



**SINGAPORE SECTION, SINGAPORE**  
THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS INC

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# **IEEE Singapore Section Annual Report**

Region-10 Meeting  
4 – 5 April 2003

Prepared by:

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## **Office Bearers of the IEEE Singapore Section 2002**

### **2002 SECTION COMMITTEE**

#### **Main Section**

<b>Position</b>	<b>Nominee</b>
Chairman	A. Rahim Leyman
Deputy Chairman	Adrian David Cheok
Secretary	Sanjib Kumar Panda
Treasurer	Tseng King Jet
Committee Member	Luo Fang Lin
	Tjing T. Lie
	Don Mahinda Vilathgamuwa
	Foo Say Wei

#### **Circuits & Systems Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Xu Yong Ping
Deputy Chairman	Lim Yong Ching
Secretary	Yang Rong Huan
Treasurer	Lian Yong
Committee Member	Foo Say Wei

#### **Communications Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Cheng Tee Hiang
Deputy Chairman	Ho Hooi Chee
Secretary	B. Kannan
Treasurer	Chen Yan
Committee Member	Choy Sok Sien
	Kwok H. Li
	Pooi Yuen Kam
	Andrew N Teo

#### **Computer Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Lau Lee Yee
Deputy Chairman	P.N. Suganthan
Secretary	Chan Khin Choong
Treasurer	Steven Chew Lai Keat

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Committee Member Gourab Sen Gupta  
Indranil Basu  
Saradhi Motamarri

## **Consumer Electronics Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	N Sriskanthan
Deputy Chairman	Hideyuki Oka
Secretary	Pan Feng
Treasurer	Nicholas Vun
Committee Member	Edmund Lai Joseph Jimson Y Yamada Lee Choon Sun

## **Control Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Ben M. Chen
Deputy Chairman	Wang Youyi
Secretary	Ding Zhengtao
Treasurer	Wang Qin Guo
Committee Member	Lee T. H. Soh Cheong Boon Wang Jian Liang Xie Li Hua

## **Electromagnetic Compatibility Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	See Kye Yak
Deputy Chairman	Lee ErPing
Secretary	Timothy Foo Wan Juang
Treasurer	Chow Wee Sing
Committee Member	Yeo Tat Soon

## **Engineering Management Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Hung Kei Tang
Deputy Chairman	Xie Min
Secretary	Kenny Lee
Treasurer	Jiao Jian Xin, Roger
Committee Member	Foo Say Wei

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**Industrial Electronics Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Luo Fang Ling
Deputy Chairman	Wen Chang Yun
Secretary	Hu Bei
Treasurer	Ng Kai Meng
Committee Member	Fazlur Rahman M.H.R Singh Ranjit Loh Wai Kuan Sim Liang Kee

**Industry Applications Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Leong Fai Choy
Deputy Chairman	Don Mahinda Vilathgamuwa
Secretary	Ali I Maswood
Treasurer	Tan Cher Ming
Committee Member	Tseng King Jet Roger Chiun Koon Yong Ashwin Khambadkone

**MTT/AP Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Li Le Wei
Deputy Chairman	Ooi Ban Leong
Secretary	Ma Jianguo
Treasurer	Lin Fu Jiang
Committee Member	Yeo Tat Soon

**Power Engineering Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Lalit K. Goel
Deputy Chairman	Rajnish Gupta
Secretary	M.H. Haque
Treasurer	So Ping Lam
Committee Member	G B Shrestha Shiun Chen Teh Gek Huat



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## **REL/CPMT/ED Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	M.K. Radhakrishnan
Deputy Chairman	Soon Huat Ong
Secretary	Yean C. Ng
Treasurer	Kin Leong Pey
Committee Member	Charles Lee Andrew Ao Tay Wilson Tan C. T. Yong

## **Signal Processing Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Ma Kai Kuang
Deputy Chairman	Li Gang
Secretary	Tan Yap Peng
Treasurer	Bi Guoan
Committee Member	Alex Kot Ng Boon Poh Koh Soo Ngee Lin Wei Si

## **Systems, Man and Cybernetics Chapter**

<b>Position</b>	<b>Nominee</b>
Chairman	Adrian Cheok
Deputy Chairman	Shuzhi Ge (Sam)
Secretary	Tay Leng Phuan
Treasurer	Wang Jing
Committee Member	Arthur Tay Lim Koon Sang Javier Ibanez Guzman



## **PART A – SECTION SUMMARY**

The IEEE Singapore Section is now in its 25<sup>th</sup> year. It should be noted that over the 25 years we have held major international IEEE conferences in Singapore, which has also led to economic benefits in terms of tourism and the economy. We have also had significant impact and support from industry.

