



The Institution of Engineers, Singapore

70 Bukit Tinggi Road, Singapore 289758

Tel: (65) 6469 5000 Fax: (65) 64671108

E-mail: ies@iesnet.org.sg

Website: <http://www.ies.org.sg>

STRICTLY EMBARGOED UNTIL 10 OCTOBER 2019, 9PM

Media Release

IES Celebrates 53rd Anniversary with Recognition of Exemplary Contributions to Engineering and Launch of New Initiatives

**Confers IES Distinguished Honorary Patron on Deputy Prime Minister Heng
Swee Keat and IES Honorary Fellow on Minister Ng Chee Meng**

Launches Singapore Railway Standards Initiative

Launches Incubator-Accelerator platform for engineers

The Institution of Engineers, Singapore (IES) hosted its 53rd Annual Dinner, themed 'Engineering a Sustainable Singapore', at the Shangri-La Hotel, Singapore today. Deputy Prime Minister (DPM) and Minister for Finance, Mr Heng Swee Keat graced the occasion as the guest-of-honour.

Recognising Outstanding Contributions to Engineering

IES conferred the IES Distinguished Honorary Patron title on DPM Heng Swee Keat at the dinner, in recognition of his central role in shaping the advancement of engineering in Singapore. The IES Distinguished Honorary Patron is the most prestigious and highest IES award and may only be conferred on those of acknowledged eminence and high standing who have made significant contributions to the engineering profession and nation building. As the Distinguished Honorary Patron, DPM Heng will provide his guidance and support to advance IES' mission.



IES also conferred the **IES Honorary Fellow** on Minister Ng Chee Meng, Minister in the Prime Minister's Office and Secretary-General of National Trades Union Congress (NTUC), in recognition of his outstanding contributions in shaping engineering education and developing engineering leaders to support Singapore's future growth.

At the dinner, Er. Tan Ee Ping also received the prestigious **IES Lifetime Engineering Achievement Award 2019**. The award recognises lifetime accomplishments that have made profound impact on the engineering industry and community, and for bringing national or international honours to Singapore. Er. Tan is an eminent civil engineer who has contributed extensively to Singapore's built environment and economic growth over his 55-year career.

"I am extremely honoured to receive the IES Lifetime Engineering Achievement Award for my contributions and services rendered to The Institution of Engineers, Singapore and our country for more than 5 decades," said Er. Tan on being awarded the IES Lifetime Engineering Achievement Award.

IES also presented the **inaugural IES Outstanding Partner Award** that recognises and honours outstanding organisations which have contributed significantly to IES and the engineering community. The recipient of the award is the Defence Science and Technology Agency (DSTA), for its longstanding commitment in partnering IES to promote engineering excellence and its profound impact made to the practice of engineering in Singapore

Other awards presented at the dinner are the **IES/IEEE Joint Medal of Excellence Award 2019** and the **IES-Yayasan MENDAKI Scholarships**. Presented by IES and The Institute of Electrical and Electronics Engineers (IEEE), the Medal was presented to Er. Lee Chuan Seng for his long-term, multi-faceted contributions to Singapore's sustainable development and shaping the growth of the engineering profession. This year's scholarship awards were presented to Mr Wan Muhammad Ismail bin Wan Mahmood from Temasek Polytechnic and Mr Shiek Abdullah Abdul Arshath from the National University of Singapore, for achieving excellent academic results in their engineering studies.



Launch of New Singapore Rail Standards Initiative and Railway Systems Handbook

At the dinner, Minister Ng witnessed the launch of the Singapore Rail Standards Initiative that aims to develop a comprehensive set of Singapore Standards on railway systems covering operations, maintenance and asset maintenance to enhance the quality, reliability and productivity of railway systems in Singapore.

The initiative is a collaboration between Land Transport Authority, SMRT, SBS Transit, Enterprise Singapore (ESG) and IES. It will be spearheaded by a new Technical Committee to be set up under the Singapore Standards Council, overseen by ESG. The Technical Committee will develop standards for the operations and maintenance of railway systems to enhance the safety, reliability and productivity of railway systems in Singapore.

IES also unveiled the Railway Systems Handbook, a resource tool for rail engineering professionals and students to gain insights into the engineering behind different railway systems in Singapore and how they function together to provide an efficient and reliable MRT system.

