

Chairman's Report for Session 2006/2007

Dear IET Members,

The Chairman's Report gives me the opportunity to thank the members of the IET Singapore Branch Management Committee and our partners for the support in organising the various events for the benefit of our members. We continued to work closely with the British High Commission, the British Council, Nanyang Technological University, Institution of Engineers Singapore, Singapore Polytechnic, A*STAR and other Engineering Societies through the National Committee of Engineering Organisations (NCEO). As Mr Brian Ferrar, the First Secretary, Science and Technology, British High Commission in Singapore will be taking up a new position in the US, I would like, on behalf of the IET Branch to thank Brian for his invaluable contributions to the close working relationship between the IET and the British High Commission in Singapore over the years.

We were recently awarded the IET Knowledge Network Award for Joint Network Co-operation 2006-07 for organising the UK-Singapore Microelectronics & Embedded Systems Workshop (MES 2007). This award is the result of close co-operation and much effort by the staff from the British High Commission, the Centre for High Performance Embedded Systems, NTU, the Agency for Science, Technology and Research and the IET both in London and Singapore. Specifically I would like to mention Professor Thambipillai Srikanthan, Director of the Centre for High Performance Embedded Systems, NTU and Professor Roger Woods, School of Electronics, Electrical Engineering and Computer Science ECIT, The Queen's University Belfast, UK.

The IET Faraday 2007:

Like the previous years, the IET Faraday, was the main highlight of this year's programme. This year's theme was "Winning Formula - Technology in the Fast Lane." A comprehensive exhibition was organised in conjunction with the Lecture. The event was sponsored by the British High Commission and hosted by Singapore Polytechnic. An IET Family Night followed the evening's Performance. It provided an opportunity to bring together IET members and their families and colleagues from the British High Commission and the Singapore Polytechnic, who helped us organise the event. Members, their family and guests had the opportunity to talk to the IET Faraday 2007 presenters during the Family Night Reception.

This is the third year running that the Faraday Lecture was brought live to Singapore. This is also the third year that Singapore Polytechnic hosted the Faraday Lecture and Exhibition. I would like to take this opportunity to specifically mention our Management Committee members Dr Stuart Passey, Mr Jolyon Caplin and Pearly for their tremendous efforts in organising this event.

Distinguish Lecture:

Since Professor Roger Woods, Queen's University of Belfast was in Singapore for the MES 2007 Workshop, we took the opportunity to organise a Distinguish Lecture for our members at the Ballroom of the Singapore Polytechnic Graduates' Guild House. His talk was on the Design Methodologies for Heterogeneous SoC.

Professor Woods described the many challenges of designing flows and design methodologies for complex DSP systems. He presented research carried out in developing a complete

dataflow design methodology that allows implementation on SoC platforms comprising of multi-processors and FPGA components. He also showed how optimisation can be carried out efficiently at the DFG level using silicon IP cores and highlights new levels of programmability needed in IP cores. A number of complex examples were demonstrated.

Professor Roger Woods leads the Programmable Systems Laboratory in the School of Electronics, Electrical Engineering and Computer Science ECIT, the Queen's University of Belfast. He was then the chairman of the IET Professional and Technical Network on Microelectronics and Embedded Systems. He has collaborated closely with a number of companies including Xilinx, BAE Systems and QinetiQ.

Members' Nights and Technical Talks:

Several talks were organised this session, some in conjunction with our Members' Night. Members' Nights are organised to facilitate networking among members.

We had a talk at a Members' Night on "Robotic Soccer: Challenges and Opportunities" given by Dr. Zhou Chang Jiu from Singapore Polytechnic. Dr. Zhou shared about some robotics related research topics, e.g. perception, intelligence, control, power, material, locomotion, interactive and entertainment technologies etc., and opportunities in education, R&D and commercialisation. His talk was illustrated with video clips of robotic stars' amazing performance in RoboCup and FIRA robotic soccer competitions.

In conjunction with our second Members' Night, the IET Yearbook was launched, together with a talk on "What is Fieldbus? An Introduction and Unique Feature of Foundation Fieldbus Technology". This talk was given by Ms Pee Suat Hoon, President of the Fieldbus Foundation End User Society (Singapore). She explained the basics of fieldbus and gave examples of applications in industry.

Ms. Pee provided a technical introduction to foundation fieldbus technology and hardware installation requirements. She also explained the interoperability issues and features which participants will find useful especially if they need to work in related projects. Several case studies of Foundation Fieldbus installations were discussed.

