

e w s l e t t e

June 2023

President's Foreword



The beginning of 2023 marks the first period in which life in Singapore has returned to normal since the pandemic started. This is also the first issue of the newsletter since I was very elected to serve as president of SAEng, for which I am deeply honoured.

I would like to thank Prof. Cham for his able stewardship of the academy since it was started in 2014. During his tenure, the academy went from strength to strength. Some of the fellows who joined during this period include Mdm Ho Ching, Mr Peter Ho, Prof. Khoo Teng Chye, Prof. Lee Seng Lip, Prof. Lui Pao Chuen, Mr J. Y. Pillay, Er. Tan Gee Paw, and Mr Philip Yeo. Prof. Cham was also successful in recruiting Senior Minister Mr Teo Chee Hean to be the academy's patron.

Prof. Cham's presidency also saw the creation of the five expert groups that serve as pillars supporting the academy's work -- in water resources, land transportation, environmental preservation, the connected city, and cybersecurity. These groups were created to ensure that SAEng is understanding and addressing Singapore's engineering needs. We as a nation have benefitted enormously from having generations of eminent engineers since independence. It is our duty as a professional body to pass a tradition of excellence on to future generations of engineers and ensure that engineering remains a profession of choice in Singapore.

To help make this happen, we have several initiatives planned. The most important of these is the creation of a permanent and sustainable funding model, which is needed for long-term growth. It will allow us to host initiatives, such as quarterly outreach programmes and activities to encourage young people to become engineers, as well as nurture existing engineers and help them upskill. It will also allow us to prepare annual reports to cement our place as thought leaders on engineering in Singapore. This initiative will be done in collaboration with our partners and stakeholders in the government and local educational institutions like the National University of Singapore and Nanyang Technological University.

I look forward to working with all of you on developing this initiative, and others, to take SAEng to greater heights in the months and years to come.

AI and Engineering

Few topics have captured the imagination recently as much as artificial intelligence (AI) thanks to tools such as ChatGPT and Dall-E becoming publicly available. AI has the potential to be a game changer, radically changing the way we live, work, and play. The impact on human life may be greater than the combined effect of the mass adoption of the Internet in the 1990s and mobile phones in the early 2000s.

The integration of AI into various engineering domains has paved the way for significant advancements. For example, in design, AI algorithms analyse large amounts of data to generate design solutions in a faster, more efficient, and more cost-effective manner than traditional design methods.

Meanwhile, in manufacturing, AI uses production data to identify areas where improvements can be made to reduce waste and increase productivity. AI is also used to predict when a piece of machinery or equipment is likely to fail so that it can be repaired or replaced in time, reducing maintenance costs.

AI can also contribute to education. With the help of algorithms, students can learn and practice engineering concepts interactively, with instant feedback helping students identify areas where they need improvement. This leads to more efficient and effective learning, and can help students develop a better understanding of complex concepts.

At the same time, engineering has an important role to play in advancing AI. The development of new hardware is essential to enabling AI algorithms to run faster and more efficiently. The development of graphics processing units and chips designed specifically for AI have made it possible to train and deploy larger and more complex AI models. Advancements in sensors and materials have also enabled the collection of high-quality data which can be used to train more precise and sophisticated AI systems. Engineering innovations will also lead to the creation of new AI applications in the near-term, such as autonomous robots and self-driving cars.

In summary, developments in AI and engineering are intertwined and will continue to be so in the years to come. By embracing AI in our research and practice, we can make sure that we as engineers are at the forefront of teaching, learning, and practical applications, regardless of our specialisation.

Professor Ho Teck Hua

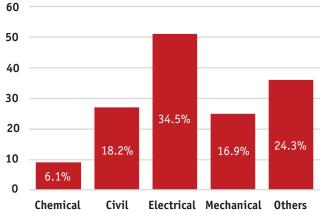


About the Academy

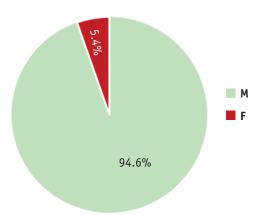
The academy's fellowship currently stands at 148 strong with the election of 17 new fellows in 2022. The new fellows are featured below and in the following pages in green.

