

**University Awards Speech by NUS President Prof Tan Chorh Chuan
University Cultural Centre, 29 April 2016**

NUS Pro-Chancellor Mr Po'ad Mattar

NUS Chairman and Trustees

Award Recipients

Distinguished guests

Colleagues, Ladies and Gentlemen

It is very hard to predict the future. Two weeks ago, NUS hosted the Global Learning Council symposium on Technology Enhanced Learning. One of our speakers from Japan, Prof Toyo Iyoshi, showed this slide of how in the 1960s, the people in Japan had envisioned the future of education.



Shigeru Komatsuzaki, 1969

Slide courtesy of Prof Toyo Iyoshi

As you can see, there is a robotic teacher right in front, and she is assisted by robots which move around the class spotting students who are not paying attention, and hitting them with a padded rod.

The point I am making is not that fear improves learning. We can also safely assume that as we look into the future ourselves, it would not involve new hi-tech ways of hitting students on the head.

Instead, we would need to find better ways to prepare our students for a future where technology and globalisation are driving what I would call, the three Commoditisations.

We are all very familiar with the first which is the Commoditisation of Information – vast amounts of information are now freely available anytime, anywhere. Our graduates need to be able to manage huge volumes of data, discern the most essential issues, ask good questions, and see possibilities and solutions which others do not.

Then, there is the Commoditisation of Competencies, which I spoke of at last year's State of the University Address. For example, I am a terrible photographer whereas my wife Evelyn is highly skilled. Yet, if you compare these two photographs which we took while trekking in Ethiopia, I dare say that my photo is as good as hers, maybe even better. The reason is, of course, I was using a very fancy camera. It allows bad photographers like me to become pretty good photographers.



Technology is levelling up skills levels in many areas, from robotic surgery to art. This means that to be exceptional, you need something extra – great creativity, special skills, or deep expertise – to really stand out.

Finally, we might perhaps be witnessing the start of the Commoditisation of Complex Thinking. In 1997, IBM’s Deep Blue outplayed Gary Kasparov in chess; in 2011, IBM’s Watson outwitted two top human champions in the word game Jeopardy; and this year, AlphaGo beat the best human master of the ancient game of Go.

It is very hard to say what all these will lead, but it is clear that as a university, we must reach much higher and more distinctive levels of excellence: in education to ensure our graduates are future-ready; in research, to achieve deep impact; and in service, to make meaningful and significant contributions to society.

This evening, we celebrate the attainments and contributions of nine members of our community who have blazed the trail and shown us how these may be achieved.

Outstanding Educator Awards

Our two Outstanding Educator award recipients have gone the extra mile to help our students develop a “can-do” spirit, and be curious yet critical thinkers.

Associate Professor Paulin Straughan helps students to see the relevance of what they study on their own lives, and to believe they can make a difference to the lives of others. Associate Professor Gerald Koh uses case-based discussions and experiential learning in the community to immerse students in real-world issues and understand the complexities involved in addressing them. Both infuse classroom learning with their passion for research and scientific inquiry, which stimulate curiosity, critical thinking, and imagination.

Young Researcher Awards

As Einstein famously said: “Imagination is more important than knowledge. For knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand”. And indeed, just as creativity and imagination are as vital for truly innovative research as they are for transformative education.

This is amply demonstrated by our Young Researcher Award winners tonight.

Magnetic Resonance Imaging or MRI is very widely used in clinical research. Yet, Associate Professor Qiu Anqi found exciting new ways to enhance our understanding of the brain’s structure and function by pioneering advanced computational methods to analyse MRI images and clinical datasets.

In the very different field of molecular electronics, Associate Professor Christian Nijhuis invented new ways of making devices incorporating a single layer of molecules. These have interesting properties that could potentially speed up data processing while using very low power.

Outstanding Researcher Awards

Beyond imagination, our Outstanding Researcher Award recipients also show how the bringing together of expertise from diverse disciplines can provide ground-breaking research insights which are also of high practical value.

Professor Aung Tin’s research combines research in basic science, clinical medicine and genetics to improve our fundamental understanding of a common, yet serious eye disease. His ground-breaking, world-leading work has extended our ability to prevent visual loss and blindness due to glaucoma.

Professor Sumit Agarwal is a highly creative, “out-of-the-box” thinker who is able to link seemingly unrelated themes and data sources to draw major insights into important real world issues in finance. He is also a master in translating deep research into concrete ideas and concepts that are valuable for policy makers.

