

# Singapore Mathematical Society Annual Report 2011

## 1. Membership

Membership in the various categories at the end of 2011 is shown below.

Membership	2010 figures	2011 figures
Honorary	9	9
Life	51	67
Ordinary	83	83
Institution	95	103
Junior	45	54
TOTAL	283	316

## 2. Officials

The officials of the Society for 2011 were:

President :	Professor Zhu Chengbo	Asst. Treasurer:	A/P Chew Tuan Seng
Vice-Presidents :	Dr. Hang Kim Hoo	Asst Editors :	A/P Toh Tin Lam
	Professor Ling San		Dr. Fedor Duzhin
	A/P Helmer Aslaksen	Committee Members:	A/P Yap Von Bing
Hon Secretary :	Dr. Ng Kah Loon		A/P Leung Ka Hin
Hon Treasurer :	A/P Victor Tan		Mrs. Tan-Foo Kum Fong
Editor :	A/P Leong Yu Kiang		Mr. Wang Haibin
Asst Secretary :	Dr. Toh Pee Choon		

## 3. Activities

### a. Publications

- One issue (Volume 36, Number 2) of the Mathematical Medley.
- SMO 2011 solution book (edited by A/P Tay Tiong Seng, A/P Toh Tin Lam, A/P To Wing Keung and Dr Wang Fei).
- SMO Five Year Series 2005-2009 (edited by Dr Chua Seng Kiat, A/P Tay Tiong Seng, Mr Thomas Teo Teck Kian, A/P Wong Yan Loi)

### b. Lectures

- SMS Public Lecture - “**Domination in Digraphs**” by Professor Koh Khee Meng (NUS) at LT25, NUS on March 9, 2011. About 100 participants attended the talk.

### c. Distinguished Visitor Program

- The distinguished visitor for DVP 2011 is Professor Frank Morgan from Williams College.
- During his visit, Prof Morgan conducted
  - Academic Talk on “**Isoperimetric Problems**” at LT 5, SPMS, NTU on May 3;
  - Teachers’ workshop on “**Teaching Geometry by Guessing What Soap Bubbles Will Do**” at Clementi Town Secondary School on May 4;
  - Teachers’ workshop on “**Soap Bubbles and Current Research**” at LT 7, NIE on May 5.
  - Public Lecture on “**Soap Bubbles and Mathematics**” at NUS High School of Mathematics and Science on May 6.

#### d. Singapore Mathematical Olympiad

- The Society conducted the Singapore Mathematical Olympiad (Junior, Senior and Open Sections) in June 2011. A total of 10673 students from 139 secondary schools and junior colleges participated in the various sections of the Olympiad.  
For Junior section, there are 5071 participants from 119 schools. For Senior section, there are 3582 participants from 108 schools. For Open section, there are 2020 participants from 68 schools.  
In addition, a total of 62 contestants from 2 schools in Indonesia also sat for two of the competitions, SMO (Junior) and SMO (Senior).

The SMO Subcommittee 2011 consisted of

- A/P Helmer Aslaksen (Chairman)
- Dr Hang Kim Hoo (Deputy Chairman/Administration)
- Dr Wang Fei (Junior Section Coordinator)
- A/P To Wing Keung (Senior section Coordinator)
- A/P Toh Tin Lam (Open Section Coordinator)
- A/P Tay Tiong Seng (Special Rounds Coordinator)

The following are contributors of competition problems:

Dr Toh Pee Choon, Dr Lim Kay Jin, Dr Rudy Sabarudin, Dr Ku Cheng Yeaw, Dr Teo Kok Ming, Mr Ho Foo Him, Mr Ng Wee Seng, A/P Wong Yan Loi, A/P Dong Fengming, A/P Tay Eng Guan, Dr Lee Tuo Yeong, Dr Ho Weng Kin, A/P Denny Leung, A/P Chua Seng Kee

#### e. International Mathematical Olympiad

- The 52<sup>nd</sup> International Mathematical Olympiad was held from 12<sup>th</sup> to 24<sup>th</sup> July 2011, at Amsterdam, Netherlands. A total of 564 competitors from 101 competing countries participated in this IMO.
- The Singapore National Team:

