

# Singapore Mathematical Society Annual Report 2013

## 1. Membership

Membership in the various categories at the end of 2013 is shown below.

Membership	2012 figures	2013 figures
Honorary	9	9
Life	69	68
Ordinary	80	69
Institution	74	78
Junior	26	24
TOTAL	258	248

## 2. Officials

The officials of the Society for 2013 were:

President :	Professor Ling San	Asst Secretary :	Dr. Toh Pee Choon
Ex-Officio:	Professor Zhu Chengbo	Asst. Treasurer:	A/P Toh Tin Lam
Vice-Presidents :	Dr. Hang Kim Hoo	Asst Editors :	A/P Yap Von Bing
	A/P Victor Tan		Dr. Fedor Duzhin
	Professor Toh Kim Chuan	Committee Members:	Dr Tang Wee Kee
Hon Secretary :	Dr. Ng Kah Loon		Dr. Wang Fei
Hon Treasurer :	A/P Chew Tuan Seng		Mrs. Tan-Foo Kum Fong
Editor :	A/P Victor Tan		Mr. Wang Haibin

## 3. Activities

### a. Publications

- Three issue (Volume 38, Number 2, Volume 39, Numbers 1,2) of the Mathematical Medley.
- SMO 2013 solution book (edited by A/P Tay Tiong Seng, Dr. Toh Pee Choon, A/P Toh Tin Lam and Dr Wang Fei).

### b. Lectures

- SMS Public Lecture - “**Topology, Geometry and Nuclear Physics**” by Professor Brett McInnes (NUS) at LT31, NUS on March 11, 2013. About 300 participants attended the talk.

### c. Distinguished Visitor Program

- The distinguished visitor for DVP 2013 is Professor Imre Leader from University of Cambridge.
- During his visit, Prof Leader conducted
  - Teacher’s workshop on “**How to mark hard questions**” at NUS High School of Mathematics and Science on 27<sup>th</sup> August;
  - Public Lecture on “**Think of a Number**” at NUS High School of Mathematics and Science on 28<sup>th</sup> August;
  - Academic Talk on “**Partition Regular Equations**” at LT2, NTU SPMS on 29<sup>th</sup> August.

### d. Singapore Mathematical Olympiad

- The Society conducted the Singapore Mathematical Olympiad (Junior, Senior and Open Sections) in June 2013. A total of 9164 students from 151 secondary schools and junior colleges participated in the various sections of the Olympiad. For Junior section, there are 4697 participants from 118 schools. For Senior section, there are 2906 participants from 112 schools. For Open section, there are 1561 participants from 75 schools. In addition, a total of 84 contestants from 1 school in Indonesia and 20 contestants from 1 school in Malaysia also sat for three of the competitions, SMO (Junior), SMO (Senior) and SMO (Open).

The SMO Subcommittee 2013 consisted of

- A/P Victor Tan (Chairman)
- Dr Hang Kim Hoo (Deputy Chairman/Administration)
- Dr Toh Pee Choon (Junior Section Coordinator)
- Dr Wang Fei (Senior section Coordinator)
- A/P Toh Tin Lam (Open Section Coordinator)
- A/P Tay Tiong Seng (Round 2 Coordinator)

The following are contributors of competition problems:

Dr Lim Kay Jin, Mr Ng Wee Seng, A/P Yang Yue, Dr Wang Fei, Dr Ho Weng Kin, A/P Dong Fengming, Mr Ho Foo Him, A/P Wong Yan Loi, A/P Denny Leung, A/P Tay Tiong Seng, Dr Teo Kok Ming, A/P Zhao Dongsheng, A/P Toh Tin Lam, A/P Chua Seng Kee.

#### e. International Mathematical Olympiad

- The 54<sup>th</sup> International Mathematical Olympiad was held from 18<sup>th</sup> to 28<sup>th</sup> July 2013, at Santa Marta, Columbia. A total of 527 competitors from 97 competing countries participated in this IMO.
- The Singapore National Team:
 

Team Leader:	Wong Yan Loi	(National University of Singapore)
Deputy Team Leader:	Wang Haibin	(NUS High)
Contestants:	Lee Hua Jun Eugene	(Raffles Institution)
	Lim Jeck	(NUS High)
	Lin Kewei David	(Raffles Institution)
	Ling Yan Hao	(NUS High)
	Liu Yi Jia	(Raffles Institution)
	Tan Siah Yong	(Raffles Institution)
Observers:	Tay Tiong Seng	
	Ivan Loh Yao Chen	(Former Contestant – sponsored by MOE)
	Gabriel Wong Ying Lin	(Former Contestant – sponsored by SMS)
	Thomas Teo Teck Kian	(Raffles Institution)
- SMS sponsored a grant of \$6500 for the observer.
- Gold medal – Lim Jeck  
Silver medals – Lee Hua Jun Eugene, Lin Kewei David, Ling Yan Hao, Liu Yi Jia, Tan Siah Yong.  
Unofficially, the team was ranked 6<sup>th</sup> with a total of 182 points.
- The Singapore International Mathematical Olympiad Committee 2013
  - A/P Tay Tiong Seng (Chairman)
  - A/P Wong Yan Loi (Deputy Chairman)
  - Ms June Tan Hwee Chiat (MOE)
  - Ms Joanne Tay Chiew Hsia (MOE)
  - Prof. Koh Khee Meng