The outstanding research work of both has gained global recognition for providing novel insights and in helping to address key challenges in medicine and finance, respectively.

Outstanding Service Award Winners

High and distinctive impact can also be achieved by bringing together ideas and practices from different sectors and traditions, with imagination and creativity.

Let me explain, with the help of these paintings.

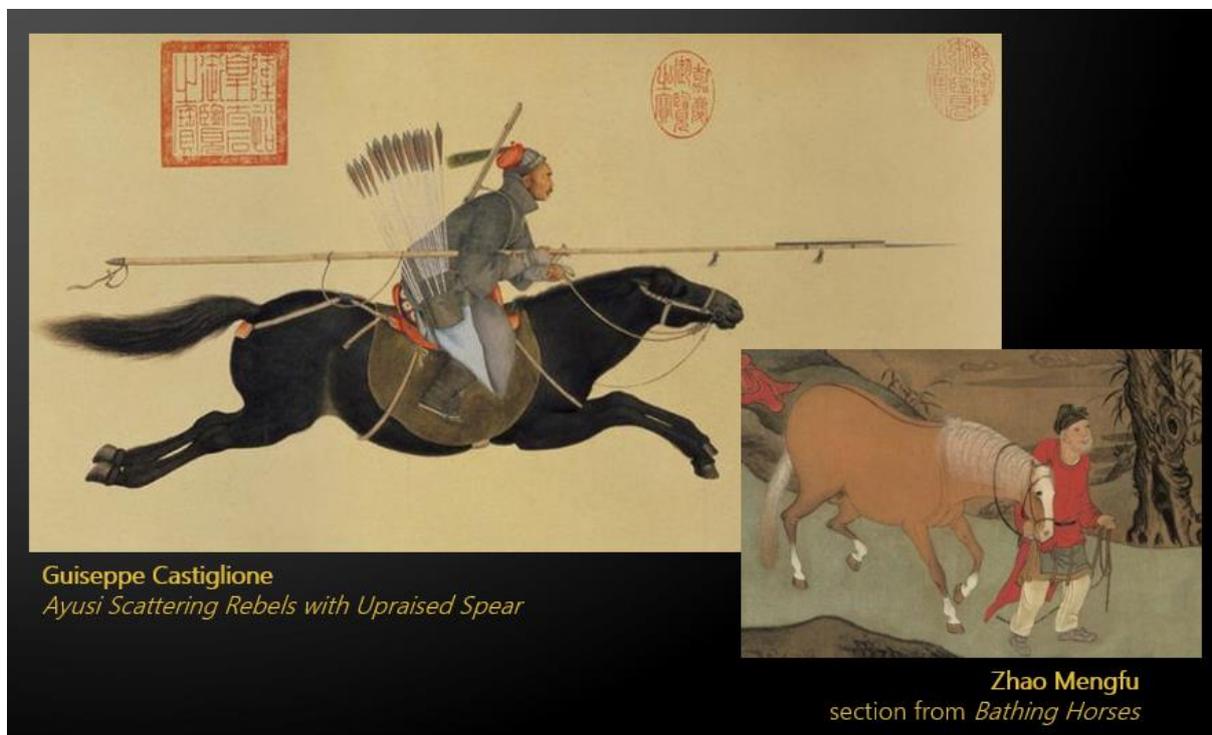


Image credit: Wikimedia Commons

The painting on the left, of a Mongol warrior, is from the National Palace Museum in Taipei. The sense of motion and liveliness is quite striking. Yet, while it uses Chinese themes and materials, it does not quite look like a typical Chinese painting.

This is because the artist Guiseppe Castiglione, blended traditional Chinese techniques with the use of European three-dimensional effects and perspectives to create depth and a different sense of realism.

Castiglione became a painter in the Chinese imperial court, but when he started the Chinese were unaccustomed to Western art. He continually learnt from Chinese court painters, and gained a deep appreciation of the tastes and traditions of the Chinese. Yet, he also integrated key elements of Western technique that made his paintings distinctive and much admired. His work later became very influential and spawned new developments in both Chinese and European art.

