

# Singapore Mathematical Society

## Annual Report 1989

### I Membership

Membership in the various categories at the end of 1989 is shown below. The figures in parentheses represent the corresponding figures for 1988:

Honorary :	6	(6)
Individual :	179	(176)
Institution :	28	(30)
Junior :	28	(34)
Reciprocal :	2	(2)

### II Officials

The officials of the Society for 1989 were:

President :	Prof Louis Chen Hsiao Yun
Vice-Presidents :	Prof Chen Chuan Chong Prof Chong Chi Tat Prof Lam Lay Yong
Hon. Secretary :	Prof Koh Khee Meng
Hon. Treasurer :	Dr Lou Jiann Hua
Editor :	Dr Tay Tiong Seng
Assist. Secretary :	Dr Leong Yu Kiang
Assist. Editors :	Dr Chew Tuan Seng Dr Brett T McInnes
Committee Members :	Ms Chan Bee Bee Dr Chow Yoong Ming Mr Leuar Boon Char Dr Shee Sze Chin

### III Activities of the Society during the year 1989

#### 1. Publications

Two issues of Mathematical Medley were published : Volume 17, Number 1 (June 1989) and Number 2 (December 1989).

#### 2. Lectures

The following six lectures were organised during the year. The Presidential Address (item (a)) was delivered at the Society's 22nd Annual General Meeting and the second lecture by Professor Atiyah (item (e)) was given at the prize-giving ceremony of the Mathematical Competitions. The remaining four lectures were organised jointly with the Department of Mathematics of the National University of Singapore.

Date	Title	Speaker
(a) 24-2-89	Probability Approximations using Stein's Method	Prof Louis H Y Chen National University of Singapore
(b) 29-3-89	Newton Polygons and a Theorem of Archimedes	Prof Sir Michael Atiyah University of Oxford
(c) 3-4-89	Integer Valued Functions on the Integers	Prof K W Gruenberg University of London
(d) 5-4-89	The Volume of Tubes and Nonlinear Regression	Prof D O Siegmund Stanford University
(e) 7-12-89	The Icosahedron	Prof Sir Michael Atiyah University of Oxford
(f) 16-2-90	$C$ is algebraically closed	Prof J-P Serre Collège de France

#### 3. Conference

The Singapore Probability Conference was held from 8 to 16 June 1989 at the National University of Singapore. It was jointly organised by the Department of Mathematics of the National University of Singapore and the Society under the assistance of the Singapore National Academy of Science, and was sponsored by the Southeast Asian Mathematical Society.



The Conference was attended by 120 participants from 20 countries. A three-day workshop (8 - 10 June) was conducted by Professors P Diaconis (Harvard), E B Dynkin (Cornell), M Pinsky (Northwestern) and D W Stroock (M.I.T.). The invited speakers at the Conference included the above four and Professors J Azéma (Paris VI), A D Barbour (Zürich), C C Heyde (A.N.U.), T Hida (Nagoya), C R Hwang (Acad, Sinica, Taipei), H Kesten (Cornell), S Kotani (Tokyo), D O Siegmund (Stanford), C Stein (Stanford), S Watanabe (Kyoto), J A Yan (Acad. Sinica, Beijing). Professor K Itô (Kyoto) gave a special lecture at the Conference.

Altogether 16 one-hour invited lectures and 43 twenty-minute contributed papers were delivered at the Conference.

The Proceedings of the Conference, which contains only the papers of the workshop and the invited conference lectures, will be published by Walter de Gruyter.

#### **IV Mathematical Competitions 1989**

In addition to the annual Interschool Mathematical Competition (ISMC), the Society organised in 1989 a new mathematical competition, called the Inter-Secondary School Mathematical Competition (ISSMC), which is open only to students from secondary schools in Singapore. The top individual prize of ISSMC is named the Liew Mai Heng Memorial Prize in memory of the late Mr Liew Mai Heng who was the first chairman of the School Teachers Subcommittee.

The Competition Subcommittee consisted of Dr Tay Tiong Seng (Chairman), Ms Chan Bee Bee, Mr Ho Foo Him, Mr Leuar Boon Char, Dr Leung Ka Hin, Dr Ma Siu Lun, Dr T R Nanda, Dr Roger Poh Kheng Siong and Dr Quek Tong Seng.

The ISSMC 1989 was held on Saturday, 3 June, at Victoria Junior College and the IMC on Saturday, 17 June, at the National University of Singapore. A total of 282 students from 56 secondary schools took part in the ISSMC, and a total of 120 students from 13 junior colleges and 9 secondary schools took part in the IMC. The results of the two competitions were as follows:

## (a) ISSMC

Team Results		
Position	School	Team Members
1	Chinese High School	Cai Zheming Lin Ziwei Huang Zhiwei
2	Raffles Institution	Tan Chong Hui Wong Ting Yu Leong Kian Fai
3	Tanglin Technical School	Ye Deqiang Li Wenwei Tian Longye, Roger

Individual Results		
Position	Competitor	School
1	Lin Ziwei	Chinese High School
2	Li Wenwei	Tanglin Technical School
3	Tan Chong Hui	Raffles Institution
4	Chung Min Him	Raffles Institution
5	Tan Weiwen	Anderson School
5	Xu Fangda	Chinese High School
7	Cai Zheming	Chinese High School
7	Wong Ting Yu	Raffles Institution
9	Wu Sizhang	Chinese High School
9	Leong Kian Fai	Raffles Institution
11	Wirta Wiriyana	Monk's Hill Sec. School
11	Wang Ruoxin	Tg. Katong Girls' School

