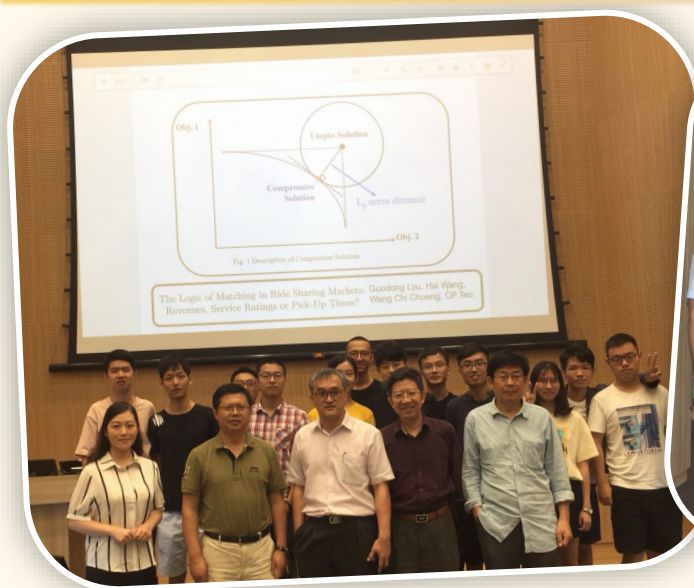# E-News for Math Students & Alumni

~ *Staying in touch with You*~

Visit from Zhejiang University

A delegation of 12 undergraduates from Zhejiang University visited the Department for academic exchange from 16 to 21 July. Led by Professor Sheng Weimin and Professor Li Song, the students visited the Department of Mathematics, Department of Statistics and Applied Probability, Institute of Operations Research and Analytics (IORA), Institute of Data Science (IDS) in NUS.

Visit to IORA and IDS

Group photo at Department of Mathematics

Enrichment talks were given by Dr An Xinliang, Prof Dai Min, Prof Toh Kim Chuan and Prof Zhang De-Qi from Math; A/Prof Chen Ying, A/Prof Li Jialiang and A/Prof Yu Tao from Statistics and Applied Probability, and Prof Teo Chung Piaw from IORA. Students also learnt more about the graduate programmes available and interacted with faculty members and graduate students.

Math Enrichment Camp 18.08.18

Organised annually since 2005, the Enrichment Camp provides a platform for pre-university students to learn about Mathematics and its applications, beyond the realm of textbook mathematics. Through this fun and interactive platform, we hope to inspire prospective students to pursue mathematics related subject when they enter university.

Welcoming everyone to the camp was Prof Zhu Chengbo, Head of Department, who shared how Mathematics was an important language in various aspects of our daily life, and Prof Victor Tan, Assistant Head of Department, who gave an introduction of the department's undergraduate programmes.

There were three talks by Mathematics faculty members to cater to diverse interests, ranging from topology to data science.

Interspersed with talks were screening of short videos on Mathematics and its applications. Interactive quizzes were also held to engage the participants and 9 lucky participants walked away with attractive prizes.

Prof Denny Leung shared with the audience how to have fun with shapes Archimedes style, explaining the Archimedes' method for relating the volumes of the sphere, cone and cylinder by balancing them against each other.

Dr Ng Kah Loon provided a mathematical analysis on the commonly played card game of Blackjack, sharing with the audience some historical developments of the game and a simple introduction to how one can apply Mathematics to study the game and play it better.

Moving on to driverless cars, Prof Ji Hui shared with the audience the mathematical model of the machine vision systems for autonomous driving, as well as how modern mathematics is playing an essential role in the development of intelligent eye for driverless cars.

Congratulations! Class of 2018

The Department warmly congratulates all our students on their graduation and welcomes them to our alumni family!

Recipients of this year's university level medals & prizes . Congratulations!

Undergraduate medals and prizes

Lim Soo Peng Book Prize:	Way Tan
Tan Teck Chwee Book Prize:	Kor Chong Luck Ryan ; Ang Yan Sheng
Leong Teng Kiang Memorial Prize in Mathematics:	Huang Yiming
Ho Family Prize:	Chen Yue
Lijen Industrial Development Medal:	Aik Kian Cheong; Cheong Yu Jia; Meng Xiang
Singapore Mathematical Society Medal and Prize:	Tran Hoang Bao Linh
The Ven. Dr. D. D. Chelliah Gold Medal:	You Pengxin
Medal of Excellence in Mathematics:	Quek Ming Hao
Singapore National Academy of Science (SNAS):	Hong Lu

Graduate medals and prizes

Louis Chen Hsiao Yun Best Dissertation Prize:	Cui Ying
Best Graduate Researcher Award:	Dao Van Thinh

Welcome new faculty members!

Dr. An Xinliang, Assistant Professor

Dr An received his Ph.D. from Princeton University under the guidance of Professor Sergiu Klainerman. His research is on nonlinear wave equations, mathematical physics, geometric analysis, and general relativity.

