



**NANYANG
TECHNOLOGICAL
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Institute of Advanced Studies

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南洋理工大学 高等研究所简讯

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C N Yang Scholars Programme

Out of an annual intake of about 5,000 students, no more than 50 will be selected for this prestigious and challenging programme. All successful candidates of the programme will be awarded scholarships, covering tuition fee and living expenses.

As the programme allows the students to graduate in one of the many Science and Engineering degrees offered by NTU, a faculty mentor will be assigned to each student, to guide them through their undergraduate studies. In particular, the mentor, together with the student, will tailor a programme most suited to the student's needs and interests. Upon completion of the highly demanding programme, students will be awarded a special certificate.

Professor Alex Law, Director, C N Yang Scholars Programme, says, "The setup of this programme is an important step in grooming our students to become top-notch scientists and researchers. The students will receive world-class guidance and supervision from NTU faculty."

Dr Su Guanng, President, NTU, adds, "Science and Technology is an important economic multiplier in any country, especially in Singapore, and gives us a competitive edge. NTU, with our established strengths in Science and Technology, is certainly well positioned to nurture such a group of students, who will be able to contribute significantly in pushing the frontiers of Science and Technology. Coupled with the top brains at the Institute of Advanced Studies, we aim to make NTU a place where scientific innovation and discoveries continue to grow."

Professor Yang Chen Ning, Nobel Prize Laureate in Physics, says, "This is a good opportunity for top students who are keenly interested in Science to pursue their passion. I am very happy to see NTU set up this programme to provide outstanding students with a strong foundation in Science and to cultivate their interest in research. Who knows? One day we might see a Nobel Laureate from Singapore."

The C N Yang Scholars Programme will be officially launched by Professor Yang Chen Ning on 10 July 2006. The launch will be followed by a talk on "Symmetry & Physics" by Professor Yang as part of the 37th International Physics Olympiad (IPhO). In addition, Professor Yang will also be sharing his life experience by giving a talk titled "My Life" on 9th July 2006 at 4.30 pm at the Nanyang Auditorium, NTU.

- adapted from Corporate Communications Office, NTU

* More information of the scholars programme can be found at <http://www.ntu.edu.sg/cnyang-scholars>

Nanyang Technological University (NTU) is launching a new programme called the "C N Yang Scholars Programme" to provide top students with a sound and deep foundation in Science with specialized studies in various branches of Science and Engineering. And under the aegis of the Institute of Advanced Studies, scholars will have the opportunity to interact with the top brains in Science and will be given priority to interact with visiting Nobel Laureates.

C N Yang Scholars Programme was named in honour of one of the first Asian Nobel Laureates, Professor Chen-Ning Yang (C N Yang) who won the Nobel Prize for Physics in 1957. This programme aims to prepare top undergraduates who exhibit a deep passion for Science and Technology for the high technology world of the 21st century.

The curriculum is modeled after those of top Science and Technology universities like California Institute of Technology (Caltech) and Massachusetts Institute of Technology (MIT).

In designing the programme, the experiences of Caltech and MIT were tapped in creating a core curriculum that delves deeply into Mathematics, Physics, Chemistry and Biology. Besides taking core courses in Science and Mathematics, C N Yang Scholars are encouraged to engage in research in the many laboratories in NTU. C N Yang Scholars are also required to take humanities courses for a well-rounded education.

“My Experience of Becoming a Scientist”



The Institute of Advanced Studies was honored to invite **Professor Lee Yuan-Tseh**, Nobel Laureate in Chemistry and President of Academia Sinica, to deliver a public lecture on 11 April this year. In the fully packed Lecture Theatre of 1A at Nanyang Technological University, Professor Lee inspired his audience mainly in Mandarin about his journey of becoming a scientist. Titled “**My Experience of Becoming a Scientist**”, Professor Lee’s encounters were filled with interesting insights on his self-development and achievements as a scientist. And contrary to the common belief that a scientist is rational, cruel and even weird, Professor Lee clearly understands that the life of a scientist can also be fun, beautiful and full of aspirations.

Professor Lee’s understanding of what it means to be a scientist was not an overnight’s “invention”; rather, his perspective of a scientist was shaped throughout his entire life, beginning as early as from his childhood days.

Born in the period of time when society was full of political instability, Professor Lee was eventually influenced to believe in using Science and Technology to save his nation.

This strong belief formed in his youth was greatly affirmed when he read Biography of Madam Curie as he grew older. In this book, he was well-aware that life as a scientist or rather, the path to success was not what his parents had educated him when young – that is through slogging and being studious in the institutional education system. Madam Curie’s belief that knowledge is a public asset and should be shared among the human kind, eventually added a new dimension to Professor Lee of what success should be. To Professor Lee, he saw that life has to be fruitful in order to be successful. On top of that, success has to be always dependable on everyone’s efforts.

All these beliefs in Professor Lee were ultimately proven to be scientific. In 1986, he was awarded the Nobel Prize in Chemistry for his outstanding research in finer molecular details of chemical reactions. Today, Professor Lee Yuan-Tseh is the President of Academia Sinica, which is Taiwan’s premier research institute. He is also holding more than 30 honorary doctoral degrees.

* The recorded lecture of “My experience of Becoming a Scientist” can be viewed from the IAS website.





IAS First Workshop Series: **Spintronics**

The Institute of Advanced Studies at the Nanyang Technological University successfully kicked off its first Workshop series from 8 May to 12 May 2006 at Classroom 1 in the School of Biological Sciences. This first workshop focused on an emerging technology that promises to provide new devices that are faster and lower energy consumption: **Spintronics**. Indeed, this new technology is expected to provide impetus to the microelectronics industry comparable to the development of transistor fifty years ago.

The Guest of Honor for the opening talk at the workshop was delivered by Professor Su Guanqing, President of Nanyang Technological University who remarked in his welcome speech that "Such pursuit and sharing of new knowledge is one of the goals of this Institute, and the Institute will be organizing many more such workshops to bring researchers together."

Altogether there were more than 130 participants hailing from 12 countries who attended the five-day workshop. Eminent speakers invited to the workshop were Professors David Awschalom (UCSB, USA), Tomasz Dietl (Warsaw, Poland), Sergei Ganichev (Regensburg, Germany), Allan Macdonald (Texas, USA), Lauren W. Molenkamps (Wuersburg, Germany), Naoto Nagaosa (Tokyo, Japan), Junsaku Nitta (Tohoku, Japan), Stuart Parkin (IBM, USA) and Seigo Tarucha (Tokyo, Japan). They spoke on a range of pedagogical and research topics ranging from theoretical topics on Quantum Spin Hall effect to experimental topics on the magnetic race track as a novel storage class spintronics memory as well as the use of quantum dots for quantum computing.

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