### **A.1 Executive Summary**

- **IEEE Singapore Section celebrated its 25<sup>th</sup> Anniversary** and published a Silver Jubilee Special Publication 2003.
- **Joint IES and IEEE Award for Engineering Excellence** – This award was instituted for the 1<sup>st</sup> time and was offered to Prof. Su Guanng on 1<sup>st</sup> November 2002.
- Formation of the **Oceanic Engineering** Chapter in 2002.
- **Prof. Yeo Tat Soon** was elected as **Fellow of the IEEE** in 2002
- **International Conferences** were held successfully:
  1. **ICON 2002, 27 – 30 August 2002** - organized by Computer Chapter and School of EEE, Singapore Polytechnic
  2. **IPFA 2002, 8 – 12 July 2002** - organized by REL/CPMT Chapter
  3. **ICCA 2002** – organized by Controls Systems Chapter jointly with Xiamen University in PR China.
  4. **APCCAS02** – originally scheduled to be held in Bali, Indonesia was latter relocated to Singapore in December 2002. The local Circuits & Systems Chapter offered their assistance in local arrangements.
  5. **PIERS 2003, January 7 – 10, 2003** – organized by MTT/AP Chapter
  6. **IPQC 2002, October 23-25, 2002** – organized by Power Engineering Chapter jointly with Institution of Engineers, Singapore.
  7. **EPTC 2002, 1<sup>st</sup> Week of December 2002**, - organized by REL/CPMT Chapter
- Bidding and bringing in Society-based Annual Meetings to Singapore:
  - **ICIP 2004** - Signal Processing Society Annual Meeting jointly organized by Nanyang Technological University and IEEE Signal Processing Chapter.
  - **IEMC 2004** – This is an Engineering Management Society based conference. This conference will be jointly organized with the Engineering Management Chapter of the IEEE Singapore Section.
  - **IMTC 2004** – Instrumentation and Measurement society based conference. This conference will be jointly organized with Singapore Polytechnic.
- **IEEE Distinguished Lecture Program**
  1. “Streaming of MPEG-4 Video” by Prof. Nam Ling on 13 August 2002 – organized by Circuits & Systems Chapter



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2. "Circuit Design for RF Transceivers" by Dr. Domine Leenaerts on 5 November 2002 – organized by Circuits & Systems Chapter.
  3. "Electromagnetic Compatibility in Industrial Equipment: Standards, Problems and Solutions" by Prof. Paolo Tenti & Dr. Giorgio Spiazzi – organized jointly by the Industry Applications and Power Electronics Joint Chapter and Electromagnetic Compatibility Chapter.
  4. "Voltage Source Converter based FACTS Controllers" by Prof. Kalyan K Sen on September 30, 2002 – organized by Power Engineering Chapter.
  5. "Quantum Well Intermixing for Optoelectronics Device Integration" by Prof. C Jagadish of Australian National University – organized by REL/CPMT/ED Chapter.
  6. "SOI MOSFETs for Analog Applications" by Prof. Juser Vasi of Indian Institute of Technology, Bombay, India – organized by REL/CPMT/ED Chapter.
- **Visits from IEEE HQ**
    - IEEE TAB team visited Singapore during March 2002 and the Section hosted a lunch for the visiting team. Section officers as well as other local IEEE members had the opportunity to interact with the TAB team for a one-to-one discussion.
    - IEEE AWARDS Committee visited Singapore during the 1<sup>st</sup> week of November for the joint IEEE-IES Award ceremony.
  - **High Performing Chapter Award**
    - It was given to Power Engineering Chapter for the year 2001. The Chapter got a US\$1000.00 award from IEEE Power Engineering Society.
  - **IEEE Region-10 Student Congress**
    - It was held in Singapore in July 2002. Some 58 participants from various IEEE Student Branches in the Region-10 attended the four day congress.
  - **IEEE ASEAN Meeting**
    - The IEEE ASEAN Meeting which was held on 1<sup>st</sup> June 2002 in KL, Malaysia and IEEE Singapore Section participated in the meeting.
  - **IEEE Section Congress**
    - IEEE Singapore Section was represented by the Chairman.

### **A.2 Financial Summary**

The financial status of the IEEE Singapore Section is sound and would be able to support its various activities in years to come. Some of the Chapters have a lot of surpluses left and that these surpluses could be used to help the members either in organizing free technical activities or by lowering the registration fees for various short-courses offered by the chapters. The net current assets of the IEEE Singapore Section at the closing of the year 2002 are S\$ 779,184.10.