In our third Members' Night, Mr. Michael Wan gave a talk on "Portfolio Management - Modern Portfolio Theory, Asset Allocation and Investment Strategies". Mr Michael Wan explained that return is commensurate with risk. He further explained how the risk-return profile of the new portfolio would be further enhanced through the process of diversification. He went into some detail on optimising financial portfolio. He also talked about the Capital Asset Pricing Model, explained how an Asset Allocation Plan is used in formulating an investment plan and the various strategies that can be utilised to achieve the financial goals of the investor. Mr Wan was prepared to run a workshop later on Portfolio and Wealth Management for our members but the response was not sufficient to warrant running the workshop.

This year we have includes an event which catered to our younger members. Meet & Mingle @ The Old Parliament House's "Living Room" was organised at the very interesting venue of the old Singapore Parliament. Members were encouraged to bring one guest - spouse, family member, friend or colleague. It was well attended.

This event was organised by the pro-tem Young Members' Committee to provide an opportunity for younger members to network.

A Technical Talk was jointly organised with the IEEE, EMC Society. The talk, "Grounding Concepts Revisited" was extremely well attended, including a large number of non-members. It was given by Associate Professor (Dr) See Kye Yak. Dr See explained the grounding concept based on the fundamental theory - the electromagnetic field theory. Using a numerical electromagnetic code developed by him, the concept of grounding was revisited. Through this seminar, the audience was able to understand what is grounding all about and good practices

in grounding. Dr See explained using real examples how grounding practices affect EMI compliance.

Conferences and Workshops:

International Conference in Biomedical and Pharmaceutical Engineering (ICBPE 2006)

Co-organised by the Nanyang Technological University, IET Singapore, IEEE, Singapore General Hospital, EMB and the Singapore-University of Washington Alliance from 11th -14th December 2006 at the Orchard Hotel, Singapore. We contributed 20% of the seed funding for this conference. Dr Chan Kap Luk represented the IET in the organising committee.

The conference was attended by 14 distinguished plenary speakers who were each experts in their respective biomedical and pharmaceutical engineering (BPE) field. Invited industry speakers and another 130 carefully selected papers were also presented during the ICBPE.

Two distinguished speakers delivered lectures at the Biomedical and Pharmaceutical Engineering Conference Dinner. The first lecture was delivered by Prof Antonios G. Mikos from Rice University. The second lecture was presented by Prof Stephen Wong from Harvard Medical School, USA.

The IET Microelectronics and Embedded Systems Workshop 2007 (MES 2007)

Jointly organised in Singapore by the British High Commission, Singapore; Nanyang Technological University's Centre for High Performance Embedded Systems - CHiPES (NTU), Singapore; Institution of Engineering and Technology Professional and Technical Network (PTN) on Microelectronics and Embedded Systems, UK, and the Agency for Science, Technology and Research (A*STAR), Singapore with the support of the Singapore Economic Development Board (EDB). The event was held from January 23rd to 24th, 2007 at Biopolis, an excellent workshop venue with state-of-the-art facilities. Three hundred and fourteen local delegates attended MES 2007 including 12 delegates from various ASEAN countries.

There were eight keynote talks and twenty parallel sessions on research, design, development and implementation of state-of-the-art microelectronics and embedded systems from eminent UK and Singapore speakers. Four of the keynote speakers were industry leaders, four distinguished researchers and pioneers in microelectronics and embedded systems research and education.

A very successful Poster Session was also organised. Twenty six posters were showcased through interactive presentations. There were a total of sixty four poster submissions from Singapore, Thailand, Australia, India, Saudi Arabia and South Korea.

The MES 2007 speakers' presentations and poster slides have been uploaded on to the IET website and are freely accessible by the public.

We were awarded the IET Knowledge Network Award for Joint Network Co-operation 2006-07 for organising this Workshop. I would like to thank all those involved in this workshop for the tremendous effort put in by all concerned.

The IET is also pleased that the Deputy Chairman of the PTN Working Party, Mr Chris Turner (who was a keynote speaker at MES 2007), has recommended that more events of this type should be held in Singapore in the coming future. At the recent IET Spring Network Conference in London, Mr Chris Turner and Mr Barrie Ross-Dow presented this model to a workshop as an example of successfully working in partnership with overseas organisations on organising events. Mr Paul Jackson, the IET's Operations Director was in Singapore for the Faraday Lecture and he had meetings with the British High Commission, A*STAR and NTU (ChiPE) to discuss further collaborations of this type.