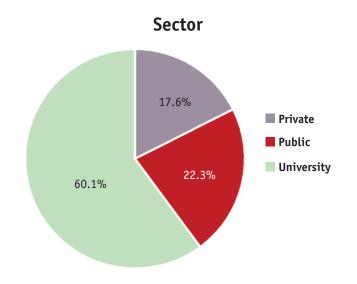
Here are the statistics of the fellows at present.

Disciplinary Field

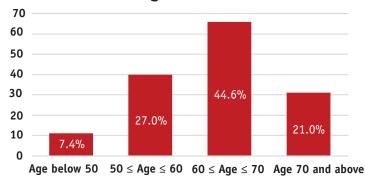


Gender Distribution





Age Profile



New Fellows

We are pleased to welcome the following new fellows to the academy.



Mr Dalson Chung

Senior Specialist, National Environment Agency President and Fellow, Institute of Engineers Singapore

Mr Chung was previously the Director of NEA's Industry Development and Promotion Division and Managing Director of the CleanEnviro Summit Singapore where he spearheaded NEA's efforts in developing the environmental industry in Singapore to meet local needs and help environmental companies globalise, especially in the waste management and the cleaning industry sectors. He is also the Chair of the Chartered Engineer Singapore for the environment and water sector, and a member of the IES Chartered Engineer Board and the Engineering Accreditation Board.



Professor Guan Cuntai

President's Chair Professor, School of Computer Science and Engineering Director, Artificial Intelligence Research Institute Director, Centre for Brain Computing Institute Nanyang Technological University

Prof. Guan's research interests include brain-computer interfaces, machine learning, medical signal and image processing, artificial intelligence, and neural and cognitive rehabilitation. He has received the Annual BCI Research Award (first prize), the IES Prestigious Engineering Achievement Award, and the Achiever of the Year (Research) Award, and the Finalist of President Technology Award. He is an elected fellow of IEEE, AIMBE, and the US National Academy of Inventors.

About the Academy



Dr Li Erping Qiushi Distinguished Professor, School of Information and Electronic Engineering Zhejiang University Principal Scientist at Pensees (S) Pte Ltd

Dr Li has been a pioneer in electromagnetic modelling and design in artificial intelligence, for 3D heterogenous integrated circuits, neuromorphic computing chips, and 5G/6G communication electromagnetic compatibility. He has had 400 journal papers and two books published and is a fellow of IEEE, AAIA, and the USA Electromagnetics Academy. He has received the IEEE EMC Technical Achievement Award, the IES Prestigious Engineering Achievement Award, the Changjiang Chair Professorship Award, the IEEE EMC Richard Stoddard Award and the IEEE Laurence G. Cumming Award.



Professor Lou Xiong Wen (David) Chair Professor, Department of Chemistry City University of Hong Kong

Prof. Lou's current research is focused on design and synthesis of novel nanostructured materials for next-generation electrochemical energy storage and conversion technologies. He has had over 380 papers published, with total citations of more than 122,000 and an H-index of 206. Prof. Lou was listed as a Highly Cited Researcher by Thomson Reuters/Clarivate Analytics from 2014 to 2022 in multiple categories including Materials Science, Chemistry, Environment, and Physics. Prof. Lou is also a fellow of Singapore National Academy of Science.



Professor Meng Qiang

Professor, Department of Civil and Environmental Engineering National University of Singapore

Prof. Meng focuses on three research areas: (i) transportation network modelling and optimisation, (ii) shipping and intermodal freight transportation analysis, and (iii) the quantitative risk assessment of transport operations. He has distinguished himself through his research on urban mobility, maritime transportation, and inter-modal freight transportation analysis, modelling, and optimisation.



Mr Ngien Hoon Ping Group Chief Executive Officer and Executive Director SMRT Corporation Ltd

Mr Ngien graduated with first class honours in electronics and electrical engineering from the University of Manchester in the UK, and a MSc in industrial engineering from NUS. He was conferred the Public Administration Medal (Silver) (Military) in 2007 and was awarded the Public Administration Medal (Silver) in 2015.



