

President's Foreword



Let me start by wishing you all a very happy and productive 2015. With the new year comes new aspirations, it is my pleasure to be in touch with you to report on the work of the Academy, along with some plans for activities in the near future.

The Academy of Engineering, Singapore (SAEng) was formed in 2011 to provide a platform for eminent and experienced engineers both in the public and private sectors to voice their opinions on engineering related issues. To achieve such objectives, expert groups are formed to study each of the issues and formulate a consultative paper for Fellows to comment subsequently. When finalised, it is the intention to submit the paper to the authorities concerned and other interested parties for their attention. Suitable papers can also be published in academic or professional journals.

Over the years, the Academy has sought to generate increased interactions between engineering disciplines and nontechnical fields and build a strong rapport with professional engineering organisations and leaders in Singapore and abroad. The inaugural issue of the SAEng Newsletter was launched in March 2014 to keep members updated on the activities and projects championed by our distinguished Fellows. The Academy has also made significant progress in laying the groundwork for improving the awareness of engineering in society and promoting engineering excellence.

In my most recent message, I wrote about the engineering sector's growing talent deficit and the critical need to strengthen its talent pipeline. To this end, I would like to draw your attention to one of the most important topics: what can we do to attract more bright students to engineering and beef up the resource for the next generation to create wealth for the nation. As technology continues to impinge into many aspects of the daily lives of people, engineers are vital in creating solutions for the benefit of society.

Since its launch, the Academy has continued its work and mandate to serve as a think tank to deliberate on national agenda and topics related to the engineering profession by leveraging on the experience and expertise of its fellow members. Examples of such topics are outlined in the current Newsletter.

Going forward, there are five new topics under consideration for inclusion in the calls for proposals, namely: Water Resources, Land Transportation, Environmental Preservation, Connected City and Cyber Security. To ensure the finalised proposals truly represent the views of the Fellows, I strongly urge all Fellows to respond to our call for comment and feedback.

I look forward to seeing more Fellows play an active role in the Academy in the coming months.

Professor Cham Tao Soon

Academy Projects

The Academy relies on the expertise of Fellows to support its activities and help achieve its objectives. As part of the strategic plan, the Academy has established three project groups to address issues ranging from enhancing the role of Science Centre Singapore on engineering innovation, study of policies and strategies to revive students' interest in engineering and renewable energy alternatives for Singapore. A new proposal calling for coordinated efforts by the government, professional engineering bodies and industry to revive the prestige of the engineering profession was circulated to all Fellows for comments and discussion.

1. Renewable Energy Alternatives for Singapore

To enthuse the young to take an interest and develop solutions in energy efficiency and clean energy to address the adverse effects of climate change, the project championed by Professor Chou Siaw Kiang proposes a multi-pronged approach which involves the set-up of a Resource Centre for Clean Energy (RECCE), working with the various schools and institutions to incorporate environmental sustainability in the curriculum, and strategically locating kiosks across the country to facilitate information dissemination, encourage public debate and involvement in community projects, and promote sustainable living habits by the public. The proposal was adopted by the Academy and circulated to all Fellows for comments and expression of interests from Fellows.

2. Enhancing the Role of Science Centre Singapore in Engineering Innovation

To capture the hearts and minds of young Singaporeans to pursue an engineering profession, the project led by Professor Hang Chang Chieh, Dr Raj Thampuran and Mr Quek Gim Pew, comprises of a two-steps approach to raise greater awareness and interest in the profession. In the incremental step, more regular exhibits in engineering innovations and entrepreneurship which are appealing to secondary school students will be added in the Science Centre Singapore. In the radical step, the Science Centre Singapore will fully embrace the mission of stimulation and long-term inculcation of students' interests in engineering innovation with the possible adoption of the Japan's National Museum of Emerging Science and Innovation as a role model. The white paper was adopted by the Academy and circulated to all Fellows for comments in November 2013. The project proposal was submitted to the CEO of Science Centre Singapore for acceptance of the recommendations and obtaining government's funding to drive the implementation phase.

