“Engage with us”
NTU President Professor Subra Suresh urges NTU alumni in his first interview with NTULink magazine.
Given NTU's rapid rise as a great global university, it is paramount that the University identifies a new leader who, in driving its next phase of development, would be able to bring it to even greater heights.

After an extensive international search, NTU announced that it had found the ideal candidate for the job and appointed Professor Subra Suresh, an emeritus engineer and scientist, as the University’s fourth President and its inaugural Distinguished University Professor. Taking over the reins from Professor Bertil Andersson, Prof Suresh began his term as NTU President on 1 January 2018.

Calling Prof Suresh an educator, scientist, advisor, inventor, entrepreneur and leader “all rolled into one”, Mr Koh Boon Hwee, Chairman of NTU’s Board of Trustees, wrote in an email to NTU faculty and staff, “Prof Suresh understands the Singapore higher education and research systems, as well as those in North America, Europe, China and India, having actively engaged with various public and private agencies and boards, and as a member of a number of national academies of science and engineering.”

The news made waves in international academic circles, with many wondering how this tiny island-state was able to attract the scientific giant to our shores. No one, however, had any doubt about NTU’s resolve in advancing the frontiers of knowledge and making a difference on the global stage.

A STELLAR RECORD

Prof Suresh brings with him a wealth of experience in higher education and scientific leadership, having donned many hats in senior management positions at universities and agencies across the globe, most recently as President of Carnegie Mellon University from 2013 to 2017.

Born in India and now a US citizen, Prof Suresh completed a Doctor of Science at the Massachusetts Institute of Technology (MIT), before conducting postdoctoral research at the University of California at Berkeley, and at the Lawrence Berkeley National Laboratory.

He began his academic career in 1983 as an Assistant Professor of Engineering at Brown University, and joined MIT a decade later, where he became Dean of Engineering in 2007. When the time came for the then US President Barack Obama to appoint his top science official, he personally handpicked Prof Suresh to lead the National Science Foundation (NSF), an independent federal agency that oversees science and engineering research in the US.

Prof Suresh’s nomination was met with unanimous approval by the US Senate. During his tenure as NSF Director from 2010 to 2015, he managed a US$5 billion annual budget and established initiatives that bolstered blue skies research in the US and abroad.

It seems fitting then that Prof Suresh has the honour of being one of only 19 American scientists elected to all three national academies in the US—the National Academies of Science, Engineering and Medicine—and one of the few elected foreign members of the Chinese Academy of Sciences.

SUSTAINING PROGRESS

Despite his heavy responsibilities in the US, the gentle and soft-spoken professor has been involved in sculpting Singapore’s research landscape for the past 25 years, first as a consultant to the National Science and Technology Board (later renamed A*STAR). He was also the principal faculty coordinator who led the formation of the Singapore-MIT Alliance for Research and Technology (SMART) in 2006.

Calling his appointment at NTU “a privilege”, Prof Suresh thanked his predecessor, Prof Andersson, and expressed his desire to work closely with the extended NTU community, including its faculty and administrative staff, global alumni numbering more than 200,000, benefactors, trustees and students.

His first order of business? A listening tour with staff and faculty, which he embarked on even before his term at NTU began in January 2018.

You have helped mould Singapore’s research landscape and higher education over the past 25 years in various capacities. What are some of the strengths of the Singapore education system?

Asian culture in general values education very strongly, and Singapore is a very good example of how education is emphasised in Asian culture. The Singapore Government is stable and very focussed. It places a very high value on education, not just with words, but equally with consistent support.

The K-12 education in Singapore is very, very strong. In the university system, a number of steps have been taken to elevate tertiary education and research. About 20 years ago, the Government created the Agency for Science, Technology and Research (A*STAR), then the National Research Foundation (NRF) in 2006, followed by the Campus for Research Excellence and Technological Enterprise (CREATE) in 2006.

The Government also created the Research, Innovation and Enterprise Council (RIEC) chaired by Prime Minister Lee Hsien Loong. I actually made a presentation to the first RIE meeting [in 2006]; we are now into the RIE2020 plan with S$19 billion invested [into research and development over five years, from 2016 to 2020].

All of this shows an enormous commitment on the part of the leadership of Singapore to research and higher education.

What about the challenges that remain?

The challenges are also quite significant. The competition is formidable, that's one. For example, since the second half of the 20th century, the US has been the global innovation leader. Singapore is very new to the game because it's a relatively young country, at only 52 years old.

There are also much larger countries in the neighbourhood within Asia: both China and India have risen rapidly in the last 20 to 30 years, and India will have the world's fastest growing large economy this year. So, in terms of attracting talent, while Singapore is moving forward very rapidly, others are not standing still.

And then you have a long history of innovation, entrepreneurship, scholarship and discovery in places like Europe, Japan and Korea.
What defines a great global university? How can NTU become a great global university?