The 8th International Power Engineering Conference 2007 (IPEC 2007)

Following the very successful IPEC 2005 which is co-organised with Nanyang Technological University, Singapore Power, the Singapore IEEE Power Chapter and the National University of Singapore, IPEC2007 is being organised with IET Singapore's participation. It will be held from 3rd to 6th December 2007 at Meritus Mandarin Hotel in Singapore.

The IET share of the surplus from the organisation of IPEC2005 was S\$24,778.00. This could be used to invest in future joint conferences in Singapore or the region.

The 3rd Built Environment Technology Network Conference 2008 (BETNET 2008)

BETNET 2008 will be hosted in Singapore from 10th to 12th September 2008 following the successful organisation of BETNET 2006 in Malaysia and BETNET 2004 in Hong Kong. The theme of BETNET 2008 will be "Engineering the Next Generation of Sustainable Buildings". This event is co-organised by BETNET Technical Professional Network and we will be getting support from local engineering institutions and universities to support the event.

Intelligent Transportation Systems Conference 2008 (ITS 2008)

I have started discussions with the Land Transport Authority, the Intelligent Transportation Society of Singapore and the Technical Professional Network (TPN) on the Branch's role in co-organising or sponsoring an Intelligent Transportation Systems (ITS) in Singapore next year.

Life-Skills Workshops:

Ms Isobel Brown, a full-time staff member of the IET London conducted a workshop on career planning on 20th April 2006 at the Sheraton Towers. We were interested in engaging her to conduct other courses but unfortunately, her services were not available this year. Our young members have identified some courses which could be conducted this year.

Short Courses:

A short course on "Recent Advances in Game Design" was arranged to be held on 5th of April 2006 in Nanyang Technological University. Although the topic is quite important, few registered for the course. We were in the process of arranging some more short courses, but we did not proceed for the time being as we could not find any interest of the participants for the short courses. Mr Michael Wan proposed a course on Portfolio and Wealth Management as a follow-up to his talk but the response was not sufficient to warrant running one.

We have to think over the issue to improve this activity. One suggestion is to have internet facilities to interact with our members, to quickly gauge our member's interest and to obtain feedback regarding the duration of course, course fee amount and topic of the course etc. These facilities could also be used for proper management of course announcement, for evaluating interest of the members and for registration, etc.

Technical Visits:

As a follow-up to the Technical Talk on "Grounding Concept Revisited" by Professor See K Y, a Technical Visit was arranged for our member in November 2006 to the Electromagnetic Effects Research Laboratory (EMERL). An initiative spearheaded by DSO in partnership with NTU, DSTA and A*STAR, the EMERL facility is unique in Singapore as it is the first National-level test facility set up to cater to both commercial and military markets; it also supports EMC research in Singapore.

Unfortunately, the response for this visit was not so good. This could be due to the inaccessibility of the centre. With hindsight, we should have arranged for transport from a more central location in Singapore.

National Committee of Engineering Organisations (NCEO):

The National Committee of Engineering Organisations (NCEO) organised a NCEO Networking Night on 30th March 2007 at NUSS Suntec City Guild House. More than 70 participants from various members of NCEO attended.

Far East Regional Network (FERN):

The Far East Regional Network (FERN) conducted its first regional conference on the 3rd November 2006 at Hong Kong. Close to 30 IET Honorary Offices from various Local Networks and IET staff attended the conference. The conference was chaired by Dr N F Chin, and was privileged to have the presence of President Sir Robin Saxby, Deputy President Mr John Loughhead and CEO Dr Alf Roberts.

The FERN was formed from 7 Local Networks of Beijing, Brunei, Hong Kong, Japan, Malaysia, Shanghai and Singapore. The objectives of FERN are to:

- Plan, coordinate and strengthen regional activities involving members of the Local Networks
- Identify common issues affecting members of the Local Networks

The FERN Committee elected at the conference were:

Chairman:	Mr David Yuen
Vice Chairman:	Mr Ang Kian Guan
Honorary Treasurer:	Mr S F Chew
Honorary Secretary:	Mr Dennis Lin
Members:	Prof A Ametani Prof Chen Huimin Prof Yuan Baozong
Coordinator:	Dr N F Chin

The FERN Committee had discussions via conference call in April and will be submitting a separate business plan and proposal to work on the following main areas for year 2007/2008:

- IET marketing and promotion campaign of "IET and You"
- Regional conference in Brunei, together with the 10 Years' Anniversary Celebration of Brunei Network
- Regional BETNET 2008 in Singapore

Membership:

Membership Categories	2003 to 2004	2004 to 2005	January 2006	April 2007
Honorary Fellow, CEng	-	-	1	1
Honorary Fellow, non-CEng	-	-	-	1
Fellow, CEng	60	60	60	60
Member	1043	995	935	[940]
- Member, CEng	-	-	-	492
- Member, non-CEng	-	-	-	448
Affiliates	139	178	147	[137]
- Member without post-nominal	-	-	-	134
- TMIET	-	-	-	3
Students	140	107	83	47
Total Membership	1382	1340	1226	1186

The decline of our membership is still a cause for concern. We have been talking to some of the management of the Polytechnics and a CEng is not recognised as a professional qualification for career advancement. Our recruitment campaign has been targeted towards the Singapore Polytechnic first.

We have initiated discussions with the British Alumni in Singapore to have joint activities especially with new graduates from British Universities, with the intention of recruiting new members.

The next committee will have to continue to address this problem – to arrest the decline and to recruit new members.

IET Yearbook:

The Yearbook was launched at our Members' Night on 29th November 2007. A copy of the yearbook was sent to all members who were not present at the Members' Night cum Year Book Launch. The publication of the "Yearbook" marks the 30th Year of the existence of the IEE Branch in Singapore, going back to its origins as the Institution of Production Engineers and to mark the transition of the IEE to the Institution of Engineering and Technology in April this year. The yearbook took a longer time to prepare than we had thought. That is because we have not had a yearbook for many years. Dr Stuart Passey did a great job in co-ordinating this project.

The Management Committee has decided to go ahead and start work on the next year's book. Please give him your co-operation to prepare for the year book. If you have any suggestions for the yearbook, please pass them to Dr Passey.

IET Awards and Scholarships:

An IET International Scholarship was initiated for applicants from Singapore. Up till now, the Singapore Branch has been offering prizes to graduating students from the Universities and the Polytechnics. We will still continue to offer prizes to the Polytechnics.

The IET International Scholarship was awarded in October 2006 to Mr. ZHANG Zhou from NTU (B. Eng EEE Programme). 18 applications were received – 15 from NTU, 1 from NUS and 2 from SIMU. Five candidates were short-listed for a half hour interview by a panel made up of Mr Dennis Lin, Dr Ong Jin Teong and Dr Pramod Meher.

Younger Members Section:

The revival of the YMS in Singapore last year was rather challenging. It was particularly difficult in view of the dearth of younger members in the Management Committee. The Honorary Secretary and I made a concerted attempt to bring younger members into the committee. With the younger members we are able to form a pro-tem committee of young members to re-form the YMS in Singapore. The pro-tem committee has planned a series of activities for the next session targeting specifically at young members and students. The committee hopes to revive the YMS again through these activities and increase the membership as well.

Present Around the World

The YMS is organising the "Present Around The World" Competition, a Short Papers Competition in which Students and Young members give a presentation. Competitors are required to give a 10 minutes presentation on a subject of relevance to the Institution and to answer questions for a further 5 minutes. The competition will be held in Singapore Polytechnic Graduates' Guild House on 23rd June 2007.

We have an active Student's Section at the Nanyang Technological University. The current Student President is Mr Sourav Debnath, 4th Management Committee. It has not been an easy task to provide student activities and recruit new members as well. Nevertheless, the student section conducted workshops, industrial tours and talks. A hands-on Matlab Workshop was successfully organised on 29th of September, 2006 at Software Engineering Lab – S2.2-B4-04. The turnout on the date of the event was 52. Response towards the workshop was overwhelming with all 60 seats filled and over 120 requests on waiting list.