Professor Ooi Beng Chin Professor, Department of Computer Science Lee Kong Chian Centennial Professor National University of Singapore

Prof. Ooi is a fellow of the ACM 2011, IEEE 2009, Singapore National Academy of Science 2016, and a foreign member of Academia Europaea 2022. He was the recipient of ACM SIGMOD 2009 Contributions award, co-recipient of the Singapore President's Science Award, the recipient of 2012 IEEE Computer Society Kanai award, 2013 NUS Outstanding Researcher Award, 2014 IEEE TCDE CSEE Impact Award, 2016 China Computer Federation Overseas Outstanding Contributions Award, 2020 ACM SIGMOD EF Codd Innovations Award, and 2021 NUS University Research Recognition Award.



Singapore Head of the Information Systems Technology and Design Pillar Cheng Tsang Man Chair Professor Singapore University of Technology and Design

Prof. Quek has been one of the strongest contributors to SUTD's rise in research in wireless communications over the past decade, specifically in the core sub-discipline of telecommunications. SUTD's growth in this sub-discipline resulted in it being ranking the fifth most influential scientific research institution in telecommunications research in Clarivate Analytics' State of Innovation Report 2017.



Professor Soh Yeng Chai Professor, School of Electrical and Electronic Engineering Associate Dean for Research, College of Engineering Nanyang Technological University

Prof. Soh's current research interests are robust system theory and applications, estimation and filtering, signal and information processing, hybrid systems and applications, and optical signal processing. He has had 200 refereed papers published in international journals and holds four published patents.



Professor Tang Loon Ching Professor, Department of Industrial Systems Engineering and Management National University of Singapore

Prof. Tang was awarded the IISE Transactions 2010 Best Application Paper Award and the prestigious Ralph A. Evans - P. K. McElroy Award for the best paper presented at the 2011 Reliability and Maintainability Symposium. He is a leading researcher in reliability and resilience and has been working with organisations on systems design and improvement for many years.

About the Academy



Professor John Wang

A*STAR, Singapore

Professor, Department of Materials Science and Engineering National University of Singapore Principal Scientist II, Institute of Materials Research and Engineering

Prof. Wang is an internationally eminent scholar, who has championed applications of advanced materials in engineering, in the key areas of energy, manufacturing, environment, electronics, and defence in Singapore. He served as the head of the Department of Materials Science and Engineering at NUS for two terms. Professor Wang has had more than 500 papers published in top international journals, has received more than 35,000 citations, and has an H-index of 98. Professor Wang is Clarivate Highly Cited Researcher for the past three consecutive years (2020, 2021, and 2022).



Professor Wang Xin

Professor, School of Chemistry, Chemical Engineering and Biotechnology Cheng Tsang Man Chair Professor in Energy Nanyang Technological University

Prof. Wang is a leader in electrocatalysis for energy and environmental applications. He has been on Clarivate Web of Science's Highly Cited Researcher list since 2018. He is a fellow of the Royal Society of Chemistry and a recipient of the 2021 Nanyang Research Award.



Professor Wen Changyun Professor, School of Electrical and Electronic Engineering Nanyang Technological University

Prof. Wen has been working for more than 35 years on automatic control theory with applications in practical systems, including autonomous systems, cyber-physical systems, and power/energy systems. He received the IES Prestigious Engineering Achievement Award from the Institution of Engineers, Singapore, in 2005 and became an IEEE fellow in 2010.



Professor Wen Yonggang Professor and President's Chair, School of Computer Science and Engineering Nanyang Technological University

Prof. Wen's main area of research is data-driven system development and performance optimization for large-scale and industry-grade digital twin systems. He was awarded the 2019 Nanyang Research Award and the 2017 Nanyang Award in Innovation and Entrepreneurship.



Professor Jason Xu Zhichuan Professor, School of Materials Science and Engineering Nanyang Technological University

Prof. Xu's work is characterised by a bottom-up, rigorous approach to electrocatalysis science and engineering, where he has made an outstanding impact in a highly competitive area. His work has been published in top quality journals and is widely followed within the community as evidenced by his appearance in Clarivate Analytics' list of Highly Cited Researchers for 2018-2022.