The Singapore Mathematical Society Trophy was won by the Chinese High School. Lin Ziwei was awarded the Liew Mai Heng Memorial Prize. The following received honourable mentions: Chen Huaqing (Bukit View Sec.), He Zhenni (Geylang Methodist Sec.), Hoang Du'c (Raffles Institution), Koh Yeong Ping (Catholic High Sch.), Li Jiaxin (Yishun Sec.), Lin Ruini (Yio Chu Kang Sec.), Lin Weijun Sunny (Nan Hua Sec.), She Caiyu (Bedok North Sec.), Su Xuehua (Yishun Sec.), Tian Longye, Roger (Tanglin Tech.), Wang Wei Mun (Anglo Chinese Sch.), Wu Lianlai (Jurong



Sec.), Ye Deqiang (Tanglin Tech.), Zhang Jingjing (St. Nicholas Girls' Sch.).

(b) ISMC

Team Results		
Position	School	Team Members
1	Raffles Junior College	Yeoh Yong Yeow Lee Mun Yew Lam Vui Chiap
2	Temasek Junior College	Deng Shaokun Jin Zihuai Shen Shunxuan
2	Victoria Junior College	Chiang Kuo Chiang Winston Yean Chan Kin Chong
4	National Junior College	Chee Wah Yong Loh Ngai Seng Tay Su Lian, Margaret

Individual Results		
Position	Competitor	School
1	Yeoh Yong Yeow	Raffles Junior College
2	Lee Mun Yew	Raffles Junior College
3	Gan Wee Teck	Hwa Chong Junior College
4	Yu Changkai	Victoria Junior College
5	Deng Shaokun	Temasek Junior College

The Singapore Mathematical Society Challenge Shield was won by Raffles Junior College. Yeoh Yong Yeow was awarded the Southeast Asian Mathematical Society Prize. The following received honourable mentions: Chan Kin Chong (Victoria J C), Chee Wah Yong (National J C), Chiang Kuo Chiang (Victoria J C), Jin Zihuai (Temasek J C), Lam Vui Chiap (Raffles J C), Loh Ngai Seng (National J C), Alvin Neo Yeow Leong (Raffles J C), Tan Chong Hui (Raffles Institution).

The prize-giving ceremony was held on 7 December 1989 at Lecture Theatre 22, Faculty of Science, National University of Singapore. Professor Sir Michael Atiyah of the University of Oxford gave away the prizes.

A grant of \$2000 was received from the Ministry of Education for the above competitions.

## V International Mathematical Olympiad (IMO) 1989

Singapore was invited to send a team to take part in the 30th IMO held in Brunswick of the Federal Republic of Germany during the period 13 - 24 July 1989. The Singapore team consisted of Prof Koh Khee Meng (Leader), Dr Tay Tiong Seng (Deputy Leader), and the following six students : Deng Shao Kun (Temasek J C), Lam Vui Chiap (Raffles J C), Lee Mun Yew (Raffles J C), Ng Lup Keen (Raffles J C), Yeoh Yong Yeow (Raffles J C) and Yu Changkai (Victoria J C).

The team members Deng Shao Kun, Lee Mun Yew, Yeoh Yong Yeow and Yu Changkai won a bronze medal each, and Lam Vui Chiap and Ng Lup Keen won an honourable mention each. The Singapore team was ranked 15 among 50 teams participating in the competition and was top among the teams from the Commonwealth countries.

The Singapore Mathematical Olympiad Training Committee (1989) consisted of Prof Chen Chuan Chong (Chairman), Mrs Chang Swee Tong (Secretary), Mr. Ho Foo Him, Prof Koh Khee Meng, Dr Leong Yu Kiang, Mr Leuar Boon Char, Dr T R Nanda, Ms Tay Lai Ling, Dr Tay Tiong Seng and Dr Tay Yong Chiang.

## VI School Teachers Subcommittee

Members of the Subcommittee were: Mr Leuar Boon Char (Chairman), Miss Chung Yam Yoke (Treasurer), Ms Chan Bee Bee, Mr Ho Foo Him and Mdm Kuo Wei Chuang.

During the year the Subcommittee helped to organised the Inter-Secondary School Mathematical Competition and arranged the following talks:

Speaker	Title	School/Junior College
Prof Chong Chi Tat	Fermat's Last Theorem	National Junior College
Dr Cheng Kai Nah	Fermat's Last Theorem	National Junior College



## VII Finance

This item is dealt with in the Treasurer's report. The Society wishes to record its thanks to the Honorary Auditor, Dr Ling Kiong Doong, for scrutinizing the accounts.

## VIII Acknowledgements

The Committee of the Society wishes to express its thanks to the Lee Kong Chian Centre for Mathematical Research for its continued financial support; to the Ministry of Education for its grant for the Mathematical Competitions; to Southeast Asian Mathematical Society for the SEAMS prize for the Interschool Mathematical Competition; to Lee Foundation, UNESCO, Shaw Foundation, Tan Kah Kee Foundation, Mr Ng Kong Beng, Hong Leong Foundation and Shell Eastern Petroleum (Pte) Ltd for their grants for the Singapore Probability Conference; and to the Department of Mathematics of the National University of Singapore for its unflinching support and cooperation.

Koh Khee Meng

Hon Secretary