REPORT FROM DIVISIONS AND OTHER COMMITTEES 2020/2021

Ir Donny CHAN Wai Keung
Aircraft Division

Ir Dr LI Chi Kwong
Biomedical Division

Ir Alex LAI Wai Wah
Building Division

Ir YEE Kwong Fai
Building Services Division

Ir Paul CHAN Chi Fai
Civil Division

Ir LEUNG Chun Sing
Control, Automation & Instrumentation Division

Ir TAM Wing Shing
Electrical Division

Ir John CHAN Kwan Wing
Electronics Division

Ir Dr Anthony MA Yiu Wa
Environmental Division

Ir Dr Simon CHAN Wai Kuen
Gas & Energy Division

Ir Dr Fiona TSUI Suk Chong
Fire Division

Ir Maureen NG
Geotechnical Division

July 2020

Electronics Division

Under the theme of "Embracing Smart City with IoT", the EN Division's flagship Hong Kong Electronics Symposium 2020 was held online for the first time on 13 July 2020. Reaching a record high of more than 750 participants, the event was a success. Many distinguished speakers joined the panel discussions.

September 2020

Information Technology Division

Aiming to stimulate the interests of students from local tertiary institutions in robotics, the Robocon 2020 Hong Kong Contest was held on 6 September 2020. Co-organised by the IT Division, the event attracted nearly 100 participants.

October 2020

Civil Division

The Student Liaison Group of the CV Division arranged university sharing sessions for more than 470 students of the Hong Kong University of Science and Technology and the University of Hong Kong in the midst of the COVID-19 pandemic, with a view of sharing their engineering experience with students and providing them with interviewing skills prior to graduation.

Control, Automation & Instrumentation Division

The HKIE CAD Paper Award Presentation was held online on 24 October 2020. 13 papers were awarded under various categories. The papers reflected how CAI engineering is influencing applications and studies globally. It also highlighted the career prospects of CAI engineers. 150 participants joined the webinar.

Electrical Division

More than 300 participants attended the EL Division's Annual Symposium. Entitled "AI^4 in Electrical Engineering" – in which "A" stands for Actualisation, and "I^4" represents Inspiration, Innovation, Intelligence and Integration – this event is the Division's most important annual occasion for sharing information about new and emerging

Ir Dr George SZE Lee Wah
Information Technology Division

Ir Prof WONG Sze Chun
Logistics & Transportation Division

Ir Dr Eric LIU Sai Lok
Manufacturing, Industrial & Systems Division

Ir Prof Joseph MAK Yiu Wing
Materials Division

Ir Albany TAM Wa Iat
Mechanical, Marine, Naval Architecture & Chemical Division

Ir Ryan LAM Chun Man
Nuclear Division

Ir LAM King Kong
Structural Division

Mr Daniel YIP Toa Sun
Associate Members Committee

Ir Simon TSUI Hoi Chung
Safety Specialist Committee

Ir Rachel NG Hoi Ching
Young Members Committee

Ir Dr LAU Chi Keung
Authorised Person/Registered Structural Engineer/Registered Geotechnical Engineer Committee

technologies and innovations with members. It also helped inspire innovation and promote professionalism in the field of electrical engineering. President Ir Prof P L Yuen delivered the opening address while Ir Ricky Leung – Executive Director, Engineering and Technology of the Airport Authority of Hong Kong – acted as keynote speaker and Dr David Chung – Acting Secretary for Innovation and Technology – gave the concluding remarks.

Electrical Division, Gas & Energy Division and Safety Specialist Committee

At this joint webinar on "Pathway to Growth of Solar Power in Hong Kong" held on 8 October 2020, Ir Barry Chung and Mr Roger Yang, presented how the Government is promoting solar energy while highlighting the achievements, challenges and opportunities of adoption of solar energy in Hong Kong. The webinar attracted around 500 participants.

Environmental Division

To enhance communication with senior government officials and industrial leaders, the EV Division initiated a special programme entitled "Reach out to Leaders". Led by the Division Chairman, a delegation formed by members from the Division Committee conducted three reach-out visits to industry leaders, meeting Ir Dr the Hon W K Lo, Ir Eric Pang and Mr K S Wong between October 2020 and March 2021 to share experiences and insights about the environmental engineering profession. Videos of the interviews were posted on the Division's website, Facebook and Instagram.

Manufacturing, Industrial & Systems Division

Under the theme of "Digital Transformation - Challenges and Opportunities for Engineering and Construction Industry", the Manufacturing, Industrial & Systems Annual Conference 2020 was held on 28 October 2020. Ir Dr Eric Liu, Chairman of the Organising Committee and MI Division, delivered a welcome speech, and the opening addresses were given by President Ir Prof P L Yuen and Ir Dr the Hon W K Lo. The keynote speakers were Mr Gary Yeung – President of Smart City Consortium – and Prof Jack Cheng, Associate Professor of Department of Civil and Environmental Engineering of the Hong Kong University of Science and Technology. Around 250 participants joined this online event.