3. Study of Policies and Strategies to Revive Students' Interest in Engineering

As many engineering universities worldwide faced a declining interest of students taking up engineering programmes, the project led by Professor Kam Chan Hin was timely to look into and review the current policies and strategies to address the issues which

includes a re-think in the teaching of sciences and mathematics, restore the mandatory teaching of physics in the school syllabus, inclusion of more hands-on modules to stimulate interest, revamp of the current engineering curriculum and inclusion of early industry exposure to entrench students within the engineering profession. Industry support for the suggested initiatives would be necessary in order for it to succeed.

4. A Call for Action: Engineering a Renaissance and Revival

To revive the prestige of engineering, improve the quality of engineering students and stop the leakage of graduates to non-engineering related sectors, the proposal led by Professor Hang Chang Chieh calls for the public sector to offer competitive salaries for engineers, professional engineering bodies to work together to raise the profile and value of engineering and engineers, and collaborations between universities and industry to reinvent the curriculum and provide scholarships to attract top students to take up engineering programmes. The proposal was adopted by the Academy and circulated to all Fellows for comments and expression of interests in May 2014.

New Fellows

The Academy's fellowship currently stands at 82 strong with the election of three new Fellows in 2014.

We are pleased to welcome the following new Fellows to the Academy.



Brian Chang
Chairman and Chief Executive Officer
Blue Capital Pte Ltd



Chong Kee Sen
President
The Institution of Engineers, Singapore



Lau Joo Ming
President
Professional Engineers Board, Singapore

Fourth Annual General Meeting

The Academy of Engineering, Singapore (SAEng) held its fourth Annual General Meeting (AGM) in September 2014, at the Nanyang Executive Centre, Nanyang Technological University.

During the AGM, the President informed that four expert groups had been established to provide expert advice on key issues currently faced by Singapore. There were also five new expert groups proposed to be formed. President reiterated that the Academy is a non-governmental organisation which receives no funding from the government and provides expert guidance on national issues and agenda pertaining to the engineering profession. He encouraged Fellows to be more forthcoming and actively participate in the Academy's projects and activities.

The Secretary gave an update on the progress of the three projects initiated by the Academy. As part of the strategic plan, the Academy sought to engage in projects to promote engineering and energy sustainability, individual project groups have since developed two papers addressing these issues, one of which has been tabled to the Academy for consultation.

With regard to future directions, Professor Freddy Boey opined that Fellows should strive to introduce new ideas which are game changers to influence government policies on national issues pertaining to the engineering profession. Professor Chen Charng Ning suggested that the Academy could establish professional networks with other professional engineering organisations in the region by sharing engineering expertise and advice on issues related to land transportation and water resources.

Professor Chou Siaw Kiang remarked that with the growing awareness and interest on renewable energy in Singapore, the Academy's project on renewable energy could attract interest and funding from the government in future. Fellows also suggested that the exhibits at the Science Centre Singapore should be revamped to make it



more creative, interesting and practical so as to attract more young students to take up the engineering profession.

In closing, the President expressed his appreciation to Executive Committee Members and the project groups for their dedication and hard work in pursuing the Academy's mission and objectives for the past year. The President also put on record and gave thanks to the Institution of Engineers, Singapore (IES), SAEng Fellows and donors, for their generosity and support. The Academy is exploring the options to produce corporate collar pins and ties with the Academy logo which could be presented as a corporate gift for Fellows, donors and visitors.



Making a Donation

The Academy of Engineering, Singapore (SAEng) is a charity entity registered in Singapore, funded by contributions from individuals and private organisations.

Your donations will enable the Academy to develop and sustain projects to attract aspiring engineers, encourage innovation and provide support to advance and promote excellence in engineering, and improve the public awareness and understanding of engineering in Singapore.

All donations are 2.5 times tax deductible.

To make a contribution to the Academy, please contact saeng@ntu.edu.sg.

Our Donors

The Academy had received four new donations in 2014 and a total of \$87,070 from organisations and individual donors thus far.

We would like to express our sincere gratitude to all generous individuals and organisations that have supported the Academy over the past four years.

Here is our 2011-2014 Honour Roll of Donors:

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ISSN 2345-7589

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This Newsletter is published for the Academy of Engineering, Singapore (SAEng) by World Scientific Publishing Co Pte Ltd.



Printed on FSC™ certified paper in support of a sustainable earth.

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