Management Committee Session 2006/2007:

<u>Name</u>	<u>Office and Portfolios Held</u>
Dr. Ong Jin Teong CEng MIET	Chairman NCEO, MES
Mr. Dennis Lin CEng MIET	Vice-Chairman Membership & Recruitment, Representative for FERN, NCEO, MES
Mr. Michael Wan CEng MIET	Honorary Secretary Representative for FERN
Dr. Meher, Pramod Kumar CEng FIET	Hon. Asst. Secretary Short Courses
Mr. Jolyon Caplin MIET	Honorary Treasurer Faraday Lecture, Members' Nights
Dr. Chin Woon Hau MIET	Committee Member Short Courses
Mr. Cheong Kah Peng MIET	Committee Member Representative for NCEO
Mr. Go Seng Bing MIET	Committee Member Website, Young Members
Ms. Lau Wee Nee, Bernice MIET	Committee Member Members' Nights, Technical Talks
Dr. Stuart Passey CEng MIET	Committee Member Publicity, Yearbook, Faraday Lecture
Mr. Rengasamy Sivakumar MIET	Committee Member Young Members, Members' Night
Mr. Tong Ween Kai MIET	Committee Member Conference (IPEC 2007)
Mr. Richard Fong CEng FIET	International Membership Advisor (International Professional Registration Advisor)
Er. Terence Wong CEng MIET	Immediate Past Chairman IET (UK) Council Member
Dr. Chan Kap Luk CEng MIET	Honorary Internal Auditor
Mr Tan Sze Wah CEng MIET	Honorary Internal Auditor

The Committee was elected on 30th May 2006 and a total of seven committee meetings were held. Besides serving on the local branch, some of the members were concurrently serving on the IET executive boards and the IET Council. The members who are in the current committee are listed in the table at the end of this report.

Besides the list of committee members, we also have members who are serving in other capacities at international level. They are: Dr. FVC Mendis CEng FIET (IET Council Member Y.2005-2007) and Mrs Buvana Vejoy MIET (IET Council Member Y.2005-2007).

I have encouraged our international members to participate in our Management Committee meetings. I would like to thank them for representing Singapore and for attending our Branch Management Committee meetings.

A report by Mr Richard Fong (IMA/IPRA) is attached.

Dr Ong Jin Teong CEng MIET
Chairman (2006/2007)
The IET Singapore Branch

The following are more details of our activities over this session.

Singapore Branch Events

- Members Nights:

Robotic Soccer: Challenges and Opportunities

by Dr Zhou Chang Jiu, Manager, Advance Robotics and Intelligent Control Centre, Singapore Polytechnic.

on 20th July 2006 at Vanda Room, Singapore Polytechnic Staff Centre, attended by 41 members and 1 non-member

Year Book Launch and What is Fieldbus? An Introduction and Unique Feature of Foundation Fieldbus Technology

by Ms Pee Suat Hoon, President of Fieldbus Foundation End-User Society (Singapore), Senior Lecturer, School of EEE, Singapore Polytechnic.

on 29th November 2006 at "The Guild" Function Room, NUSS Suntec City Guild House attended by 51 members and 2 members of FFEUS

Portfolio Management – Modern Portfolio Theory, Asset Allocation, and Investment Strategies

by Michael Wan, CEng MIET, MBA, AFP, AWP,

on 1st March 2007 at Singapore Polytechnic Graduates' Guild House, Ballroom attended by 23 members and 1 non-member

- Technical Talks:

Grounding Concept Revisited

by Assoc Prof (Dr) K Y See

on 28th September 2006 at Vanda Room, Singapore Polytechnic Staff Centre

attended by 43 IET members, 9 IEEE members and 36 non-members

(jointly with Institute of Electrical and Electronics Engineers' EMC Society)

- Technical Visit:

Electromagnetic Effects Research Laboratory (EMERL)

on 24th November 2006 at 41 Nanyang Crescent, Nanyang Technological University

attended by 13 members

- Distinguish Lecture:

Design Methodologies for Heterogeneous SoC Platforms

by Dr Roger Woods, Professor, Queen's University of Belfast, UK

on 24th January 2007 at Singapore Polytechnic Graduates' Guild House, Ballroom

attended by 14 members and 6 non-members

- The 2007 IET Faraday & Family Night

For the third year running, the Lecture was brought live to Singapore and the Far East. It was staged at the Singapore Polytechnic Convention Centre. The title of this year's lecture was "Winning Formula – Technology in the Fast Lane," a very appropriate topic in view of the reports then and the recent confirmation that Singapore will host an F1 race in 2008.

The IET Faraday 2007 was similarly organised with strong support from the British High Commission and Singapore Polytechnic.

Through the sterling support from the British High Commission, an exhibition on A1 and F1 racing was organised to accompany the IET Faraday 2007. We had A1 exhibits from

the National University of Singapore and a life-size F1 racing simulator from the Royal Bank of Scotland. This exhibit was very popular with the visitors to the exhibition.