Launch of IES Incubator–Accelerator (IES–INCA)

At the event, the IES–Incubator and Accelerator (IES–INCA), an initiative by IES to support engineers in their technopreneurship journey, was launched. Set up by engineers for engineers, IES–INCA will support engineers in developing ground–breaking technologies via mentoring, leadership training, business planning and start–up funding. It will incubate technology enterprises in the scale–up stage, particularly those developing infrastructure, Internet of Things, robotics, automation, cleantech and sustainability technologies.



Minister Ng also witnessed the signing of a Memorandum of Understanding (MoU) between IES-INCA and the Institute of Singapore Chartered Accountants (ISCA) at the dinner to mark their partnership to provide engineers with business-management mentorship from professional accountants.

** refer to separate media release about the Launch of IES-INCA and MoU signing between IES-INCA and ISCA*

- End -

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ii. Chinese Glossary

<i>English Terms</i>	<i>Chinese Terms</i>
The Institution of Engineers, Singapore (IES)	新加坡工程师学会
Prof. Yeoh Lean Weng, President, IES President	杨联文博士，新加坡工程师学会会长
IES Distinguished Honorary Patron	新加坡工程师学会卓越荣誉赞助人
IES Honorary Fellow	新加坡工程师学会荣誉院士
IES Lifetime Engineering Achievement Award	新加坡工程师学会终身工程成就奖
IES Outstanding Partner Award	新加坡工程师学会杰出合作伙伴奖
IES-IEEE Joint Medal of Excellence	新加坡工程师学会与电气电子工程师学会杰出奖章
Er. Tan Ee Ping	陈以彬
Er. Lee Chuan Seng	李全盛
Defence Science and Technology Agency (DSTA)	国防科技局
The Institute of Electrical and Electronics Engineers (IEEE)	电气电子工程师学会
Singapore Rail Standards Initiative	新加坡铁路标准倡议
IES Incubator-Accelerator (IES-INCA)	新加坡工程师学会起步培育与加速器
Railway Systems Handbook	铁路系统手册



About The Institution of Engineers, Singapore (IES)

The Institution of Engineers, Singapore was formally established in July 1966 as the national society of engineers in Singapore. IES is the premier engineering Institution in Singapore and is often called upon by the Government to provide feedback on professional engineering matters.

IES is well represented among the faculty members of the major engineering institutions of higher learning in Singapore, as well as the industry partners. Through close collaboration with engineering stakeholders, IES organises courses, seminars and talks for engineers and IES members to advance the continuous development of engineers.

The Institution maintains close links with professional organisations of engineers regionally and throughout the world. The Institution also represents Singapore in the World Federation of Engineering Organisations (WFEO), ASEAN Federation of Engineering Organisations (AFEO) and the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) in promoting goodwill and fellowship among all engineers in the region and internationally.

Through its Engineering Accreditation Board (EAB), IES obtained full signatory status in the Washington Accord (WA) in June 2006. The entry grants IES the authority to represent Singapore, the first country within the ASEAN region to obtain full signatory status in the WA, to vet education systems under the WA mutual recognition framework.

To raise the technical competencies of engineers in Singapore and promote engineering to the community, IES has introduced the Chartered Engineer Programme, World Engineers Summit and National Engineers Day



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MEDIA CONTACT

Desmond Teo

Publications Manager

The Institution of Engineers, Singapore

DID : (65) 6461 1229

Email : desmond@iesnet.org.sg

Esther Lim

Senior Associate

The Right Spin Public Relations

DID: (65) 6325 5935

Mobile: (65) 9785 1713

Email: esther@therightspin.com.sg

Chin Yan Qi

Junior Associate

The Right Spin Public Relations

DID: (65) 6325 5935

Mobile: (65) 9833 3010

Email: yanqi@therightspin.com.sg



Annex 1

Citation: Mr Heng Swee Keat, Deputy Prime Minister and Minister for Finance IES Distinguished Honorary Patron 2019

Mr Heng Swee Keat has played a central role in shaping the advancement of engineering in Singapore.

As Minister for Education from 2011 to 2015, Mr. Heng strongly supported Science, Technology, Engineering and Mathematics (STEM) education. He advanced applied learning in schools so that students now bring together what they learn in STEM subjects and apply them to real-life situations.

As Minister for Finance since 2015, Mr Heng has put in place strategies to harness Singapore's national research capabilities so as to enhance economic competitiveness, and to anchor Singapore as a Global-Asia node of technology, innovation and enterprise.

