

Speech by Professor Tan Chorh Chuan, President, National University of Singapore, at  
the University Awards 2017

University Cultural Centre, 28<sup>th</sup> April, 7.45 pm

NUS Pro-Chancellors, Mr Po'ad Mattar and Mrs Mattar  
and Mr Chan Sek Keong

NUS Chairman

Award Recipients

Distinguished Guests

Ladies and Gentlemen

Last week, I visited Farrer Park Hospital for the first time. The facilities were excellent but what particularly caught my attention, was the thoughtful referencing to the history of the site. One of its courtyards displayed a model of the Boxkite biplane, to mark the place where the first manned air flight took place in Singapore in 1911.

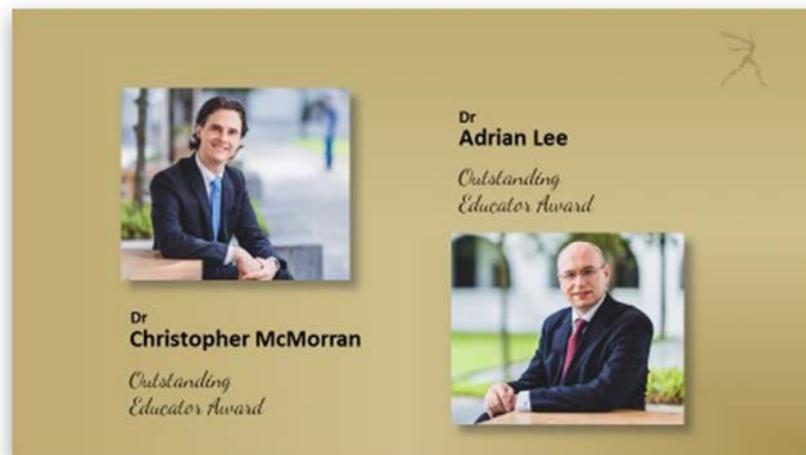
This reminded me of the replica of the plane which Lindbergh used to fly solo across the Atlantic, which I saw in the History Museum in St Louis in the US. It also caused me to reflect on the spirit that drove Lindbergh and others like him, to excel by “being where others aren’t going to be”.

This desire to be different can be a very effective driver of creativity and innovation. In 2010, NUS partnered Dr Allan Snyder, Director of the University of Sydney’s Centre for the Mind, to organise the “What makes a young champion” Forum in conjunction with the inaugural Youth Olympic Games. Allan told me that in his work, the common thread he found amongst young people who excelled across a range of fields, was a deep desire to be different.

In many ways, the Award winners we celebrate tonight have excelled by going beyond the conventional, by not being entrapped by current assumptions, by blazing new pathways; by being different to make a distinctive impact.

By so doing, they have not only achieved remarkable successes for themselves, but more importantly, through their work and spirit of excellence and service, they have added much to the culture and vibrancy of our University, and helped uplift the work and lives of many in the NUS and wider community.

Our Outstanding Educators demonstrate this well. Although they come from very different disciplines – Dr Christopher McMorran from Japanese Studies, and Dr Adrian Lee from Chemistry – each has pioneered innovative technology-enhanced learning approaches, such as the flipped classroom, online research collaboration, and other interactive elements, to promote student engagement and participation. Beyond technology, they have used other novel approaches including role-play, peer reviews, and field-based learning to enhance learning outcomes.



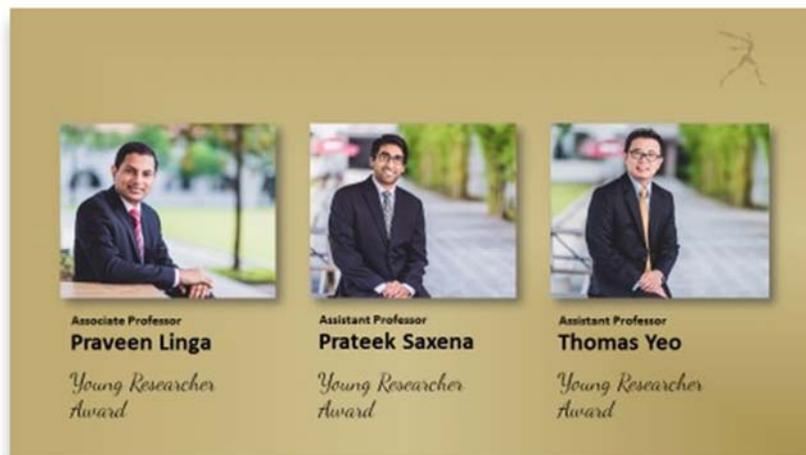
Both educators have a greater aim in mind of encouraging autonomous learning, of fostering self-discovery, and the creation of new ideas and insights through synthesis and unique formulations. By developing very different approaches, they are helping our students to prepare for the future as effective self-directed learners.

