards such as the Teaching Excellence Award from the NUS engineering faculty in 1994 and the Invention Award from glass and chemicals company Asahi Glass in Japan in 1993.

He has also authored and co-authored more than 320 publications in international journals, and holds 23 patents.

Prof Chong, 56, received his undergraduate degree in engineering from the Tokyo Institute of Technology, and has a Doctor of Science from the Massachusetts Institute of Technology.

His wife, 54, is an academic staff member at Republic Polytechnic. They have three children, two daughters aged 24 and 18, and a son, 20.

Professor Low Teck Seng, 54, will take over as executive director of A*Star's Science and Engineering Research Council.

Q & A

What kind of students are you looking for?

Our ideal students are passionate about what they are doing, technologically grounded, have an entrepreneurial spirit and think out of the box. To do that, you need courage and determination.

Ultimately, they must see themselves as tomorrow's leaders and inventors. Our university will prepare them for a PhD career, to be an architect or systems engineer, city planner or CEO. The important thing is that when they approach a problem, they have a solid base and training through technology and design. They have to want to contribute to society and build a better world. Their marks also have to be good. We want to attract the best and the brightest.

What is the advantage of having both the Massachusetts Institute of Technology (MIT) and Zhejiang University on board?

Both are top universities in their respective countries and will complement each other as they bring the best of the East and West to the Singapore University of Technology and Design. Our students can have the best of MIT's vigorous technical training, plus they can be part of the action in China.

Our companies are going to China and developing cities. When you build a city, that is where you have the multi-dimensional challenges, not just in terms of architecture, but sustainability, energy, water, power grids, transport. This calls for looking at problems with a design approach. And with that experience, students will go out to work looking at the big picture.

What are the main challenges you will face?

The three key challenges are to attract top faculty members who are passionate about the vision of the university, to attract the best and brightest students against declining interests in the science and engineering disciplines, and to continue to strengthen the partnerships with MIT and Zhejiang.

Chong Tow Chong named Provost of SUTD

Carried : Channel NewsAsia, Tuesday, 19-January-2010

<http://www.channelnewsasia.com/stories/singaporelocalnews/view/1031665/1.html>



张道昌 (CHS, Pre-U2, 1972)

SINGAPORE: Professor Chong Tow Chong has been appointed as the founding Provost of the Singapore University of Technology and Design (SUTD).

As Provost, Prof Chong will assist SUTD's president Prof Thomas Magnanti in steering the university's development, including key areas such as its educational and research programs.

He will officially take on full responsibilities as Provost from 1 June, although he will be deeply involved in the crucial early stages of SUTD's development.

Prof Chong is currently serving as the executive director of the Science and Engineering Research Council (SERC) and the Data Storage Institute of the Agency for Science, Technology and Research (A*STAR).

He is concurrently a professor with the Department of Electrical and Computer Engineering at the National University of Singapore (NUS).

Prof Chong will continue to hold his appointments as executive director of A*STAR's Data Storage Institute and at NUS until 31 May.

SUTD also announced the appointment of Professor Pey Kin Leong as its Associate Provost (Academic). His appointment took effect on January 1.

SUTD, which expects to start admitting students next year, is distinguished by its unique interdisciplinary academic program which incorporates elements of entrepreneurship, management and design thinking.

Its tripartite partnership involving top universities Massachusetts Institute of Technology (MIT) and Zhejiang University (ZJU) will draw together and create synergies from different cultures of education and research.



