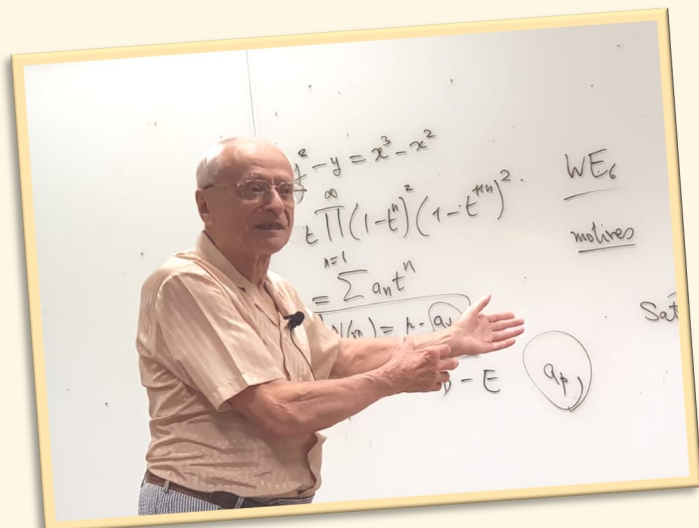


# E-News for Math Students & Alumni

## Staying in touch with You

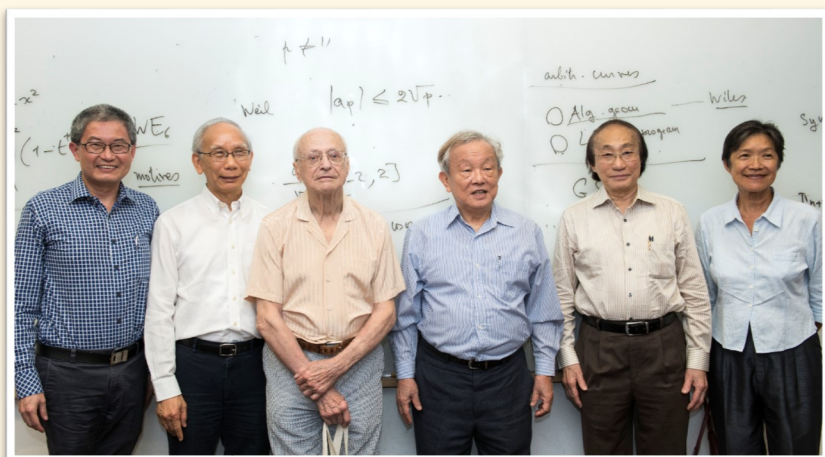


# Oppenheim Lecture 2018

*By Professor Jean-Pierre Serre*

The Oppenheim Lectures is a distinguished lecture series jointly organised by the Department of Mathematics, and the Institute for Mathematical Sciences (IMS) at NUS. It was started in 2015, in honour of Sir Alexander Oppenheim, who held the position of Professor and first Head of the Department from 1931, at the time of Raffles College, until 1959.

The speaker for the 4th Oppenheim Lecture was Professor Jean-Pierre Serre, Professor of Mathematics at College de Paris, who delivered a lecture on “Number of points modulo  $p$  when  $p$  tends to infinity” on 22 June 2018. Professor Jean-Pierre Serre is a French mathematician who has made revolutionary contributions to algebraic topology, algebraic geometry, and algebraic number theory. He was awarded the Fields Medal in 1954 (the youngest ever, at age twenty-seven), the Wolf Prize in Mathematics in 2000, and was the first recipient of the Abel Prize in 2003.



*From left:*

*Professor Ling San, Professor Chong Chi Tat, Professor Jean-Pierre Serre, Professor Peng Tsu Ann, Professor Louis Chen and Dr Cheng Kai Nah*

# University Awards 2018

*The University Awards ceremony honours and recognises members of the NUS community who, through their consistently high performance and resolute commitment, set new benchmarks in the areas of education, research and service.*

**Professor Chong Chi Tat** was conferred the University Outstanding Service Award at the University Awards Ceremony on 14 May 2018. In a career spanning over four decades, Professor Chong has made numerous major contributions in the areas of education, research and administration, both within NUS and beyond. His passion and dedication in research has also inspired generations of students and young staff in the Department of Mathematics.



**Professor Toh Kim Chuan** was conferred the University Research Recognition Award, in recognition of his outstanding research in and fundamental contributions to the theory, practice and application of convex optimisation. Professor Toh was also recently selected as a SIAM Fellow (Class of 2018) for his contributions to the development of algorithms and software for semidefinite programming and, more generally, conic programming.



*One for the album, group photo taken with both award recipients, NUS President Tan Eng Chye, Senior Deputy President and Provost Ho Teck Hua, and colleagues*



# Staff Accolades



Dr Wang Fei received the NUS Annual Teaching Excellence Award for the Academic Year 2016/2017.

The award is given by the University to recognize faculty members who have demonstrated a very high level of commitment to, and achievement of, good teaching.



Professor Gan Wee Teck was named as a fellow of the Singapore National Academy of Science (SNAS), among 10 individuals who have distinguished themselves in the field of science.



Associate Professor Roger Tan was appointed as Associate Vice President at the Office of the President (UPR) from 1 April 2018.

A/P Tan will head the Organisational Excellence Transformation Unit (OETU) within UPR.

# Outreach events

- Bringing a different perspective to textbook mathematics -



## Learning Journey

Designed for pre-university students with interest and aptitude in mathematics and/or who plan to study mathematics at university, the Department hopes to introduce prospective students to NUS' Mathematics course and create awareness on the relevance and applications of mathematics in our daily lives.

Each Learning Journey runs for about four hours. Students are first given an overview of the department and our programmes, followed by two enrichment talks related to the topics in A Level H2 mathematics, such as calculus, sequences and series, and probability, and the opportunity to interact with our professors and undergraduates to find out more about university life and studying mathematics during a tea session.

The Learning Journey ends with an interesting hands-on activity for students to experience graph plotting using the Maple software. First launched in 2015 as part of the department's outreach program, the Learning Journeys have since been held annually (4 sessions from January to April in each year), after receiving positive response from both teachers and students.

The department plans to continue with this as a platform to engage more students who are interested in mathematics.



# Outreach events

- *Bringing a different perspective to textbook mathematics* -

## What is Data Science? Want a career as a Data Scientist ?

For the second year running, the Department of Mathematics held a Data Science and Analytics themed-event on 14 March as a platform to share with the general public and pre-university students about data science, its applications and career prospects. Prof Zhu Chengbo, Head of Department, welcomed the audience and shared more on our programme in Data Science and Analytics, a four-year direct Honours programme, designed with sufficient technical depth to equip graduates with the ability to develop novel analytical tools for new scientific applications and industry problems that will emerge in future. (The programme is offered by the Departments of Mathematics and Statistics & Applied Probability in the Faculty of Science, in conjunction with the School of Computing.)

The department brought together three speakers from different backgrounds to share their expertise.



Our Science alumnus Dr Loke Chok Kang, with diverse experience in his role as Principal Analyst (Human Resource) in the Public Service Division, shared how data science has become a mainstream tool that aids decision-making for businesses, across enterprises, within the private and public sectors, and how data science allows one to derive game-changing insights and make data-driven decisions.

Dr Li Qianxiao (Scientist, Institute of High Performance Computing) zoomed in on the basic theory and applications of reinforcement learning, which is an important branch of machine learning that mimics the way biological agents learn through experience.



Dr Adrian Roellin (Associate Professor at NUS's Department of Statistics and Applied Probability) explained how computers have surpassed humans at playing Go, and how mathematics and big data have played a crucial role in this development.