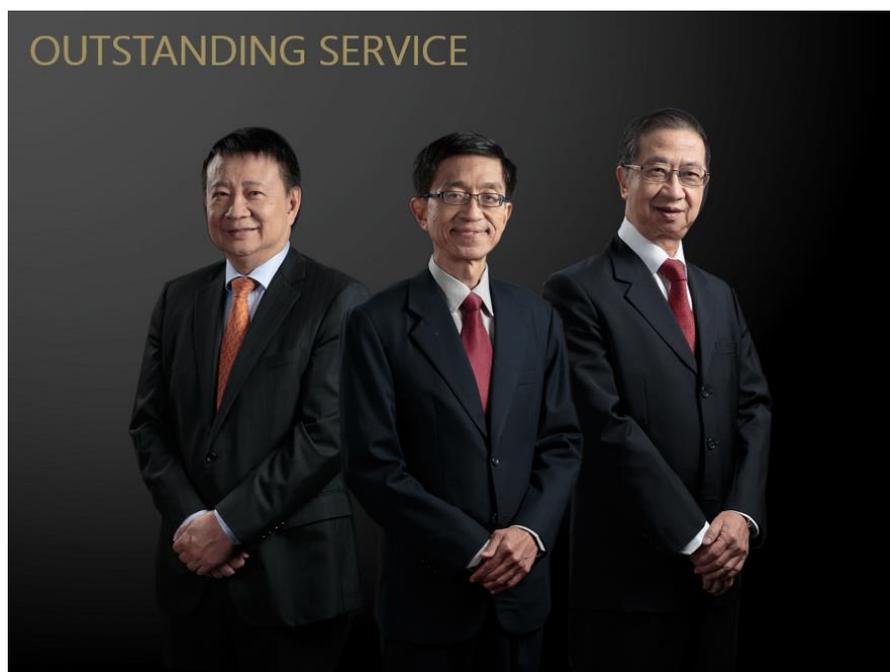
In a somewhat analogous manner, our three Outstanding Service Award recipients tonight are leaders in their respective fields, but they have also served as vital bridges and integrators between these, and NUS and the academic world. By so doing, they have enabled valuable synergies and beneficial outcomes.

Professor Quek Tong Boon has made vital leadership contributions in many areas, particularly in advancing critical technological capabilities in the defence of Singapore. He has been a very successful bridge between the worlds of academia and defence science, creating new and productive synergies that have intellectually challenged the research communities in NUS and the defence research organisations, and substantially raised the quality and impact of their joint research. I was delighted that some of this collaborative work has extended beyond the technical to the artistic – for example when he orchestrated multi-drone calligraphy and light shows with our NUS teams.

Mr Lee Tzu Yang is one of our country's highly respected industry leaders who has also made important contributions in many areas from education, to the entertainment and arts industry. His leadership has been characterised by an impressive ability to

bring together the relevant expertise and experience of each sector, to catalyse fresh thinking and synergies across the sectors. In this and other ways, he has made a difference to the lives of many in Singapore and the region, and contributed to the development and growth of NUS as a leading global university.

Last but certainly not least, we are very proud of the wide ranging and signal contributions that our alumnus, Professor Tan Ser Kiat has made to the public healthcare system over the past 40 years. He has been a highly effective leadership bridge between healthcare and academia, and has done much to promote and advance the growth of both. This is best illustrated by the critical roles he played in the development of the Singapore General Hospital and Singapore Health Services, and the birth and successful growth of the Duke-NUS Medical School.



From left: Mr Lee Tzu Yang, Prof Quek Tong Boon and Prof Tan Ser Kiat

Our Outstanding Service Award recipients are therefore beacons of inspiration to all of us. We thank them for your visionary leadership of various NUS research institutes and initiatives, and for their many distinguished contributions to Singapore and the world.

Closing

In closing, as NUS moves forward into a future with exciting new opportunities and complex challenges, we would need to work even harder and with even greater imagination and creativity. We must also have a renewed sense of urgency about pursuing even higher levels of excellence and impact.

Our award recipients tonight show us how these may be achieved. I hope that this would inspire the entire NUS community, to strive with even fiercer energy and to do even more to help drive NUS forward and upwards as a leading global University centred in Asia.

Once again, my heartiest congratulations to all our award recipients.

Thank you.



From left: Assoc Prof Gerald Koh, Assoc Prof Paulin Straughan, Assoc Prof Christian Nijhuis, Assoc Prof Qui Anqi, Prof Sumit Agarwal, Prof Aung Tin, Mr Lee Tzu Yang, Prof Quek Tong Boon, and Prof Tan Ser Kiat

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