We also took the opportunity to organise a Members' Family Night for our members and their family after the lecture on 26th March 2007. We arranged a buffet to facilitate interaction between our members, their families, the presenters for the Faraday Lecture and members of the British High Commission and Singapore Polytechnic who helped with the organisation.

The afternoon performances at 2.30pm and 4.30pm and the evening performance at 7.30pm attracted over 1500 participants from the schools, ITEs, and members of the public, including our members and their families. The event received coverage from the radio, TV and the newspapers. Although the IET Faraday Lecture is targeted at teenage students, we received very favourable feedback from teachers and our members who attended the lecture. Advertisements were put out in The Straits Time and Today newspapers to advertise the event and IET.

- **Younger Members Section:**

- **Meet & Mingle @ The Old Parliament House**

- on 7th May 2007 at The Old Parliament House's "Living Room"
attended by 36 members and 16 non-members

- **Conferences**

- **International Conference on Biomedical and Pharmaceutical Engineering 2006 (ICBPE 2006) from 11th to 14th December 2006**

- The ICBPE2006, co-organised by Nanyang Technological University, IET, IEEE, Singapore General Hospital, EMB, and the Singapore-University of Washington Alliance, was held at Orchard Hotel, Singapore. We contributed 20% of the seed funding for this conference.

The ICBPE 2006 was a forum where international researchers and scientists from a wide spectrum of biomedical and pharmaceutical engineering (BPE) research discussed the promotion of novel methodologies and cutting-edge solutions to meet the emerging trends in healthcare. The BPE builds on the core expertise of biomedical engineering, which concerns with the delivery of medical treatment and therapy; development and manufacture of prostheses, medical devices, and diagnostic devices; with the pharmaceutical engineering that emphasises on the use of drugs, analysis of drugs, related materials, and endogenous compounds, and their processing. The synergy of expertise in both is important for the improvement of medical healthcare and strategic to Singapore as a biomedical hub. This grand event was well received with over 250 international and local delegates from over 25 countries.

Amongst the globalised cohort of attendees were 14 distinguished plenary speakers who were each experts in their respective BPE field. The plenary sessions are key part of the ICBPE programme as it gave exciting, stimulating, and informative research directions for the BPE, which was important to the conference attendees.

Invited industry speakers and 130 carefully selected papers were also presented during the ICBPE. All these added to the grandeur of the event and provided an excellent opportunity for academics, scientists, industrialists, and research students to exchange ideas and enhance learning experiences. The ICBPE was honoured with the presence of several invited guests from the related industries and tertiary institutions in the opening ceremony.

In addition, many keen industrial organisations from the biomedical sector supported the ICBPE by taking up a sponsorship position and an exhibition table top at the event. The

feedbacks from these sponsors/exhibitors were both positive and encouraging in that their expected interactions with the conference delegates surpassed.

The ICBPE 2006 conference was graced by Guest-Of-Honour, Prof Er Meng Hwa, who delivered the opening speech and officially declared the commencement of conference. Associate Professor Kwoh Chee Keong, the Conference Chair, then delivered the welcome speech for the ICBPE.

The ICBPE 2006 conference was a success as it had established and/or renewed important alliances to address the key technological BPE issues facing patient care and disease control. Furthermore, it was a rich experience for cultural exchange between the international and local ICBPE delegates

Two distinguished speakers delivered the Biomedical and Pharmaceutical Engineering Dinner Lectures. The first lecture was delivered by Professor Antonios G. Mikos from Rice University. He is the Director of the J.W. Cox Laboratory for Biomedical Engineering and the Director of the Centre for Excellence in Tissue Engineering at Rice University. His lecture focus was centred on “Nanobiomaterials for Tissue Engineering.”

The second lecture was presented by Professor Stephen Wong from Harvard Medical School, USA. He is the Director of Centre for Bioinformatics, Harvard Centre for Neurodegeneration and Repair, Harvard Medical School, as well as the Executive Director of Functional and Molecular Imaging Centre, Brigham & Women's Hospital. His presentation was targeted at “Bioinformatics of High Content Screening.”

The recipients of the Young Investigator Award (YIA) for the ICBPE 2006 were evaluated based on originality, clarity, potential impact on practical applications or theoretical foundations as well as their oral presentations. In this year's conference, only four participating delegates were given the YIA for their outstanding contributions in their respective field of research.