Professor Zhang Daohua Professor, School of Electrical and Electronic Engineering Nanyang Technological University

Prof. Zhang has worked on semiconductor materials and devices for over 30 years and is a one of the leaders in photodetection from midinfrared to millimetre waves. He has completed over 30 research projects, including the first \$10 million competitive research programme at NTU as the lead principal investigator. The programme was assessed as having made "outstanding, world class research progress" by an international evaluation committee, which included a Nobel Laureate.



Professor Zhang Yong Professor, Department of Biomedical Engineering National University of Singapore

Prof. Zhang is a world-renowned biomedical engineering researcher who has developed several new technologies for bioimaging, point-of-care diagnostics, and phototherapy based on nanomaterials and implantable devices, some of which have been commercialized and licensed to Singaporean companies. He has had 250 papers published in top-tier journals and has a h-index of 81 with 29,692 total citations in Google Scholar.

SAEng is actively seeking candidates to be fellows of the academy.

Nomination Criteria

Candidates are nominated by two existing members of the academy and must reside in Singapore.

In addition, candidates should have:

- 1. Made impactful contributions to engineering practice, research, and/or education; or
- 2. Demonstrated outstanding entrepreneurship and leadership; or
- 3. Created innovations that have been successfully translated into practice; or
- 4. Shown leadership in the management and professional growth of the engineering industry, educational institutions, or research organisations.

These accomplishments should be at the national or international level. Some examples are:

• National level

• National contributions in various high-level technical committees, government statutory boards, and professional societies.

• International level

- Served on international scientific and advisory committees or judging panels at major scientific and academic events, etc.
- Contributions have brought the nation to international prominence in a particular field

SAEng also welcomes candidates who are early in their careers and are expected to make major contributions in the years to come.

The Fellowship Process

Nominations will be reviewed on a yearly basis in December. To be considered for assessment, nominations must be received by 30 October in the same year. Nominations received after 30 October will be included in the following year's discussions.

Successful candidates will be notified in February of the subsequent year.

To submit a nomination, please write to **secretariat@saeng.sg**.

Singapore's Engineering Doctorate (EngD) Pioneers

Three graduates from NUS & SUTD's EngD Programme

The engineering doctorate (EngD) programme, which was initiated and endorsed by the Academy of Engineering Singapore (SAEng) in July 2015, heralded a new era in higher education for the engineering profession. With its focus on research with industrial importance, projects must be approved by a supporting company. The programme was created to boost Singapore's competitive edge in training the next generation of engineer-leaders and ensure that they have depth of training in scientific theory as well as first-hand understanding of the needs of industry. Intended for working professionals, the EngD programme requires candidates to undertake coursework in technology management.

The National University of Singapore (NUS) and the Singapore University of Technology and Design (SUTD) were the first two local universities to approve the EngD programme, in 2017. They admitted the first batch of EngD students in 2018.

To date, NUS and SUTD have admitted a total of 29 EngD candidates from multi-national companies (e.g., AMAT, AMD, Panasonic, Halliburton, Nippon Paint, and Dyson), A*STAR, DSO, AISG, LLE/SME, and start-ups (e.g., Engro, One Smart Engineering, and ANOR Tech). The Economic Development Board has supported a number of EngD candidates from the abovementioned companies through the Industrial Postgraduate Programme (IPP). The EngD programme's dual focus on industry and academia makes it an excellent programme to train talent for industry.

SAEng is proud to have played a pivotal role in nudging universities in Singapore to pioneer the development of EngD programmes to serve as timely additions to the advanced manpower education programme for the future needs of Singapore's high-tech industry.

Three students from the first batch have completed their EngD study/research successfully and have been awarded engineering doctorate degrees; one was from NUS and two were from SUTD. SAEng is proud to spotlight two of the EngD pioneers, both women, below.



Dr Ariane Wu Yunshan National University of Singapore Project: Investigation of Corrosion Issues in the Oil and Gas Sector

How has the EngD programme benefitted you?

I've learnt a new research area and how to develop innovative technology. I've picked up new software skill sets and deepened soft skills abilities such as project management, critical thinking, public speaking and many more.

I've also learnt how to bridge between experimental and actual operational technologies. These soft skills are essential in developing new technologies and product development.

Tips for future candidates:

Have a passion to create new technologies to solve problems and create a plan on how to achieve solutions. Although there is no guarantee of success, the learning path is never halted by failure.