- Prof Tay Yong Chiang
- Dr. Chua Seng Kiat
- A/P Chua Seng Kee
- A/P Denny Leung
- Dr. Jeffrey Pang
- Mr Thomas Teo (Academic coordinator)
- Mr Lu Shang Yi (Academic coordinator)
- Mr Wang Haibin
- Mr Ng Boon Leong

**f. China Western Mathematical Invitation**

- The China Western Mathematical Invitation (CWMI, previously known as CWMO) 2013 was held in Lanzhou, China from 15<sup>th</sup> August to 19<sup>th</sup> August, 2013.
- A total of 21 teams comprising 105 students from Hong Kong, Kazakhstan, Indonesia, Singapore and western provinces of China were invited to take part in the competition.
- The Singapore National Team:  
Team Co-Leader: Mr Lu Shang-Yi and Mr Thomas Teo Teck Kian
- Contestants:
  - Dylan Toh Shan Hong (NUS High)
  - Clarence Chew Xuan Da (NUS High)
  - Tan Likai (Raffles Institution)
  - Chua Zhe Xuan (Raffles Institution)
  - Teh Jiun Harn (Raffles Institution)
  - Glen Lim Wei An (Raffles Institution)
  - Ma Zhao Yu (Raffles Institution)
- Results:
  - Gold Medal: Dylan Toh Shan Hong, Teh Jiun Harn
  - Silver Medal: Clarence Chew Xuan Da, Tan Likai, Chua Zhe Xuan, Glen Lim Wei An, Ma Zhao Yu

**g. China Girls Mathematics Olympiad**

- The 12<sup>th</sup> China Girls Mathematics Olympiad (CGMO 2012) was held in Ningbo, China from 10<sup>th</sup> to 14<sup>th</sup> August 2013.
- A total of 34 teams comprising 133 students from Russia, Philippines, Hong Kong, Macau, Singapore and mainland China were invited to take part in the competition.
- The Singapore National Team:  
Team Leader: Ms Jiang Zewei  
Contestants:
  - Surya Mathialagan (NUS High)
  - Toh Wei Qi (NUS High)
  - Hsiao I Ann (NUS High)
  - Lim Li (NUS High)
- Results:
  - Silver Medal: Surya Mathialagan
  - Bronze Medal: Toh Wei Qi, Hsiao I Ann

**h. Singapore Mathematics Symposium**

- SMS organized the 4th Singapore Mathematics Symposium on 27 September 2013 at SPMS-LT1, NTU.
- The symposium featured 4 speakers – Professor Gan Wee Teck from NUS Mathematics Department, Professor Xu Xingwang from NUS Mathematics Department, Dr Gopal Pandurangan from NTU School of Physical and Mathematical Sciences and Professor Bao Weizhu from NUS Mathematics Department.
- There was also a poster competition participated by graduate students from NUS and NTU. Two winners (Huang Mengmin from NUS and Gao Fan from NUS) were selected by the panel of judges.

#### **i. Singapore Mathematics Project Festival**

The Singapore Mathematics Project Festival 2013 attracted a total of 39 projects. Judging panels made up of Mathematicians and school teachers were formed to grade the presentation of each team. The grades were used as a reference for shortlisting the projects for the final round. Consequently, 5 teams each from the Junior and Senior Sections were invited to the Festival Congress held at Commonwealth Secondary School on 23<sup>rd</sup> March 2013. The judges for the Festival were

##### Junior Section

- Dr. Teo Kok Ming (NIE)
- Dr. Toh Pee Choon (NIE)
- A/P Zhao Dongsheng (NIE)

##### Senior Section

- Dr. Wang Fei (NUS)
- Dr Ku Cheng Yeaw (NUS)
- A/P Tay Tiong Seng (NUS)

#### **j. SMS Essay Competition**

- The theme of the competition in 2013 is “Mathematics and Planet Earth”. It attracted a total of 97 entries for categories A (lower sec), B (upper sec) and C (JC) respectively.
- Panel of judges consists of Dr. Ng Kah Loon (Chair, NUS), Dr Soon Wanmei (NIE), Mr Koh King Koon (RGS), Mr Khoo Hock Heng (RVHS).

Three top prizes were given out in each of the three Categories.

