

# Singapore Mathematical Society Annual Report 2010

## 1. Membership

Membership in the various categories at the end of 2010 is shown below.

<b>Membership</b>	<b>2009 figures</b>	<b>2010 figures</b>
Honorary	9	9
Life	50	51
Ordinary	103	83
Institution	85	95
Junior	71	45
<b>TOTAL</b>	<b>318</b>	<b>283</b>

## 2. Officials

The officials of the Society for 2010 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 Victor Tan
Hon Secretary :	Dr. Ng Kah Loon		Mr. Chan Yew Fook
Hon Treasurer :	A/P Chua Seng Kee		Mrs. Tan-Foo Kum Fong
Editor :	A/P Leong Yu Kiang		
Asst Secretary :	Dr. Toh Pee Choon		

## 3. Activities

### a. Publications

- One issue (Volume 36, Number 1) of the Mathematical Medley.
- SMO 2010 solution book (edited by A/P Tay Tiong Seng, A/P Toh Tin Lam, Dr Teo Kok Meng and A/P Yang Yue).

### b. Lectures

- SMS Public Lecture - “**Modeling Large Societies**” by Professor Sun Yeneng (NUS) at LT31, NUS on March 10, 2010. More than 200 participants attended the talk.

### c. Distinguished Visitor Program

- The distinguished visitor for DVP 2010 is Professor Hung-Hsi Wu from University of California at Berkeley.
- During his visit, Prof Wu conducted
  - Academic Talk on “**Sense making and Problem Solving in Math Education in America**” at LT 7, NIE on August 31;
  - Teachers’ workshop on “**The decimal expansion of a fraction**” at Teachers’ Network on September 2;
  - Teachers’ workshop on “**Geometry based on rigid motions**” at NUS High School of Mathematics and Science on September 3.

### d. Singapore Mathematical Olympiad

- The Society conducted the Singapore Mathematical Olympiad (Junior, Senior and Open Sections) in June 2010. A total of 10526 students from 142 secondary schools and junior colleges participated in the various sections of the Olympiad.  
For Junior section, there are 5082 participants from 120 schools. For Senior section, there are 3452 participants from 110 schools. For Open section, there are 1992 participants from 70 schools.  
In addition, schools from regional countries were invited to participate in the Olympiad. A total of 461 contestants from 17 schools in Malaysia, India, Indonesia, Thailand, Vietnam and Myanmar sat for two of the competitions, SMO (Junior) and SMO (Senior).

The SMO Subcommittee 2010 consisted of

- A/P Helmer Aslaksen (Chairman)
- Dr Hang Kim Hoo (Deputy Chairman/Administration)
- A/P Yang Yue (Junior Section Coordinator)
- Dr Teo Kok Meng (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:

Mr David Chia Meng Hwee, Mr Ho Foo Him, Dr Toh Pee Choon, Mr Wang Fei, Dr Teo Kok Ming, A/P Dong Fengming, Dr Ng Wee Leng, A/P Victor Tan, A/P Wong Yan Loi, Dr Lee Tuo Yeong, Dr Ho Weng Kin, Dr Roger Poh, A/P Chua Seng Kee, A/P Denny Leung, A/P Tay Tiong Seng.

#### e. International Mathematical Olympiad

- The 51st International Mathematical Olympiad was held from 2<sup>nd</sup> to 14<sup>th</sup> July 2010, at Astana, Kazakhstan. A total of 523 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:	Lu Shang Yi	(Raffles Institution)
Contestants:	Ang Jie Jun	(Anglo-Chinese School (Independent))
	Ang Yan Sheng	(NUS High)
	Lim Jeck	(NUS High)
	Loh Yao Chen Ivan	(Raffles Institution)
	Vincent Brian Ariffin Tjeng	(Raffles Institution)
	Wong Ying Lin Gabriel	(NUS High)
Observers:	Tay Tiong Seng	(NUS – sponsored by MOE)
	Hang Kim Hoo	(NUS High – sponsored by MOE)
	Thomas Teo Teck Kian	(Raffles Institution)
	Low Soo How	(Raffles Institution)
	Hooi Yew-Kuan Bryan	(Former Contestant – sponsored by MOE)
	Loke Gar Goei	(Former Contestant – sponsored by SMS)
- SMS sponsored a grant of \$5000 for the observer.
- Silver medal – Ang Jie Jun, Ang Yan Sheng, Lim Jeck, Loh Yao Chen Ivan  
Bronze medals – Wong Ying Lin Gabriel  
Honorable mention – Vincent Brian Ariffin Tjeng
- Unofficially, the team was ranked 22<sup>nd</sup> with a total of 117 points.

- The Singapore International Mathematical Olympiad Committee 2010
  - A/P Tay Tiong Seng (Chairman)
  - A/P Wong Yan Loi (Deputy Chairman)
  - Ms June Tan Hwee Chiat (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)

**f. China Western Mathematical Olympiad**

- The 10th China Western Mathematical Olympiad (CWMO 2010) was held in Shanxi, China from 26<sup>th</sup> October to 1<sup>st</sup> November 2010.
- A total of 25 teams comprising of 104 students from Hong Kong, Kazakhstan, Philippines, Indonesia, Singapore and Western China were invited to take part in the competition.
- The Singapore National Team:  
Team Co-Leader: Mr Thomas Teo Teck Kian and Mr Wong Wei Kit Derrick  
Contestants:
  - Ding Yue (Raffles Institution)
  - Kor Chong Luck Ryan (Raffles Institution)
  - Joseph Kuan Jun Jie (Raffles Institution)
  - Lim Jeck (NUS High)
  - Chin Zhan Xiong (Raffles Institution)
  - Wayne Lin (NUS High)
  - Zhang Aidi (Raffles Girls School)
  - Gan Wei Liang (Hwa Chong Institution)
- Results:
  - Gold Medal: Lim Jeck, Kor Chong Luck Ryan
  - Silver Medal: Ding Yue, Chin Zhan Xiong, Joseph Kuan Jun Jie, Wayne Lin, Zhang Aidi, Gan Wei Liang