Final reflection:

The EngD programme requires self-motivated, and goal-orientated individuals to carry out research work under supervisors' guidance. The combined efforts of academia and industry provide more resources to achieve the desired outcome.

Comments from academic supervisor:

"The programme certainly helps to link the academic supervisor with industry as the two parties work together for almost four years while supervising the candidate. The supervision involved regular meetings and site visits. Personal contacts were made, and they learnt about our (academic supervisor's) capabilities and we found out in more detail what problems they (industry) were facing. In the long run, this may lead to more meaningful collaborations or consultancy."

Comments from industry supervisor:

"The EngD candidate did work on a new process; when implemented, it will increase the product life without adding significant cost. In addition, she filed a patent which adds to the company's IP platform."



Dr Yvonne Tan

Singapore University of Technology and Design Project: Precision Design, Advanced

Analysis & Modelling of High-Speed Motor Components

How has the EngD programme benefitted you?

Without a doubt it has trained in me the

ability to perform in-depth research within a challenging time frame. The experience has granted me exposure to different research methodologies and technical white papers and honed my ability to distil the essence of the work within a short span of time.

The professional modules have refreshed and updated my understanding of information and key concepts that I felt I was familiar with. For example, the modules gave me new insights into patents, which is a big part of my work.

Tips for future candidates:

It is important to define your topics and area of research with your academic and industry supervisor. Do also ensure regular meetings are set up with both parties – separately, as well as altogether.

Final reflection:

Learning is a life-long journey. The adrenaline rush of getting an EngD has deepened my urge to learn more and increased my curiosity for engineering. This journey has also equipped me with an appreciation of, and the capability to conduct applied research.

Comments from academic supervisor:

"The linkage to industry via this EngD programme has benefits to both research and teaching. This programme has enabled more applied research work which benefits industry directly. In parallel, the experience with industry is looped back into teaching to benefit undergraduate students."

Comments from industry supervisor:

"Our company is already seeing rewards from this programme. Benefits include exposure to untapped talent in Singapore, parallel resourcing of R&D activities from offerings for more expedient timeto-market, gaining insights to the facilities within the research programmes in Singapore, as well as the opportunity to influence the technological direction of the research topics of our candidates."

Awards & Honours

Our heartiest congratulations to the following fellows who have recieved the honours and awards mentioned below.

Prof. Chen Xiaodong

- Named a fellow of the Singapore National Academy of Science (SNAS) (link: https://snas.org.sg/fellowship-fellows).
- Placed on the Asian Scientist 100 list, by Asian Scientist Magazine (link: https://www.asianscientist.com/as100/).
- Won an award for Solid State Chemistry & Materials, by the Singapore National Institute of Chemistry (SNIC) (link: https:// snic.org.sg/index.php/awards/2020-07-20-06-34-52/solidstate-chemistry).
- Won the IUMRS Frontier Materials Scientists Award (link: https://iumrs.org/recipients-of-iumrs-fmsa-fmysa-2022/).

Prof. Chung Tai-Shung Neal

• His lifetime achievements were honoured at a special symposium at the 13th Conference of the Aseanian Membrane Society (AMS 13) on 4-6 July 2022.

Prof. Guan Cuntai

- Won the King Salman Award for Disability Research (Technical Branch) 2022, for his dedicated research on brain-computer interface technologies and his significant contributions to several medical applications using brain-computer interfaces, such as stroke rehabilitation, ADHD treatment, cognition training, and mental health.
- Named a fellow of the National Academy of Inventors (NAI)'s Class of 2022, in the USA. The fellowship is the highest professional distinction accorded solely to academic inventors across the world. The NAI Fellows Program was established to highlight academic inventors who have demonstrated a prolific spirit of innovation in creating or facilitating outstanding inventions that have made a tangible impact on the quality of life, economic development, and the welfare of society.

Dr Richard Kwok

 Named a Friend of Land Transport, by the Land Transport Authority, to recognise his contributions to the holistic improvement of Singapore's land transport system through various nation-wide initiatives that focus on manpower development, community development and standards development.

Dr Li Er Ping

• Won the 2022 Zhejiang Province Natural Science Award, first class, for outstanding contributions to the discovery of inverse Cerenkov radiation in artificial electromagnetic materials.