Team Leader:	Wong Yan Loi	(National University of Singapore)
Deputy Team Leader:	Derrick Wong Wei Kit	(Victoria Junior College)
Contestants:	Ang Jie Jun	(Anglo-Chinese School (Independent))
	Ang Yan Sheng	(NUS High)
	Ding Yue	(Raffles Institution)
	Kor Chong Luck Ryan	(Raffles Institution)
	Kuan Jun Jie Joseph	(Raffles Institution)
	Lim Jeck	(NUS High)
Observers:	Tay Tiong Seng	(NUS – sponsored by MOE)
	Thomas Teo Teck Kian	(Raffles Institution)
	Lei Lei	(Former Contestant – sponsored by MOE)
	Wu Jiawei	(Former Contestant – sponsored by SMS)
- SMS sponsored a grant of \$5000 for the observer.
- Gold medals – Ang Jie Jun, Ding Yue, Kuan Jun Jie Joseph, Lim Jeck  
Silver medal – Ang Yan Sheng  
Bronze medal – Kor Chong Luck Ryan  
Unofficially, the team was ranked 3<sup>rd</sup> with a total of 179 points.

- The Singapore International Mathematical Olympiad Committee 2011
  - ☛ 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
  - ☛ Mr Thomas Teo (Academic coordinator)
  - ☛ Mr Lu Shang Yi (Academic coordinator)
  - ☛ Mr Wang Haibin
  - ☛ Mr Ng Boon Leong

#### **f. China Western Mathematical Olympiad**

- The 11th China Western Mathematical Olympiad (CWMO 2011) was held in Jiangxi, China from 28<sup>th</sup> to 31<sup>st</sup> October 2011.
- A total of 28 teams comprising of 112 students from Hong Kong, Kazakhstan, Romania, Singapore and Western China were invited to take part in the competition.
- The Singapore National Team:  
Team Co-Leader: Mr Ng Boon Leong and Ms Joanne Tay Chiew Hsia  
Contestants:
  - ☛ Benny Koh Pei Zhi (Raffles Institution)
  - ☛ Way Tan (Raffles Institution)
  - ☛ David Lin Kewei (Raffles Institution)
  - ☛ Teh Jiun Harn (Raffles Institution)
  - ☛ Bay Wei Heng (Hwa Chong Institution)
  - ☛ Lee Si Ying (Raffles Institution)
  - ☛ Cho Ming En (Hwa Chon Institution)
  - ☛ Ling Yan Hao (NUS High)
- Results:
  - ☛ Silver Medal: Way Tan, David Lin Kewei, The Jiun Harn, Bay Wei Heng, Lee Si Ying, Cho Ming En, Ling Yan Hao
  - ☛ Bronze Medal: Benny Koh Pei Zhi

#### **g. China Mathematics Olympiad**

- The 26<sup>th</sup> China Mathematics Olympiad (CMO 2011) was held in Jilin, Changchun China from 10<sup>th</sup> January to 16<sup>th</sup> January 2011.
- The Singapore National Team:  
Team Co-Leader: Mr Wang Haibin, Ms Xu Luxi  
Contestants:
  - ☛ Lee You Jun (Raffles Institution)
  - ☛ Ang Yan Sheng (NUS High)
  - ☛ Ang Jie Jun (Anglo-Chinese School (Independent))
  - ☛ Ryan Chan Jun Neng (NUS High)
  - ☛ Ding Yue (Raffles Institution)
  - ☛ Kor Chong Luck Ryan (Raffles Institution)
- Results:

- ☛ Silver Medal: Lee You Jun, Ang Yan Sheng
- ☛ Bronze Medal: Ang Jie Jun, Ryan Chan Jun Neng, Ding Yue, Kor Chong Luck Ryan

#### **h. Singapore Mathematics Symposium**

- SMS organized the Second Singapore Mathematics Symposium on 3 May 2011 at LT 5, SPMS, NTU.
- The symposium featured 4 speakers – Professor Frank Morgan (SMS DVP 2011), Professor Yu Shih-Hsien from NUS Mathematics Department, Dr Chen Ning from NTU School of Physical and Mathematical Sciences and Professor Toh Kim Chuan from NUS Mathematics Department.
- There was also a poster competition participated by graduate students from NUS, NTU and NIE. Two winners (Cai Yongyong from NUS and Wang Shenling from NTU) were selected by the panel of judges.

