

E-News for Math Students & Alumni

Staying in touch with You

Celebrating 90 years!



The Department of Mathematics celebrates her 90th anniversary this year! The following commemorative activities were held in March.

(14 March)

Critical Conversations: Rare Events, a public lecture by Emeritus Professor Louis Chen

(15 March)

Celebratory Reception for 90th Anniversary and Opening Show of NUS Arts Festival 2019: A Disappearing Number.

(20 March) 90th Anniversary Distinguished Lecture I: Coxeter groups and regular polyhedra, by Professor David Vogan

Upcoming...

(4 Sept) 90th Anniversary Distinguished Lecture II: The Moment-SOS hierarchy and some of its applications, by Professor Jean-Bernard Lasserre, 2:00pm @ S17 Colloquium Room

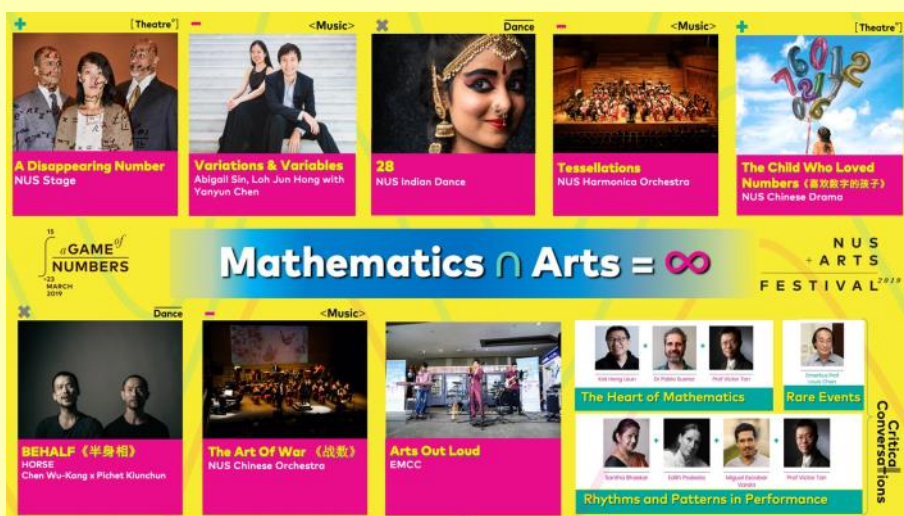
(27 Sept) 90th Anniversary Dinner for staff and guests

Continued on next page...

Celebrating 90 years!

When Raffles College first opened its doors in 1929, the then Science faculty offered courses in Mathematics, Physics and Chemistry. There were only ten students and three faculty members including one in Mathematics. The main figure in the early history of NUS Math was the first Head of the Department, Professor Alexander Oppenheim, a famous number theorist thanks to a conjecture in his name. Professor Alexander Oppenheim served as Head for 28 years from 1931-1959.

The Department remained relatively modest up until the formation of NUS in 1980, which heralded a new era. In tandem with the University's rapid progress, the department has gone through extraordinary growth, in the breadth and scale of its undergraduate programmes, in the depth and vibrancy of its postgraduate programmes, and in the steadily increasing research capacity and reputation of its faculty. Today, NUS Math Department is widely regarded as one of the leading mathematics departments in Asia.



It was timely that the NUS Centre for the Arts had approached us to be their partner in the NUS Arts Festival 2019: A Game of Numbers.

The first of its kind in Singapore, the NUS Arts Festival uncovered and celebrated the infinite possibilities where arts and math meet, and marked an important milestone of the Department — its 90th anniversary since establishing in 1929.

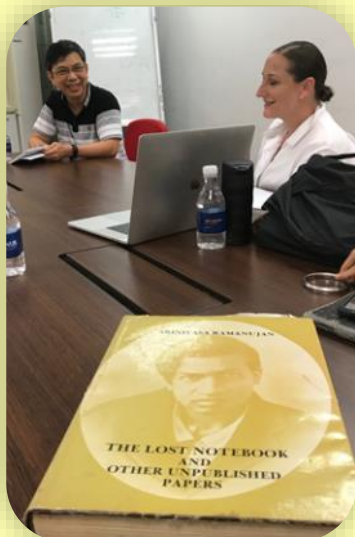


To kick start the celebrations, the department held a reception on 15 March, the opening night of the Arts Festival.