Prof. Lim Chwee Teck

- Won the IES Prestigious Engineering Achievement Award 2022, from the Institution of Engineers, Singapore, for engineering achievements that demonstrate outstanding engineering skills and which have made a significant contribution to the engineering progress and the quality of life in Singapore.
- Named a IUPESM fellow 2022 by the International Union for Physical and Engineering Sciences in Medicine. The fellowship recognises outstanding contributions to the international development of Physical and Engineering Sciences in Medicine.

Prof. Lock Kai Sang

• Co-winner of the 2022 Medal for Excellence in Engineering Education from the World Federation of Engineering Organizations (WFE0)

Prof. Phee Soo Jay Louis

 Awarded the Public Administration Medal (Silver) at the National Day Awards 2022, for his contributions to the education sector as Dean of the College of Engineering at Nanyang Technological University, Singapore.

Prof. Tony Quek

- Named in Stanford University's "Top 2% of Scientists Worldwide 2022", for outstanding contributions to networking and tele-communications.
- Winner of the 2022 IEEE Signal Processing Society Best Paper Award for "Federated Learning With Differential Privacy: Algorithms and Performance Analysis". The paper was published in IEEE Transactions on Information Forensics and Security, April 2020, and was co-authored by Kang Wei, Jun Li, Ming Ding, Chuan Ma, Howard H. Yang, Farokhi Farhad, Shi Jin, Tony Q. S. Quek, and H. Vincent Poor.
- Selected as a finalist for the Falling Walls Science Breakthroughs of the Year 2022 in the category Science and Innovation Management.

• Named a ST Engineering Distinguished Professor for contributions in accelerating the translation of research in wireless communications.

Mr Seah Moon Ming

- Winner of the Meritorious Service Medal at the 2022 National Day Awards, for his significant contributions to the public transport and education sectors.
- As chairman of SMRT since 2017, Mr Seah Moon Ming has been instrumental in achieving a best-in-class standard of reliability. He helped to deepen SMRT's rail engineering capabilities, enhanced its operations and maintenance, and introduced innovations which improved station services. He also contributed significantly to the Johor Bahru-Singapore Rapid Transit System project.
- As chairman of the board of governors of NUS High School, Mr Seah led the school to nurture an international outlook in its students. He helped the school establish partnerships with industry, which enabled students to gain authentic professional experiences.

Prof. Wang Rong

- Awarded the Public Administration Medal (Silver) at the 2022 National Day Awards.
- Winner of the 2022 President's Technology Award for "outstanding contributions to the field of membrane science and technology, leading to more energy-efficient liquid purification and desalination to support Singapore's sustainability goals".

Dr Yang Yi Yan

- Highly Cited Researcher 2022 awarded by Clarivate as the world's most influential scientific minds, demonstrated by the production of multiple highly-cited papers that rank in the top 1% by citations for field and year in the Web of Science[™]
- The Commendation Medal (COVID-19) awarded by the Republic of Singapore for displaying great courage and dedication beyond the call of duty while maintaining a high level of professionalism in her role during the COVID-19 pandemic.

Prof. Yeo Kiat Seng

- Won a 2022 Singapore National Academy of Science (SNAS) Fellowship for his pioneering work and leadership in radio frequency millimetre-wave integrated circuit design and the promotion of STEM education in Singapore.
- Named in Stanford University's "Top 2% of Scientists Worldwide 2022", for outstanding contributions to the field of engineering and integrated circuit design.

Events & Meetings

The Academy of Engineering, Singapore held its twelfth Annual General Meeting (AGM) via Zoom on 7 June 2022.

Then-President Professor Cham Tao Soon extended a warm welcome to all the fellows present at the meeting. Secretary Professor Aaron Thean presented the Secretary's Report which highlights brief statistics on the academy's fellows as well as key activities over the past year.

Professor Hang Chang Chieh, a fellow and member of SAEng's executive committee, informed the attendees about the engineering doctorate programme, which exposes students to research translation projects in industry while teaching them industry-relevant skillsets in their course of study. Professor Hang encouraged the members to contact him if they are interested in learning more about the programme.

Then-treasurer Professor Cheong Hee Kiat presented the treasurer's report on the academy's financial status for the year ending 31 December 2021.