Microelectronics and Embedded Systems Workshop 2007 (MES 2007) from 23rd to 24th January 2007

The Microelectronics and Embedded Systems Workshop 2007 was jointly organised by IET, Nanyang Technological University, the British High Commission, Singapore, and the Agency for Science, Technology and Research, at Biopolis Singapore. This event was also supported by the Singapore Economic Development Board (EDB).

The objective of the workshop was to bring together key industrialists and academics from both the UK and Singapore with a common interest in microelectronics and embedded systems with the aim of stimulating discussions, exchanging ideas and promoting collaborations between academia and industry in the UK and Singapore. MES 2007 was a key event of the UK-Singapore Partners in Science Initiative.

The co-chairs of the organising committee were Professor Roger Woods (based in UK) and Professor Thambipillai Srikanthan (based in Singapore). Professor Woods is from the Institute of Electronics, Communications and Information Technology (ECIT), the Queen's University Belfast, UK, and the then chairman of the Microelectronics and Embedded Systems Professional and Technology Network of the IET. Professor Thambipillai Srikanthan is from the Centre for High Performance Embedded Systems (CHiPES), Nanyang Technological University, Singapore.

MES 2007 comprised a number of keynote presentations and parallel sessions on design, development and implementation of state-of-the-art microelectronics and embedded systems from eminent UK and Singapore speakers along with poster presentations and R&D work showcasing from a wide range of researchers and practicing engineers.

Key presenters at MES 2007 included Warren East, CEO, ARM; Steve Furber, University of Manchester, UK; Guang-Zhong Yang, Imperial College, London, UK; Chris Turner, Cambridge Consultants, UK; Damian Chan, Singapore Economic Development Board and Lim Kiang Wee, A*STAR, Singapore.

The conference attracted more than 314 delegates from Singapore and the region. There was a near equal representation of the delegates' profile from industry, academia and research institutes. The profile of the delegates from industry was higher on the middle management side, with 62% being the category of Program Managers, Senior Engineers and Senior Managers with the capacity of influencing decision-making processes in their respective organisations. The profile of delegates from academia and research institutes had similar correlation where nearly 60% belonging to the category of Senior Research Engineer. The conference was recognised to be successful and there were already discussions to make this conference a repeated one.

As an aftermath of MES 2007, the British High Commission, Singapore has declared a Collaboration Development Award (CDA), aimed at facilitating collaborations between researchers in the UK and South East Asia to identify potential joint projects or to develop joint proposals in microelectronics and embedded systems. The maximum value of this award is S\$5000 and the call is open to researchers from universities, polytechnics, research institutes and companies from South East Asia. The date of proposal submissions was March 23, 2007. This call has been circulated among the MES 2007 delegates and the submissions are now awaited.

The Institution of Engineering and Technology saw a great deal of value in the initiative and the event was highlighted as a success both at the recent IET's Board of Trustees meeting and the last IET quarterly review. There will also be an article in the next issue of the internal members' newsletter sent to all of the volunteers involved in IET committees. It was also very useful to have the MES 2007 co-chair, Professor Roger Woods, making a presentation to the local IET Singapore Branch.

We were awarded the IET Knowledge Network Award for Joint Network Co-operation 2006-07 for organising this Workshop.

Built Environment Technology Network Conference 2008 (BETNET 2008) from 10th to 12th September 2008

BETNET 2008 will be hosted in Singapore following the successful organisation of BETNET 2006 in Malaysia and BETNET 2004 in Hong Kong. The theme of BETNET 2008 will be "Engineering the Next Generation of Sustainable Buildings." This event is co-organised by BETNET Technical Professional Network and we will be getting support from local engineering institutions and universities to support the event.

The 8th International Power Engineering Conference 2007 (IPEC 2007) from 3rd to 6th December 2007

IPEC 2007, co-organised by Nanyang Technological University, Singapore Power Ltd, IET Singapore, Institution of Engineers Singapore and IEEE Power Chapter Singapore.

The topic for IPEC 2008 is "Sustainable Development of Electric Power Systems: Challenges and Opportunities".

Selected papers will be published in a special issue of the International Journal of Emerging Electric Power Systems (IJEEPS). All accepted papers will be included in IEEE Xplore database and indexed by the Engineering Index (EI).

For full details of the Conference, please visit: www.ipec.sg.

National Committee of Engineering Organisations (NCEO)

The National Committee of Engineering Organisations (NCEO) organised a NCEO Networking Night on the 30th March 2007 at NUSS Suntec City Guild House. More than 70 participants from various members of NCEO attended. This included ASME, CIWEM, ICE, IEAust, IEEE, IES, IET, ImarEST/RINA and SMA.