I am also very proud of our Young Researcher recipients this evening who have striven to differentiate their work and who stand out because they have succeeded in doing so. They are remarkable scientists who are not just making original research breakthroughs, but also translating their research into impactful applications.

Associate Professor Praveen Linga is an expert in gas hydrates, with a particular emphasis on their behaviours and use in seawater desalination. Given the many challenges in water, energy and the environment that Singapore and the world face, his work has major national, regional and global implications.

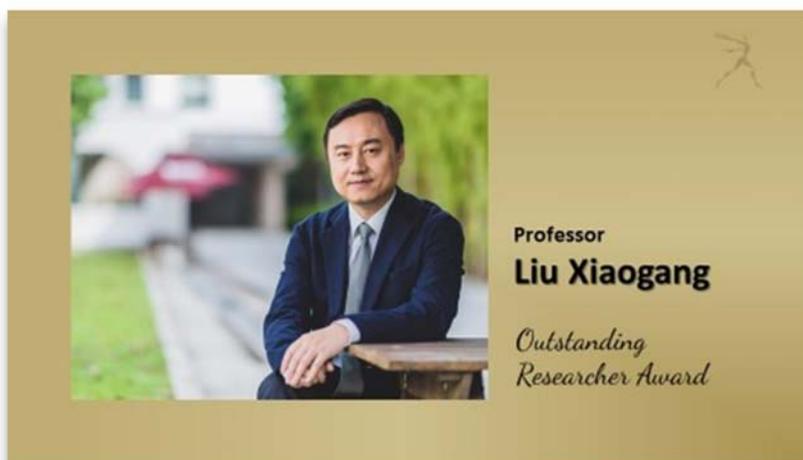
Assistant Professor Prateek Saxena is a leading expert in cryptography and cybersecurity, and featured as one of the top 10 innovators under 35 in Asia, by MIT Technology Review. He has helped create several start-ups, and actively encouraged and mentored students in their start-up ventures. I have a personal vested interest in his work as I am hoping that one day, we can get rid of having to remember all those passwords needed for our many online accounts.

Assistant Professor Thomas Yeo's work is at the nexus of two really exciting fields: big data and neuroscience. His algorithms applied to the analysis of large magnetic resonance imaging data sets, are yielding fresh and powerful insights into key brain conditions such as Alzheimer's disease. Assistant Professor Yeo's work is pushing the frontiers on human networks, cognition and mental health models.



Very big advancements can also spring from studying very small things, in this case, at the nanoparticle level, that is 75,000 times smaller than the width of a human hair. Our Outstanding Researcher recipient, Professor Liu Xiaogang, is a world leading expert on optical nanomaterials, with particular regard to their application in biomedical imaging.

Professor Liu's work is highly acclaimed: last year, he was conferred Singapore's highest honours for exceptional research scientists and engineers, the President's Science Award. Professor Liu was cited for his outstanding contributions on luminescent nanomaterials<sup>1</sup>, which can emit a range of colours, and can be attached to biological cells to aid visualisation. This technology has tremendous potential application for the study of biological systems, including the imaging of cancer cells.



But it was no easy task to develop this rare-earth-doped nanocrystals technology. It took Professor Liu 10 years of hard work with a talented team of multi-disciplinary researchers, to overcome the many hurdles to advance the fundamental knowledge and develop the new technologies for this important area.<sup>2</sup> He is a great exemplar of a talented scholar who has achieved international leadership status in his research, by “being where others aren’t going to be”.

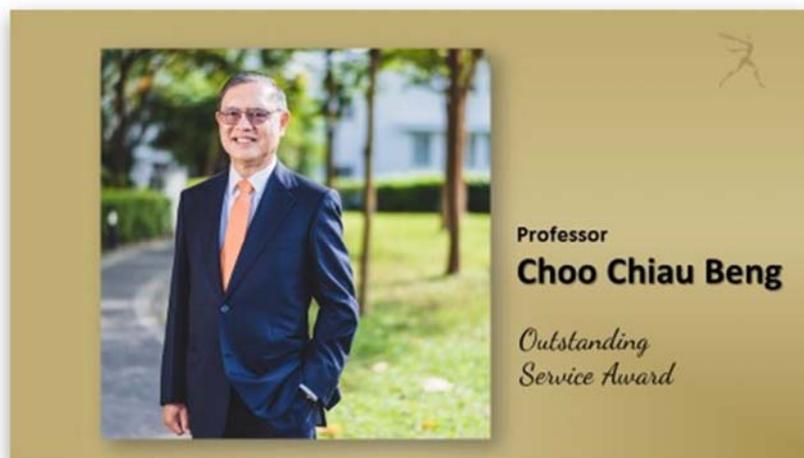
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<sup>1</sup> [https://www.gov.sg/~/sgpcmedia/media\\_releases/mti/speech/S-20161018-2/attachment/SPEECH%20BY%20MR%20S%20ISWARAN%20MINISTER%20FOR%20TRADE%20AND%20INDUSTRY%20\(INDUSTRY\)%20AT%20THE%20PRESIDENT%20SCIENCE%20AND%20TECHNOLOGY%20AWARDS%202016.pdf](https://www.gov.sg/~/sgpcmedia/media_releases/mti/speech/S-20161018-2/attachment/SPEECH%20BY%20MR%20S%20ISWARAN%20MINISTER%20FOR%20TRADE%20AND%20INDUSTRY%20(INDUSTRY)%20AT%20THE%20PRESIDENT%20SCIENCE%20AND%20TECHNOLOGY%20AWARDS%202016.pdf)