During the meeting, Professor Cham proposed the following nominees for election to the executive committee. The nominations were supported and approved.



Professor Ho Teck Hua President



Professor Aaron Thean Secretary



Professor Liu Bin Treasurer



Mr Dalson Chung Ex-Officio-President IES



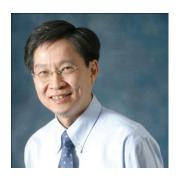
Dr Richard Kwok Immediate Past President IES



Professor Chong Hee Kiat Ordinary Member



Professor Chong Kee Sen Ordinary Member



Professor Chong Tow Chong Ordinary Member



Professor Chou Siaw Kiang Ordinary Member



Professor Er Meng Hwa Ordinary Member



Hang Chang Chieh Ordinary Member



Professor Lee Der-Horng Ordinary Member

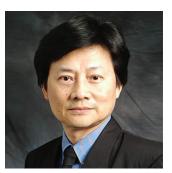
Events & Meetings



Professor Lee Shiang Long Ordinary Member



Mr Seah Moon Ming Ordinary Member



Professor Andrew Nee Ordinary Member



Yeoh Lean Weng Ordinary Member

President Professor Ho Teck Hua expressed his gratitude for being elected to serve as the next president of SAEng and thanked Professor Cham for his leadership over the past twelve years. Professor Cham was named president emeritus of SAEng.



Prof. Cham Tao Soon

"It was a pleasure and honour to have led the academy for more than 10 years. I would like to thank all the fellows and ExCo members who were very supportive of my role.

The role of the academy is to promote the work of the engineers, be it in institutions of higher learning, government departments or the private sectors. Their work and achievements are good role models for the young. I hope increasingly more graduates will be interested to study engineering.

I would also like to encourage our fellows to provide suggestions and inputs from an engineer's perspective to the academy as well as policymakers for a greater good.

Finally, please join me in welcoming the new president, Professor Ho Teck Hua, to lead the academy. I am confident that he will provide the academy with new insights, leading it to greater heights."

In closing, President Professor Ho shared his three key goals for the academy in the coming years:

- 1. To continue to attract more fellows from diverse backgrounds.
- 2. To amplify influence in the engineering industry through efforts such as the President's Technology Award and create deeper engagements with NRF.
- 3. To encourage the academy to take on new projects that will energise the engineering profession.

President Professor Ho added that he looks forward to having face-to-face meetings with the members of the academy and encouraged fellows to share ideas for interesting projects at the next AGM.

Making a Donation

The Academy of Engineering, Singapore (SAEng) is a not-for-profit 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 also improve the public awareness and understanding of engineering in Singapore.

To make a contribution to the academy, please contact secretariat@saeng.sg

Our Donors

The academy has received a total of \$207,070 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 ten years. Here is our 2011-2022 Honour Roll of Donors:



Patron

SM Teo Chee Hean

Executive Committee

President Ho Teck Hua

Secretary Aaron Thean

Treasurer Liu Bin

Ex-officio - President IES Dalson Chung

Ex-officio - Immediate Past President IES **Richard Kwok**

KICHAIU KWOP

Ordinary Member Chong Hee Kiat Chong Kee Sen Chong Tow Chong Chou Siaw Kiang Er Meng Hwa Hang Chang Chieh Lee Der-Horng Lee Shiang Long Seah Moon Ming Andrew Nee Yeoh Lean Weng

Editor Er Meng Hwa

Honorary Auditor Gan Boon Jin Lock Kai Sang



ISSN 2345-7589

While every care has been exercised in compiling this publication, we assume no responsibility for the effects arising there from. Information provided is considered to be true and correct at the time of publication.

Feedback on the Newsletter is welcome as well as all communications that you may wish to make and which we may publish. To contribute an article/give us your feedback, email us at secretariat@saeng.sg © Copyright 2022. All rights reserved. Permission from the publisher is required for reproduction by any means in whole or in part.

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



Printed on FSC^{\otimes} certified paper in support of responsible management of the world's forest

The Academy of Engineering, Singapore c/o Institution of Engineers

70 Bukit Tinggi Road, Singapore 289758. http://www.saeng.sg/