As Chairman of the Committee on the Future Economy, Mr Heng led the development of economic strategies for Singapore's next phase of growth.

He currently chairs the tripartite Future Economy Council, which oversees the implementation of national strategies in areas such as skills and capabilities development, innovation and productivity, and industry transformation.

Mr Heng is also the Chairman of the National Research Foundation, where he sets the direction for Singapore's research, innovation and enterprise strategies, including the translation of research outcomes into solutions that address our national and economic needs.

As Deputy Prime Minister, Mr Heng continues to support IES in advancing its goals for a green and sustainable Singapore built on engineering capabilities. He continues to encourage engineers to tap technology to come up with innovative engineering solutions.

In recognition of his exemplary achievements and leadership, IES confers the highest honour of the Distinguished Honorary Patron on Mr Heng; and looks forward to his esteemed guidance and support to help IES advance engineering for the benefit of Singapore and our people.



Annex 2

Citation: Mr Ng Chee Meng, Minister in the Prime Minister's Office and NTUC Secretary-General

IES Honorary Fellow 2019

Mr Ng Chee Meng, Minister in Prime Minister's Office and Secretary-General of the National Trades Union Congress (NTUC) has made exemplary contributions to the advancement of engineering in Singapore.

During his time as the Acting Minister for Education (Schools) and then the Minister for Education (Schools) from 2016 to 2018, Mr Ng placed a strong focus on Science, Technology, Engineering and Mathematics (STEM) in schools and advocated applied learning to prepare students for future challenges. He also championed the joy of learning to encourage students to dare to take risks to pursue their interests. These efforts were central in nurturing a skills-based, innovative and future-ready generation of engineers. As the Guest-of-Honour at the National Engineers Day 2016, he also advocated the importance of engineering in Singapore and to start cultivating an interest in engineering in students at a young age.

From 2015 to 2018, as the Senior Minister of State for Transport and then Second Minister for Transport, Mr Ng advocated the transformation of the aviation sector through technological innovations and helped taxi and private hire industries cope with technological disruption.

Mr Ng continues to guide and support IES-NTUC partnership as NTUC Secretary-General to elevate Singapore's engineering capabilities to new levels of competence, particularly through the Engineers Progression Pathway that develops current engineers into next-generation leaders. Since its launch in 2015 starting with the Young Engineers Leadership Programme, the pathway has grown to include the Advanced Engineers Leadership Programme and Global Engineers Leadership Programme and has trained more than 700 engineers in total.

In recognition of his contributions to the education of engineering and developing its leaders for Singapore's future growth, IES proudly confers the title of IES Honorary Fellow on Mr Ng Chee Meng.



Annex 3

Citation: Er. Tan Ee Ping, IES Lifetime Engineering Achievement Award 2019 Recipient

Er. Tan Ee Ping's dedication to engineering over his 55-year career has significantly contributed to the growth of the built environment and the engineering profession in Singapore.

Er. Tan graduated as a civil engineer with a Bachelor of Engineering (Hons) Degree from the University of Malaya in 1964. Commencing his career with the Economic Development Board and Jurong Town Corporation, he played a vital role in the planning, design and project management of the Jurong Industrial Estate – a project that paved the way for Singapore's industrial development and economic growth.

In the 1970s and 1980s, Er. Tan's expertise and knowledge were instrumental in the completion of the Hitachi Robin Dockyard project and the development of Changi Airport International. He also provided profound insights into the planning and management of Singapore Airline's offices, SATS Engine Workshops, CAFHI storage tank structures, Flyover Bridge across the East Coast Parkway and Taildocks for the repair, servicing and maintenance of aeroplanes. During this period, Er. Tan also started his own consulting engineering firm, now known as TEP Consultants Pte Ltd.

An illustrious civil engineer, Er. Tan was awarded the Best Buildable Design Award by the Construction Industry Development Board (CIDB) for his structural designs for Plaza By The Park and the 40-storey DBS Tower II respectively in 1991 and 1994. In 2012, he was accorded the Structural Steel Excellence Award for his structural design for the 38-storey One Raffles Place Tower II.