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The L-50 Form had been submitted to IEEE HQ well in advance of the deadline of 21<sup>st</sup> February 2003 and was already approved.

### **PART B – ORGANISATIONAL ACTIVITIES**

#### **B.1 Membership Development Programs**

Membership statistics: As of 31<sup>st</sup> January 2003, we have 3457 members altogether under the IEEE Singapore Section. The break down is as follows: Fellows – 8, Life Senior Members – 2, Senior Members – 172, Life Member -12, Members – 2236, Pending Members – 18, Life Associate – 1, Associate – 372, Students – 636. This shows an overall gain of 93 members (2.97%) as compared to the figure of 3364 total members as of 31<sup>st</sup> January 2002.

The Section continues its efforts in membership recruitment drive in Singapore through various ways such as promoting IEEE Membership during conferences, workshops etc. In order to attract students to join IEEE the two student branches are encouraged to organize various technical activities at their schools.

#### **B.2 Professional and Continuing Education Activities**

All the Chapters under Singapore Section have altogether organized 43 technical activities. There had been seven very successful conferences as well as six IEEE Distinguished Lecturer Programs as highlighted in A.1.

#### **B.3 Recognized Educational Programs**

1. The Communications Chapter helped the IEEE Students Branch at NUS to organize the IEEE Tech Quiz 2002, which was attended by nearly 150 IEEE members and 50 guests.
2. The Computer Chapter had sponsored an IT Awareness Program on 6<sup>th</sup> April 2002 for Club Rainbow, which was organized by Ngee Ann Polytechnic students.
3. The Power Engineering Chapter had donated a sizable sum for the IEEE Student Branch, NTU for the Mathematics Olympiad and was actively involved in providing the Keynote Speech in the program.
4. The Robotics & Automation Chapter had sponsored and co-organized the Singapore Robotics Games 2002 held in Singapore Expo. From 20 – 22 May 2002.



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### **B.4 Student Activities**

There are two IEEE Student Branches in Singapore: (1) National University of Singapore and (2) Nanyang Technological University. Various student activities organized by the student branches are as follows:

1. NTU Student Branch
  - a. IEEE Talent Search
  - b. IEEE Tech Quiz
  - c. MindBend
  - d. Math Olympiad
  - e. Membership Drive
  - f. ECA Fair
  - g. IEEE Annual Magazine, Endeavor
  - h. Welcome Tea and AGM
  
2. NUS Student Branch
  - a. Fundraiser I: Soldering Iron Sales I
  - b. Tech Quiz – Preliminary Round
  - c. Flash/Multimedia Competition
  - d. Pasir Ris Outing with Welfare Home
  - e. Short Course on Flash
  - f. Hosting of University of Technology Malaysia Visit
  - g. IEEE ECE Week
    - i. Soldering Iron Sale
    - ii. RecycleMania
    - iii. Games Day
    - iv. FoodFanaticZ
    - v. Fun Factory
    - vi. Prize Presentation and Seminar
  - h. Engine Fiesta Food Stall
  - i. Industrial Visit to CREATIVE
  - j. IEEE Region-10 Students Congress

### **B.5 E-mail and Newsletter Activities, Home Page**

The IEEE website is completely revamped and running (<http://www.ieee.org.sg>). The Section had received a lot of responses from members and non-members through this web-site. People have also written in asking for membership forms. The IEEE Singapore Section has used this portal to broadcast emails to all members for various Section as

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well as Chapter activities. Altogether there were 13 e-mail broadcasts being done through this web-site.

Each Chapter has its own homepage within the website. The Chapter Chairmen have been encouraged to communicate directly with their members and to use the portal as a tool to broadcast their activities.

The Section is planning to start e-newsletter in 2003.

### **B.6 Awards**

- The IEEE Awards Board had also visited Singapore to attend the IES/IEEE Engineering Excellence Award. This award was instituted for the 1<sup>st</sup> time and was offered to Prof. Su Guaning on 1<sup>st</sup> November 2002.
- High Performing Chapter Award was given to Power Engineering Chapter for the year 2001. The Chapter got a US\$1000.00 grant from IEEE Power Engineering Society.

### **B.7 Chapter Activities**

A summary of various Chapter activities is given below.