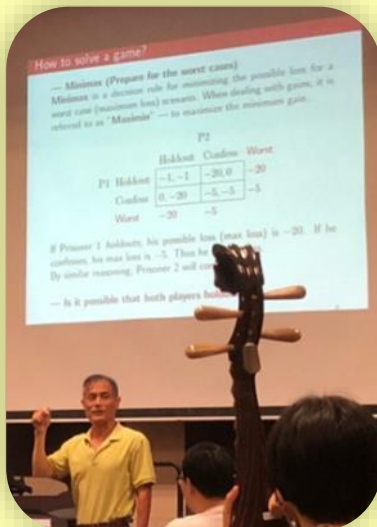
Graced by Guest-of-Honour NUS President Tan Eng Chye who is also our alumnus, the event brought together colleagues, ex-colleagues and alumni who were treated with the opening show: Complicité UK's A Disappearing Number, directed by highly acclaimed theatre director Edith Podesta with professional casts and students from NUS Stage.

Celebrating 90 years!

The department would like to thank our colleagues for contributing time and expertise in this collaboration with the Centre for the Arts:



Prof Chan Heng Huat for sharing mathematical insights on various scenes in the opening show : A Disappearing Number.



Prof Zhao Gong Yun for sharing his knowledge and insights into Game Theory for the Closing Show, The Art of War.



Emeritus Prof Louis Chen for helping one of the Critical Conversations talks called Rare Events.



Prof Victor Tan for assisting the NUS Indian Dance for their performance as well as moderating at the Critical Conversations panel discussions.

University Awards 2019

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.



Dr Vincent Tan, Dean's Chair Associate Professor

University Young Researcher Award 2019

Dr Tan is a rising star in information theory.

He is known internationally for his work on finite length fundamental limits which shape the design of low latency networked communication systems.

Dr Tan holds a joint appointment at the Faculty of Engineering and Department of Mathematics, Faculty of Science.



1st from right:

Dr Vincent Tan with other recipients at the award ceremony on 28 May 2019

Learning Journey: Mathematics beyond books



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, and students are first given an overview of the department and our programmes. This is 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.

For the fifth run this year, we have hosted 135 students from the following schools:

- Anderson Serangoon Junior College
- Anglo Chinese Junior College
- Catholic Junior College
- Eunoia Junior College
- Jurong Pioneer Junior College
- Millennia Institute
- NUS High School of Mathematics and Sciences
- River Valley High School
- Temasek Junior College

What is Data Science?

Want a career as a Data Scientist ?

For the third consecutive year, the Department of Mathematics held a Data Science and Analytics themed event on Saturday 16 March 2019 as a platform to share with the general public and pre-university students about data science, its applications and career prospects. The event was attended by more than 80 participants.

Dr Vincent Tan (Dean's Chair Associate Professor at NUS's Department of Mathematics & Department of Electrical & Computer Engineering gave an introduction to Data Science and discussed with the audience simple models of big datasets from a statistical perspective.

Our Science alumnus **Dr Murphy Choy**, with diverse experience in his role as Director of Analytics, Operations and Technology, SSON Analytics shared how data science techniques can be applied to tackle fake news, as well as the difficulties data scientists encounter in this process.

Dr Feng Ling (Scientist, Institute of High Performance Computing) gave an overview of how numerous data sets are represented in the form of networks consisting of individuals and their relations/connections, ranging from transport to social media. He shared how the analysis of such data structure requires its own mathematical tools.



Dr Murphy Choy



Dr Feng Ling

Staff Awards & Accolades



Tan Chin Tuan Centennial **Professor Shen Zuowei** has been selected as a SIAM Fellow (Class of 2019) for his contributions to approximation theory, wavelet theory, and image processing.



Provost Chair **Professor Dinh Tien Cuong** has been elected the recipient of a Humboldt Research Award.

The Humboldt Research Award is granted in recognition of a researcher's entire achievements to date to academics whose fundamental discoveries, new theories or insights have had a significant impact on their own discipline and who are expected to continue producing cutting-edge achievements in the future.

Staff Promotion



Congratulations to **Dr Dilip Raghavan** on his promotion to Associate Professor, with effect from 1 July 2019.