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

The Singapore Mathematics Project Festival 2011 attracted 26 projects from Junior section and 29 projects from Senior section. 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 Hwa Chong Institution on 19 March 2011. The judges for the Festival were

##### Junior Section

- Dr. Teo Kok Ming (NIE)
- Dr. Wang Fei (NUS)
- A/P Toh Tin Lam (NIE)

##### Senior Section

- A/P Denny Leung (NUS)
- Dr Ku Cheng Yeaw (NUS)
- A/P Tay Tiong Seng (NUS)

#### **j. Annual Prize Presentation Ceremony**

The Prize Presentation Ceremony was held on September 3, at the NUS High School of Mathematics and Science Auditorium. The event was opened by the Vice President of SMS, Professor Ling San. The Guest-of-Honour was Mr Lawrence Wong, Minister of State for Education and Defence.

The following prizes were given out during the ceremony:

- 9 prizes for the Junior section and 11 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 20 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 52<sup>nd</sup> International Mathematical Olympiad

Winners of the two Gold medal award projects from the Junior and Senior sections of Singapore Mathematics Project Festival also gave presentations on their winning projects: “**Catalan Numbers:  $m \times n$  and  $l \times m \times n$** ” (for Junior Section) and “**Generalized Quantum Tic-Tac-Toe**” (for Senior Section).

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

#### k. Enrichment Programmes in Mathematics

- Primary Mathematics Olympiad Programme (PMOP)  
SMS conducted the programme for 10 groups of students at NUS. Altogether 277 students have attended the programme.
- Secondary Enrichment Programme  
SMS conducted 6 sessions of enrichment classes/talks for MOE Gifted Education Programme in 2011.

#### l. SMS Masterclasses

Organized by SMS and featuring an invited speaker (Professor Alan Davies) from Royal Institution (Ri) of Great Britain, the Masterclasses was a two-full day programme with four sessions conducted on June 1 and 2, 2011. A total of 36 students participated in this programme. The instructors for the Masterclasses were: Prof Alan Davies (Ri), A/P Yap Von Bing (NUS), Dr Chua Chek Beng (NTU) and Dr Ng Kah Loon (NUS).

#### 4. SMS Prizes in Mathematics

- The **Singapore Mathematical Society Challenge Trophy** for Junior section (Team) of the Singapore Mathematical Olympiad 2011 was won by Raffles Institution.
- The **Singapore Mathematical Society Challenge Shield** for Open section (Team) of the Singapore Mathematical Olympiad 2011 was won by Raffles Institution.
- The **Singapore Mathematical Society Prize** for Open section (Individual) of the Singapore Mathematical Olympiad 2011 was awarded to Lim Jeck from NUS High School.
- The **Singapore Mathematical Society Shield** for Senior section of the Singapore Mathematics Project Festival 2011 was won by NUS High School of Mathematics and Science.
- The **Singapore Mathematical Society Prize** for the Top Three Performers of the National Mathematical Olympiad of Singapore (Primary) 2011 organized by NUS High School of Mathematics and Science.
- The **Singapore Mathematical Society Gold Medal and Book Prize** 2011 at NUS was awarded to Mu Chun, 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** 2011 at NTU was awarded to Yang Lu, 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** 2011 at NIE was awarded to Cai Zhiwen, best student teacher in Mathematics in the BSc (Education) program.
- The **Singapore Mathematical Society Book Prize for Engineering Mathematics** 2011 at Temasek Polytechnic was awarded to Min Lingduo, 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 Ma Siu Lun, 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
- Dunman High School, Hwa Chong Institution, NUS High School of Mathematics and Science, Paya Lebar Methodist Girls' School and Raffles Institution 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 2012