#### **IEEE Singapore Section/Chapter Meeting Activities Report (21/11/02)**

<b>SECTION/CHAPTER</b>	<b>Administrative</b>	<b>Technical</b>	<b>Social</b>	<b>Professional</b>	<b>Educational</b>	<b>Total</b>
Section	6		4			10
MTT/AP Chapter						
EMC Chapter		4				4
Communications Chapter	1	5				6
Engineering Management Chapter	4			1	1	6
REL/CPMT/ED Chapter	8	9		2		19
Industry Applications/Power Electronics Joint Chapter	1	4				5
Signal Processing Chapter	1	4				5
Consumer Electronics Chapter	5			1		6
Control Chapter	4	2	1			7
Computer Chapter	2					2
Power Engineering Chapter	6	6	1			13
Industrial Electronics Chapter	2	5				7
Circuits & System Chapter	2	4				6
Robotics & Automation Chapter	1	2			1	4
Magnetics Chapter		1				1
Oceanic Engineering Chapter						0
Systems, Man & Cybernatics Chapter						0

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The L-31 Forms for each Section and Chapter activities have been submitted to IEEE HQ well in advance of the deadline and acknowledgement of the receipt has been obtained.

## **PART C – GOALS AND PLANS**

### **C.1 Goals**

This year we are continuing the active tradition by having major new initiatives. Including:

- The formation for the first time of the Woman in Engineering Affinity Group and GOLD Affinity group.
- Pursue the formation of new chapters such as the Engineering Medicine & Biology Chapter and the Information Theory Chapter and others.
- International links in our region SEA/Pacific
- History committee to document carefully our last 25 years
- Build cooperative and friendly links with affiliated societies such as the ACM
- Substantial support of the new and forming chapters (including grant and loans)
- Substantial support of student branches (including grants)

### **C.2 Detailed Implementation Plans**

The expected expenditure for the activities are as follows

- Woman in Engineering Affinity Group and GOLD Affinity group to be funded \$1000 each start up grant and \$2000 long term loan
- New and forming chapters to be funded \$1000 each start up grant and \$2000 long term loan
- Substantial support of student branches to be a \$3000 grant for each branch = \$6000
- History committee expenditure \$3000

### **C.3 Budget**

The budget for IEEE Singapore Section Basic Operations for 2003 is as follows:



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## **1. Revenue**

Allowance from HQ for services to members: 3500 X US\$3.00	= US\$10,500.00
Allowance from HQ for services to chapters: 17 X US\$180.00	= US\$ 3,060.00
Total allowance from HQ: US\$13,560.00 X 1.75	= S\$23,730.00
Income from lease of membership database	= S\$2,000.00
Total revenue	= <b>S\$25,730.00</b>

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## **2. Expenditure**

Secretariat fees: 12 months X S\$1,000.00	= S\$12,000.00
Book-keeping fees:	= S\$ 3,000.00
Web site maintenance fees:	= S\$ 2,000.00
Administrative expenses:	= S\$ 1,500.00
Meeting expenses: 4 meetings X S\$500.00	= S\$ 2,000.00
AGM basic expenses: excluding dinner and souvenirs	= S\$ 4,000.00
Donations to students' branches: 2 X S\$500.00	= S\$ 1,000.00
Total expenditure	= <b>S\$25,500.00</b>

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Surplus from 2003 Section Basic Operations	= <b>S\$230.00</b>
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Note: Expenses for non-basic operations such as AGM dinner, souvenirs, ad-hoc projects, donations for scholarships and awards, extra donations to students' branches, section-sponsored technical meetings, funding for new chapters, etc, are to be funded from section income from co-sponsorship of conferences.

## **PART D – OTHERS**

### **D.1 Relationship with National Societies**

The IEEE Singapore Section works closely with the National Societies such as Institute of Engineers Singapore (IES), Singapore Robotics Society and also with the Institute of Electrical Engineers (IEE), Singapore. The results of such close cooperation with National societies are: the Joint IES and IEEE Award for Engineering Excellence, the Singapore Robotics Games etc.

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### **D.2 Special Events**

The IES and IEEE Award for Engineering Excellence ceremony was held on 1<sup>st</sup> Nov, 2002. Many volunteers attended the award ceremony. Prof. Su Guaning was selected as the winner from 7 nominees. The award was sponsored by Region 10, IES and IEEE Foundation.

There have been visits from IEEE HQ and the Technical Activities Board in March 2002. Both Section and Chapters have organized technical talks during these visits. A lunch was also hosted for the President of the IEEE when he was in Singapore. The meeting with the IEEE President had given Singapore Section an opportunity to exchange ideas.

### **D.3 Problems to be Anticipated**

Attracting and retaining good volunteers.

S K Panda  
Deputy-Chairman  
IEEE Singapore Section

04 May 2003