Dr Gao Fan, Peng Tsu Ann Assistant Professor

Dr Gao received his Ph.D in 2014 from our Department under the guidance of Professor Gan, and was the recipient of the Top Graduate Research Award in the Faculty of Science in 2013. His main research interests include number theory, representation theory on linear algebraic groups and their finite-degree central covering groups, and also some number theoretic applications in statistics.

Dr Jonathan Scarlett, Assistant Professor
joint appointment with Department of Computer Science.

Dr Scarlett obtained his PhD degree in Engineering from the University of Cambridge, United Kingdom in 2015. He obtained his double Bachelor's degrees (Honours) in Electrical Engineering and Computer Science from the University of Melbourne, Australia in 2010. His research interests are in the areas of information theory, machine learning, high-dimensional statistics, and signal processing.

Dr Zhang Tengren, President's Assistant Professor

Dr Zhang received his PhD from the University of Michigan in 2015, under the guidance of Professor Richard Canary. His research interests are in Higher Teichmuller theory, which is a research area that lies in the intersection of low-dimensional topology, Lie theory, gauge theory, and hyperbolic dynamics.

Staff Awards & Accolades

NUS President Professor Tan Eng Chye has been honoured for his outstanding achievements with the prestigious Wilbur Lucius Cross Medal, the highest award that can be bestowed on an alumnus by Yale University and the Yale Graduate School Alumni Association.   The Wilbur Lucius Cross Medal was established in 1966 and is presented each year to honour exceptional alumni in the areas of scholarship, teaching, academic administration and public service. It is named after the distinguished literary critic and Yale alumnus who headed the Graduate School as Dean from 1916 to 1930.

With this latest accolade, Prof Tan joins a small group of only seven mathematicians to have received the coveted Wilbur Lucius Cross Medal since its inception.

Prof Tan was also awarded with an Honorary Doctor of Science from the University of Southampton, UK in recognition of his passion and excellence as an award-winning educator and leader.

Prof Toh Kim Chuan

Professor Toh Kim Chuan, Professor SUN Defeng and their former graduate student **Dr YANG Liuqin** (PhD, 2016) were awarded the triennial Beale-Orchard-Hays Prize for Excellence in Computational Mathematical Programming 2018 by the Mathematical Optimization Society.   The award recognizes their work on SDPNAL+, which is a MATLAB solver for large-scale semidefinite programming with bound constraints.

Associate Professor Vincent Tan has been appointed as Dean's Chair Associate Professor in the Faculty of Engineering.

Staff Awards & Accolades

National Day Award 2018

The Singapore National Day Awards recognize various forms of merit and service to the nation.

Congratulations to our colleagues!

Recipient of the Commendation Medal: *Dr Ng Kah Loon*

Recipients of the Long Service Medal

From left: Mdm Chan Lai Chee, A/Prof Leung Ho-Hon, Denny, A/Prof Leung Man Chun, Prof Sun Yeneng and Mdm Rubiah Bte Tukimin

From left: Prof Tan Eng Chye, A/Prof Tan Hwee Huat, A/Prof Victor Tan, Prof To Wing Keung and Prof Zhu Chengbo

Department

Quality Service Award 2018

From left:

Mdm Chan Lai Chee, Mdm Sim Choo Geok, Lilian and Mr Muhammad Ghazali Bin Sungit

Staff Awards & Accolades

Faculty Awards 2018

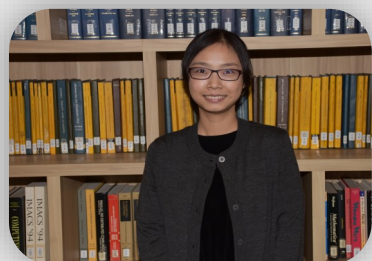**Faculty Teaching Excellence Award** : Dr Li Wei, Dr Tan Ban Pin

Faculty Honour Roll : Dr Ng Wee Seng , Dr Wang Fei

Teaching Assistant (Full-time) Award: Ms Chen Lin, Mr Christian Ong Go

Teaching Assistant (Part-time) Award: Mr Cui Hanwen, Mr Teo Yi Han (not in photo)

Outstanding Scientist Award : Prof Dinh Tien Cuong

Student Accolades

Congratulations to our undergraduates

who have won prizes in the

Simon Marais Mathematics Competition 2018

Individual prize:

1st place - Ang Yan Sheng

8th place - Way Tan

Pairs prize:

1st place (joint)- Lim Li and Ling Yan Hao

3rd place - Bay Wei Heng and Cho Ming En

The Simon Marais Mathematics Competition is an annual competition that aims to:

- Encourage creative mathematical problem-solving among undergraduate students
- Identify talented students across the Asia-Pacific region
- Forge links between academics in the region
- Promote healthy competition among students as well as between universities