Since the early 1970s, Er. Tan has served on numerous government and statutory boards, namely Singapore Professional Engineers Board (PEB), Board of Architects, National Productivity Board, Strata Title Board and CIDB to promote excellence in professional engineering practice. As Chairman of CIDB's Steering Committee for Buildability, he promoted the adoption of precast, prefabricated reinforced concrete elements in enhancing construction quality and productivity to alleviate over-reliance on foreign labour. This led to the successful prefabrication of pre-finished volumetric construction of multi-storey building structures in Singapore.

Er. Tan has also actively participated in and contributed to various engineering societies. He was the President of The Institution of Engineers, Singapore (IES) from 1992 to 1994,



Chairman of ASEAN Federation of Engineering Organisations (AFEO) from 1992 to 1993 and Vice President of the Institution of Structural Engineers, England from 1993 to 1994.

Er. Tan also played a central role in the formation of the Singapore Mediation Centre (SMC) to provide alternative consensual dispute resolutions for the construction industry. Since 1997, he has actively helped to resolve numerous construction disputes through mediations, adjudications and arbitrations as an accredited regional Arbitrator, principal Adjudicator and Mediator.

He was conferred Fellowship in the following engineering societies: IES (1976), Institution of Structural Engineers, England (1984), Institution of Civil Engineers, England (1984), Singapore Institute of Arbitrators (1984) and Corporate Member of the Chartered Institution of Arbitration, England (1996). He was also the Honorary Fellow of IES, AFEO and Academy of Engineering, Singapore.

Er. Tan's contributions throughout the years have earned him several awards. These include the Long Service Gold Award from IES in 1996, the National Day Award, Public Service Medal in 1997; the Long Service Gold Award in Education in 2010, a 20-year outstanding dedicated service award from the Ministry of National Development in 2015 and the Distinguished Professional Engineer Award from PEB in 2016.

In recognition of his contributions of expertise, knowledge and insights to the engineering industry, IES presents Er. Tan Ee Ping with the Lifetime Engineering Achievement Award 2019. The award honours his long-term dedicated efforts and outstanding accomplishments that have greatly benefited IES, the engineering community and our nation.



Annex 4

Citation: Er. Lee Chuan Seng, IES/IEEE Joint Medal of Excellence Award 2019 Recipient

Er. Lee Chuan Seng has made significant contributions to the consulting engineering industry and in promoting engineering excellence in Singapore.

Er. Lee is the Chairman of the National Environment Agency and has served on its board since 2012. He is concurrently Scientific Advisor to the Ministry of National Development on S&T matters and sits on the Committee of Government Scientific Advisors which looks over the whole of government S&T needs.

He is also the Emeritus Chairman of Beca Asia, a leading engineering consultancy firm based in Singapore. He led the firm's expansion into Indonesia, Myanmar, Malaysia and China as its CEO and then Chairman for over two decades before retiring from active practice in 2013.

Er. Lee served on the IES Council for more than 10 years and was its Vice President between 1995 and 2006. He represented IES in chairing the Building and Construction Authority (BCA) and SPRING committee for development of the CAD Standards CP83 that enabled e-submissions on CORENET, an initiative that significantly increased the construction industry's productivity.

Er. Lee has led several other key built environment initiatives to their success, including the BCA Green Mark programme and the digitalisation of the construction industry through BIM and Integrated Digital Delivery (IDD).

Er. Lee has served as Deputy Chairman of the Singapore Standards Council since 2011 and was a member from 2007 to 2011. He also served on the Professional Engineers Board from 2001 to 2011 where he also chaired the taskforce that recommended Singapore as a signatory of the Washington Accord. He was appointed to be on the BCA board from 2003 to 2013 and served as its Deputy Chairman from 2011 to 2013.

Er. Lee has contributed immensely to engineering training in Singapore. He has served on the National University of Singapore (NUS) Mechanical Engineering Department Consultative Committee from 1998 to 2018, advisory committees for different diplomas and programmes in the BCA Academy and the Institute of Technical Education (ITE) since the 1990s. He is currently the Deputy Chairman of the BCA Academy Advisory Panel.



Er. Lee is the founding President of the Singapore Green Building Council (SGBC). He led the organisation to enhance its members' capabilities and capacity in sustainable design and construction. He also served on the Audit Committee and the Rules Review Committee of the World Green Building Council (World GBC) Board from 2010 to 2013 where he helped the body gain good financial footing and revised its constitution to promote greater collaboration between different councils.