**g. China Mathematics Olympiad**

- The 25<sup>th</sup> China Mathematics Olympiad (CMO 2010) was held in Sichuan, Chongqing China from 20<sup>th</sup> January to 25<sup>th</sup> January 2010.
- The Singapore National Team:  
Team Co-Leader: Mr Lu Shang Yi and Mr Thomas Teo Teck Kian  
Contestants:
  - Lee You Jun (Raffles Institution)
  - Ivan Loh Yao Chen (Raffles Institution)
  - Vincent Brian Ariffin Tjeng (Raffles Institution)
  - Ang Yan Sheng (NUS High)
  - Ryan Chan Jun Neng (NUS High)
  - Lim Jeck (NUS High)
- Results:
  - Silver Medal: Ivan Loh Yao Chen, Ang Yan Sheng, Ryan Chan Jun Neng.
  - Bronze Medal: Lee You Jun, Vincent Brian Ariffin Tjeng, Lim Jeck.

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

- SMS organized the first Singapore Mathematics Symposium on 26 April 2010 at the Institute for Mathematical Sciences, NUS.
- The symposium featured 3 speakers – A/P Zhang De Qi from NUS Mathematics Department, Dr Chua Chek Beng from NTU School of Physical and Mathematical Sciences and A/P Chan Hock Peng from NUS Department of Statistics and Applied Probability.
- There was also a poster competition participated by graduate students from NUS, NTU and NIE.

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

The Singapore Mathematics Project Festival 2010 attracted 36 projects from Junior section and 30 projects from Senior section. This was similar to last year's figures (68). 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 Nanyang Girls' High School on 20 March 2010.

The judges for the Festival were

##### **Junior Section**

- Dr. Soon Wan Mei (NIE)
- Dr. Teo Kok Meng (NIE)
- A/P Toh Tin Lam (NIE)
- A/P Zhao Dongsheng (NIE)

##### **Senior Section**

- A/P Helmer Aslaksen (NUS)
- Dr. Ng Kah Loon (NUS)
- A/P Danny Leung (NUS)

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

- The theme of the competition in 2010 is the application of mathematics in Social Sciences. It attracted a total of 53 entries for categories A (lower sec), B (upper sec) and C (JC) respectively.
- Panel of judges consists of Dr. Ng Kah Loon (Chair, NUS), Mrs Tan Chiu Jin (TJC), Mr Teo Gene En (VJC) and Mr Ong Yen Chin (NYP).
- Three top prizes were given out in each of the three Categories.

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

The Prize Presentation Ceremony was held on September 4, at the NUS High School of Mathematics and Science Auditorium. The event was opened by the President of SMS, Prof Zhu Chengbo. The Guest-of-Honour was Professor Hung-Hsi Wu of the University of California at Berkeley, who was also the Distinguished Visitor of SMS in 2010.

The following prizes were given out during the ceremony:

- 8 prizes for the Junior section and 8 prizes for Senior section of Singapore Mathematics Project Festival
- 30 individual prizes and 21 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

- 9 prizes for the SMS Essay Competition
- Awards for the 6 medallists of the 51<sup>st</sup> International Mathematical Olympiad

Winners of the two Gold medal award projects from the Senior section of Singapore Mathematics Project Festival also gave presentations on their winning projects: “**Uniquely list coloring of K6 bipartite graph**” and “**A general method of drawing biplanar crease patterns**”.

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 12 groups of students at NUS. Altogether 334 students have attended the programme.
- Secondary Enrichment Programme  
SMS conducted 8 sessions of enrichment classes/talks for secondary schools and MOE Gifted Education Programme in 2010.

#### **m. SMS-Royal Institution Masterclasses**

Jointly organized by SMS and Royal Institution (Ri) of Great Britain, the Masterclasses was a two-full day programme with four sessions conducted on November 29 and 30, 2010. A total of 35 students from 10 schools participated in this programme. The instructors for the Masterclasses were: Prof Alan Davies (Ri), A/P Helmer Aslaksen, A/P Tay Eng Guan and A/P Sinai Robins.

### **4. SMS Prizes in Mathematics**

- The **Singapore Mathematical Society Challenge Trophy** for Junior section (Team) of the Singapore Mathematical Olympiad 2010 was won by NUS High School of Mathematics and Science.
- The **Singapore Mathematical Society Challenge Shield** for Open section (Team) of the Singapore Mathematical Olympiad 2010 was won by Hwa Chong Institution.
- The **Singapore Mathematical Society Prize** for Open section (Individual) of the Singapore Mathematical Olympiad 2010 was awarded to Loh Yao Chen Ivan from Raffles Institution.
- The **Singapore Mathematical Society Shield** for Senior section of the Singapore Mathematics Project Festival 2010 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) 2010 organized by NUS High School of Mathematics and Science.
- The **Singapore Mathematical Society Gold Medal and Book Prize** 2010 at NUS was awarded to Teo Wei Hao, 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** 2010 at NTU was awarded to Tan Ming Ming, 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** 2010 at NIE was awarded to Huang Wei Qiang, best student teacher in Mathematics in the BSc (Education) program.
- The **Singapore Mathematical Society Book Prize for Engineering Mathematics** 2010 at Temasek Polytechnic was awarded to Wang Shuai, 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 Goh Say Song, 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, Gan Eng Seng School, Hwa Chong Institution, NUS High School, Raffles Girls' Secondary School, Paya Lebar Methodist Girls' School, Raffles Institution and Nanyang Girl's High 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 2011