NTU, in less than 20 years, is well on its path to being a great global university, and some might argue that it is perhaps already there.

To be a great global university we have to compete globally in research, and NTU is doing very well here. For example, the number of strong publications by our faculty in prominent journals has grown significantly.

The number of companies from around the world that want to set up corporate labs in NTU has grown, and you’re going to be hearing about a few more in the next few months.

As a great global university, the faculty feel empowered and supported to do cutting-edge research and the best teaching. Teaching and research go hand-in-hand; it’s not ‘I’m a teacher’ versus ‘I’m a researcher’—a great researcher has to be a great teacher and vice versa.

Tell us more about your recent listening tour on campus.

We had a town hall on 10 January 2018 that was attended by nearly 2,000 people, with many more joining via video link. This kind of community engagement will increase, and we’ll have these town halls periodically. This was an administrative move to set up corporate labs in NTU, but my listening tour will also engage in faculty town halls and student town halls.

[The audience was interested in] my take as there has been a change of leadership. How do we move up in education and research? How do we effectively compete?

I’ve been working quietly over the last five months with people on campus. NTU is in a very unique position: we have a large and beautiful campus. We will become a test bed for many things. We will become the largest Smart Campus in the world. We will become a test bed for people on campus. NTU is in a very unique position: we have a change of leadership. How do we move up in education and research? How do we effectively compete?

What was it like to be appointed by the then US President Barack Obama as Director of the US National Science Foundation?

It was one of the most unique life experiences one could have. Also, the opportunity to work with President Barack Obama was very special. He is not only a very warm human being, but also has a very powerful intellect. For somebody who is trained as a lawyer, his knowledge of and appreciation for science is spectacular.

Do you think that your experiences there will help you in your appointment as NTU President?

Very much so. As a university professor, dean or president, I would never have had the same perspectives had I not been NSF Director.

To give you one example, all of the US operations in the continent of Antarctica report to the NSF Director. I actually stood on the South Pole, right at 90 degrees latitude south, on a beautiful sunny summer day in Antarctica, when the highest temperature of the day was -66. It doesn’t matter if it’s in Centigrade or Fahrenheit at that temperature, because it’s really really cold.

I was also dealing with diplomacy for science, because the NSF Director often represents the US as we don’t have a science minister. I even had a US diplomatic passport. I learnt later that all those things were part and parcel of the job.

Is there anything you would like to share with the alumni community?

My message to the alumni community is: engage with us.

Most of our faculty and staff travel all the time. Find out when one of us is coming to your town, host an event and invite people to come. We’ll be happy to host an event in your town with your help and leadership.

What can the alumni look forward to from NTU?

In recent years, NTU has become a leader in technology and flipped classroom learning. We want to put that to good use not only for our students, but also for our alumni.

Wherever you are, the pace of change in the world is such that your current job is going to be outdated in a few years—you’ll need to continually reskill and upskill.

NTU has announced that we will give our alumni credits to take classes, so that you can move up in your career and your profession. We will help you do that—you could be 50 years old, you could be 30 years old, it doesn’t matter.

How have you been adjusting to life here? When you’re not working, what do you do?

I am a photographer. I’m probably not as good as a professional photographer, but over the years, I have taken some unique pictures of melting glaciers in the Arctic, the Singapore Botanic Gardens at 5.30 a.m. when not many people are around, the Imperial Palace gardens in Tokyo, and aboard the US Air Force plane as I was flying to Antarctica. I’m donating some photographs to a museum here; hopefully, you’ll get a chance to see them.

What is your favourite local food?

I like all local food. I like Chinese food, I like Malay food, I like Indonesian food, I like Indian food. I’m primarily a vegetarian who eats fish. All of these local foods are very flavourful, and I like all of them.

Do you know any Singlish phrases?

Well, I’ve been here in Singapore for a long time, lah.
He is an engineer by training
Prof Suresh received his doctorate from MIT in 1981. The mechanical engineer has co-authored more than 300 research papers and has 25 patents to his name.

He’s a renaissance scientist
Prof Suresh is one of only 19 American scientists elected to all three national academies in the US—the National Academies of Science, Engineering and Medicine.

He is also entrepreneurial
In 2002, Prof Suresh co-founded Oraxion Diagnostics, a semiconductor industry start-up which received US$8 million in venture funding before it was acquired in 2006.

He knows Singapore inside out
Prof Suresh has been a friend to Singapore for the past 25 years. Most significantly, he helped to launch the Singapore-MIT Alliance for Research and Technology (SMART) centre.

He is married with two daughters
Prof Suresh is married to Mary Delmar Suresh, a public health consultant, and they have two daughters, Nina and Meera. Nina is a medical doctor, and Meera is a global health professional at a non-profit organisation in the US.

His favourite hobby is taking photos
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He once managed an eye-popping US$7 billion annual budget
In 2011, the then US President Barack Obama appointed Prof Suresh to lead the National Science Foundation, which made him the top science official in the United States.