#### **k. Annual Prize Presentation Ceremony**

The Prize Presentation Ceremony was held on 7<sup>th</sup> September 2013, at the NUS High School of Mathematics and Science Auditorium. The event was opened by the President of SMS, Professor Ling San. The Guest-of-Honour was Professor Chong Chi Tat, Director, Institute for Mathematical Sciences, NUS.

The following prizes were given out during the ceremony:

- 7 prizes for the Junior section and 13 prizes for Senior section of Singapore Mathematics Project Festival
- 30 individual prizes and 22 team prizes for the Junior section of Singapore Mathematical Olympiad
- 30 individual prizes and 21 team prizes for the Senior section of Singapore Mathematical Olympiad
- 30 individual prizes and 10 team prizes for the Open section of Singapore Mathematical Olympiad
- Awards for the 6 medallists of the 54<sup>th</sup> International Mathematical Olympiad

Winners of the Foo Kean Pew Memorial Prize project from the Senior section of Singapore Mathematics Project Festival also gave a presentation on their winning projects: “**Computer Solution to Convex 7-gon Happy Ending Problem via Graph to Matrix Transformation**” (Liu Changshou, Philip Ong Zheng Yang, Gao Yuan from Anglo Chinese School (Independent)).

More than 500 people, including School Principals, Teachers, Prize Winners and Parents turned up for the event.

#### l. Enrichment Programmes in Mathematics

- Primary Mathematics Olympiad Programme (PMOP)  
SMS conducted the programme for 6 groups of students at NUS. Altogether 160 students have attended the programme.
- Secondary Enrichment Programme  
SMS conducted 6 sessions of enrichment classes/talks for MOE Gifted Education Programme in 2013. In addition, the Society also conducted another 3 sessions of enrichment classes for two different Secondary Schools.

#### m. SMS Masterclasses

The SMS Masterclass was co-organized with the Singapore Science Center from 2<sup>nd</sup> to 5<sup>th</sup> July 2013. About 20 students participated in this programme. The instructors for the Masterclasses were: A/Prof Chua Chek Beng (NTU) and Dr. David Chew (NUS).

#### 4. SMS Prizes in Mathematics

- The **Singapore Mathematical Society Challenge Trophy** for Junior section (Team) of the Singapore Mathematical Olympiad 2013 was won by Raffles Institution.
- The **Singapore Mathematical Society Challenge Shield** for Open section (Team) of the Singapore Mathematical Olympiad 2013 was won by NUS High School.
- The **Singapore Mathematical Society Prize** for Open section (Individual) of the Singapore Mathematical Olympiad 2013 was awarded to Lim Jeck from NUS High School.
- The **Singapore Mathematical Society Shield** for Senior section of the Singapore Mathematics Project Festival 2013 was won by Anglo Chinese School (Independent).
- The **Singapore Mathematical Society Prize** for the Top Three Performers of the National Mathematical Olympiad of Singapore (Primary) 2013 organized by NUS High School of Mathematics and Science.
- The **Singapore Mathematical Society Gold Medal and Book Prize** 2013 at NUS was awarded to Goh Jun Le, a student in Mathematics with First Class Honours and best overall performance in Mathematics in his undergraduate studies.
- The **Singapore Mathematical Society Gold Medal and Book Prize** 2013 at NTU was awarded to Do Duc Tai, a student in Mathematics with First Class Honours and best overall performance in Mathematical Sciences in her undergraduate studies.
- The **Singapore Mathematical Society Book Prize** 2013 at NIE was awarded to Ng Kok Min, best student teacher in Mathematics in the BSc (Education) program.
- The **Singapore Mathematical Society Book Prize for Engineering Mathematics** 2013 at Temasek Polytechnic was awarded to Gu Bin, the best Mathematics student from Engineering School.

#### 5. Finance

This is dealt with in the Treasurer's report. The Society wishes to record its thanks to the Honorary Auditor, A/P Leung Ka Hin for auditing the accounts.

#### 6. Acknowledgements

The Committee wishes to express its thanks to

- the Ministry of Education and Singapore National Academy of Sciences for their financial support
- the Southeast Asian Mathematical Society for donating the SEAMS prize for the Singapore Mathematical Olympiad
- Raffles Girls' School (Secondary), River Valley High School, Hwa Chong Institution (High School), NUS High School of Mathematics and Science, Paya Lebar Methodist Girls' School (Secondary) and Commonwealth Secondary School for their assistance in the organization of the Singapore Mathematics Project Festival.
- NUS High School of Mathematics and Science for their assistance in the organization of the Prize Presentation Ceremony
- - Department of Mathematics of the National University of Singapore
  - Mathematics Society of the National University of Singapore
  - Mathematics and Mathematics Education Academic Group of the National Institute of Education
  - Division of Mathematical Sciences of Nanyang Technological Universityfor their support and cooperation.

Ng Kah Loon  
Honorary Secretary

February 2014