<sup>2</sup> <http://www.science.nus.edu.sg/newshub/1907-president-s-science-award-2016>

**The same can be said for the two distinguished individuals we are recognising tonight for their lifetime of dedication and service, which have had such great impact for Singapore and the world.**

Professor Choo Chiau Beng served with great distinction in several top leadership positions at Keppel Corporation for 42 years, before retiring as its CEO in 2013. During his tenure, he led the company to new growth markets in the offshore and marine sector, and many new successes despite the 2009 global financial crisis.



At Keppel, Professor Choo was known for his passion in developing and mentoring talent. He was particularly focused on nurturing individuals who not only had the right skills, but more importantly, the correct values. In an interview as CEO, he said that to “succeed, in Keppel or anywhere else, you will have to be able to continually learn, re-learn, and then learn some more.”<sup>3</sup>

NUS is also honoured to have had a long and productive relationship with Professor Choo. In 2014, he was appointed Provost’s Chair and Professor (Practice) in the Faculty of Engineering and Business School. I am especially grateful that he agreed to be Rector of RC4, sharing freely of his wisdom and experience with the students

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<sup>3</sup> <http://www.egonzehnder.com/the-focus-magazine/topics/the-focus-on-potential/interview/i-knew-from-the-start-that-one-of-my-most-important-tasks-was-considering-who-might-take-over-from-me.html>

and faculty of that Residential College. As a captain of Industry, Professor Choo was a strong advocate of industry-university research partnerships to create value, promote innovation and create sustainable solutions, and he was instrumental in setting up several of these at NUS.

Our other Outstanding Service Award recipient is a stalwart and well-beloved member of our community, Professor Leo Tan. Prof Leo Tan has had a most remarkable career. A Straits Times article once described him as a scientist, educator and eternal optimist, and he is indeed the ultimate 3-in-1 package. His determination was evident as a young man, where he set out to become the first person to receive a marine biology PhD from Singapore, despite his own fear of water, and the even greater unease of his supervising Professors.<sup>4</sup>



But Professor Tan's passion and tenacity won out, and he would remember telling his students later, "If you believe in what you want to be, dream the future and make it a reality." As a young boy, and later as a PhD student, his big dream was to restore the Raffles Museum, which as you all know, he and Professor Peter Ng translated into stunning reality in 2015 in the form of the Lee Kong Chian Natural History Museum.

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<sup>4</sup> Straits Times, Change-Makers: Man of Science and Dreams, 21 March 2014

Professor Leo Tan also played pivotal roles in several major national institutions. Most notably, as Chairman of the National Parks Board from 1998 to 2007<sup>5</sup>, he raised public awareness about conserving our natural biodiversity. He helped moot the idea of Gardens by the Bay in 2003, and led efforts to protect for future generations a ten-hectare stretch of the Labrador coast as a nature reserve.

Ladies and gentlemen, this evening we celebrate the diverse accomplishments of our 8 award recipients, who are striking exemplars of the many accomplished members of our wider NUS community. From young educators and researchers developing and delivering innovative ideas and solutions, to those at the very peak of their accomplishments, to distinguished pioneers who continue to push innovation and new possibilities, we are reminded that the ceaseless spirit of endeavour and excellence will always open new pathways for discovery, fulfilment and contribution.

They also underscore the point that the drive to “be where others aren’t going to be”, to stand out, and to be different, can really make a big difference to others around us, and the wider community and society.

And at the same time, the true NUS spirit of excellence and service will also propel us forward as a dynamic, global university, contributing to the nation, and the world.

Thank you.

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<sup>5</sup> <http://lkcnhm.nus.edu.sg/dna/people/details/16>