In the area of R&D, Er. Lee has contributed his advice to the development of energy-saving solutions for Singapore's first Zero Energy Building, the Singapore Berkeley Building Efficiency and Sustainability in the Tropics Programme and the development of Urban Solutions and Sustainability by the National Research Foundation (NRF). He currently chairs the USS Technical Advisory Workgroup that consists of the CTOs of all the government agencies in the USS space.

His contributions to engineering, green buildings and sustainability have earned him prestigious accolades including the Outstanding Consulting Engineer Award from the Association of Consulting Engineers Singapore in 2007, the Inaugural Green Visionary Award in 2015 by BCA-SGBC, the Public Service Medal (PBM) in 2010 and the Public Service Star (BBM) in 2018.

In recognition of his long-term, multi-faceted contributions to Singapore's sustainable development and shaping the growth of the engineering profession, IES and IEEE hereby present Er. Lee Chuan Seng with the IES/IEEE Joint Medal of Excellence 2019.



Annex 5

Citation: Defence Science and Technology Agency, IES Outstanding Partner Award 2019

The Defence Science and Technology Agency (DSTA) has a strong multidisciplinary engineering capability and has been adopting a systems engineering and lifecycle management approach in building up defence capabilities for Singapore.

Over the years, DSTA has placed strong emphasis on developing its engineers. It is also heartening that DSTA extends its engineering competency to support other domains besides defence. In the push for engineering excellence in Singapore, DSTA engineers have continually shared their experience and expertise with IES – serving on the IES council and committees on selected technical domains, as well as participating as speakers at talks and seminars organised by IES. DSTA's in-house Systems Engineering Book of Knowledge formed the foundation for IES to develop its systems engineering courses.

In 2008, DSTA was one of the first government agencies that partnered IES and jointly launched the Certified Systems Engineering Professional Programme. The certification was expanded to other disciplines and led to the IES Chartered Engineer Programme, which has registered a total of 357 engineers to date. DSTA worked closely with the IES Chartered Engineers Board to establish the evaluation criteria for certifying Chartered Systems Engineers. The certification criteria was subsequently adopted by other disciplines for the benefit of the wider engineering community. To nurture the new generation of engineering talents, DSTA engineers have supported IES for the annual National Engineers Day.

In recognition of DSTA's significant contributions and profound impact made to the practice of engineering in Singapore, IES is proud to present the IES Outstanding Partner Award on DSTA.



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Annex 6

Recipients of 2019 IES–Yayasan MENDAKI Scholarships

- **Mr Wan Muhammad Ismail bin Wan Mahmood**
Temasek Polytechnic – Diploma in Aerospace Electronics

- **Mr Shiek Abdullah Abdul Arshath**
National University of Singapore – Bachelor of Chemical Engineering



Annex 7

FACTSHEET ON THE LAUNCH OF THE SINGAPORE RAIL STANDARDS INITIATIVE

The Institution of Engineers, Singapore (IES) will be launching the Singapore Rail Standards Initiative, and the Railway Systems Handbook at the IES 53rd Annual Dinner to enhance support for Singapore's railway development.

The initiative is a collaboration between Land Transport Authority, SMRT, SBS Transit, Enterprise Singapore (ESG) and IES. It will be spearheaded by a new Technical Committee to be set up under the Singapore Standards Council, overseen by ESG. The Technical Committee will develop standards for the operation and maintenance of railway systems to enhance the safety, reliability and productivity of railway systems in Singapore.

The Technical Committee comprises representatives from academia, government agencies, the transport industry and the public transport operators. It also plans to develop 60 standards over a period of five (5) years.

Areas of focus include health, safety, environment, quality, service and reliability standards for railway operation and maintenance.

ABOUT SINGAPORE STANDARDS COUNCIL

The Singapore Standards Council (SSC) facilitates the development, promotion and review of Standards and Technical References in Singapore. This work is done through partnerships with the industry, academia and government organisations, under the national standardisation programme administered by Enterprise Singapore. Visit www.enterprisesg.gov.sg/standards for more information.

ABOUT ENTERPRISE SINGAPORE

Enterprise Singapore is the government agency championing enterprise development. They work with committed companies to build capabilities, innovate and internationalise.

They also support the growth of Singapore as a hub for global trading and startups, and build trust in Singapore's products and services through quality and standards. Visit www.enterprisesg.gov.sg for more information.