The Night started with a talk by Er. Dr Lock Kai Sang, the past President of the Institution of Engineers, Singapore and Chairman of the Engineering Accreditation Board. He spoke on the topic of "Engineers' Mobility from a Global Perspective." Er. Dr Lock highlighted the importance of ASEAN Engineers Register (AER), APEC Engineer Register, EMF International Engineer Register and the Washington Accord in his talk.

- **ASEAN Engineers Register (AER)**

The ASEAN Engineers Register (AER) is formed to recognise professional engineers within the ASEAN region. The AER was formed after the ASEAN Federation of Engineering Organisations (AFEO) Governing Board at their meeting in Manila on the 23rd November 1998.

The AFEO, founded in 1980, brings together national engineering organisations from ASEAN countries as national members. It and the Secretariat are rotated among member organisations hosting the annual Conference of the ASEAN Federation of Engineering Organisations (CAFEO). The permanent Treasurer of AFEO is The Institution of Engineers, Malaysia, in Kuala Lumpur.

- **APEC Engineer Register**

The APEC Engineer Register is formed to recognise professional engineers within an APEC Economy, which includes countries New Zealand, Australia, United States, Malaysia, Hong Kong (China), Japan, Korea, Canada and Indonesia.

- **Engineers Mobility Forum (EMF) International Engineer Register**

The Engineers Mobility Forum (EMF) International Engineers Register is formed to facilitate the international mobility of experienced professional engineers by establishing a framework for their recognition

- **The Washington Accord**

The Washington Accord is a multinational agreement signed in 1989 with the following objectives:

- recognising the substantial equivalency of accreditation systems of organisations holding signatory status, and the engineering education programs accredited by them;
- establishing that graduates of programmes accredited by the accreditation organisations of each member nation are prepared to practice engineering at the entry level.

The current members (at full signatory status) of Washington Accord include: Australia, Canada, Hong Kong, Ireland, Japan, New Zealand, Singapore, South Africa, United Kingdom and United States. Singapore became a full member in 2006.

After Dr Lock's talk, Mr Jonathan Law, Public Affairs Manager of ExxonMobil Asia Pacific Pte Ltd, presented the research report by ExxonMobil on "Energy Outlook (which extends to 2030)". The report incorporates data and input from a variety of respected sources, including the International Energy Agency and the U.S. Department of Energy. By sharing this document, ExxonMobil hopes to foster a better understanding of the world's energy needs, and the factors that will shape global energy demand and supply in the coming decades.

After the two formal talks, there was a Q&A, and followed by dinner. During the dinner, extensive exchanges of views on the two topics were noted at each of the dining tables. The night ended after 10pm and there was suggestion to follow-up with subsequent dialogues among engineers from various organisations on important topics/issues that affect us.

Report of the International Professional Registration Advisor, Singapore for the period May 2006 – April 2007

1. Introduction

Ms. Michelle Richmond FIET, CEng took over the post of Director of Qualifications from Mrs Dorrie Giles. Work towards a more integrated approach in assessing the award application of the candidate has progressed and this has been supported with new forms used in the interview session.

There was an increase of inquiries for Professional Registration via the IET website, which I handled. Average number per month was 2 whereas last year it was 2 per quarter. Suggest reason may be the globalisation of the Singapore Engineers and the need for international registration.

2. Meetings

Visited IET Regional Office in Hong Kong on 12 September 2006. Had a meeting with Regent Lam to discuss implementing the IET Business Partners program in Singapore and review the coming establishment of the Far East Regional Network (FERN) on 3 November 2007.

Discussion with Mr. Paul Jackson, IET Director, Professional Operations during the Faraday lecture on the need for accrediting the Polytechnics from Singapore for the purposes of meeting the academic standards required for I Eng and Eng Tech Registration awards as well as reduced subscription fees.

3. Singapore Interviews

A total of 6 interviews for CEng were conducted over the period May 2006 – May 2007.

4. Membership

IET Membership was publicised at the following events by setting up a table with brochures and banner:

- Microelectronics and Embedded Systems Workshop MES 2007 – 23-24 January 2007, the Biopolis, Singapore: A “UK-Singapore Partnership in Science” Initiative.
- Faraday Lecture - 26 March 2007, Singapore Polytechnic Convention Centre.

Submitted by
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