Mechanical, Marine, Naval Architecture & Chemical Division

The MC Division co-organised an online story telling event with YWCA to provide online voluntary service for children with special educational needs. Using interactive games and storytelling via video conference, volunteers from the Division introduced the duties and roles of mechanical engineers to the children.

Young Members Committee

On 17 October 2020, the YMC organised a workshop on the "UN Sustainable Development Goals (UNSDG): Learning through Games" to give an opportunity for young engineers to use a card game to reflect on how they could help create a sustainable world and better appreciate the importance of collaboration in achieving the SDGs. Ms Queenice Wong and Ms Aubree Wai, certified 2030 SDGs Game Facilitators, acted as coaches for this workshop, which attracted around 20 participants.

November 2020

Associate Members Committee and Building Services Division

The AMC and BS Division jointly organised a talk to Higher Diploma students of Building Services at IVE (Tuen Mun) to introduce HKIE and the engineering profession.

Biomedical Division

The Biomedical Engineering Conference 2020 organised by the BM Division was held on 27-28 November 2020. This 1.5-day online Conference attracted more than 350 participants from Hong Kong and various countries such as Malaysia, Singapore, New Zealand and the USA. Ir Alfred Sit, Secretary for Innovation and Technology, and President Ir Prof P L Yuen acted as guests of honour for the event, while Prof Paul Chan of The Chinese University of Hong Kong was the keynote speaker.

Control, Automation & Instrumentation Division

The CA Division held a webinar titled "5G Era - Hong Kong and Worldwide" on 3 November 2020. Mr Gordon Guo introduced the latest developments in 5G technology while discussing the major steps towards the 5G era. More than 460 participants joined the webinar.

Electronics Division

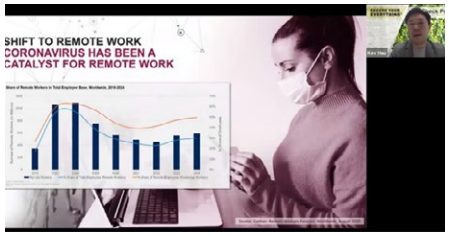
Held on 2 November 2020, the "2020 Hot Talk Electronics Forum - How Does the Sino-US Trade Progress Impact the Electronics High-Tech Industry?" attracted around 250 participants. The panel speakers and facilitator discussed the impact of the Sino-US trade progress on the electronics industry and introduced the IEEE P2668 IoT Maturity Index (IDEX). Participants were invited to share their views on future trends across various industries via online live polls.

Fire Division

Entitled "Practising Fire Safety for Cavern and Underground Development, the HKIE Fire Division Annual Symposium 2020 was held on 6 November 2020. Local and overseas speakers made eight presentations to an audience of around 330 participants across topics like innovation and knowledge on fire engineering (safety); issues for cavern development; road tunnels in Europe; massive underground transportation facilities in the Mainland; research on digital technology supporting fire-fighting; and Internet Of Things application of smoke detection in tunnels and smart cities.

Information Technology Division

A virtual technical seminar entitled "New Normal Solution Connects Remote Users and Branches to Everything" was held on 30 November 2020 to keep members abreast of the latest developments on this topic. Mr Kev Hau of Check Point Software Technologies Ltd. addressed around 130 participants during the seminar.



Mechanical, Marine, Naval Architecture & Chemical Division

The HKIE X HKU Marine Conservation Series included a 4-episode webinar to promote marine conservation and how engineers can help meet Goal 14 of the Sustainable Development Goals for Hong Kong. Running from November 2020 to February 2021, the series attracted a total of 420 participants.

December 2020

Building Services Division

The cross-institutional task force named "Leaky Drain Busters" convening a press conference on 29 December 2020 to share their ideas on good practices for preventing the cross contamination of drainage systems in residential buildings. President Ir Prof P L Yuen and Ir Victor Cheung served as the convenor and advisor of the task force respectively.

Gas & Energy Division

Held on 4 December 2020, the webinar on "Glass in Gas (GIG) Application in Hong Kong" co-organised by the EG Division attracted around 150 participants. Serving as speaker, Ir K T Lai presented the technology and its applications in Hong Kong.

Materials Division

Held in hybrid format on 9 December 2020, the technical seminar on "Sustainable Timber Engineering" introduced glued laminated timber (Glulam) as a sustainable material. The speaker, Ms Phyllis Chong of Rubner Holzbau

GmbH (Austria), highlighted the production of the material, the relevant code of compliance requirements and considerations relating to fire resistance, termites and durability of the timber in tropical climate.

January 2021

Building Services Division, Civil Division and Structural Division

Employing real time virtual recording techniques, the three Divisions jointly organised a virtual technical visit to "Kai Tak Sports Park" on 30 January 2021. Complying with social distancing measures, the event attracted more than 100 participants.

Fire Division

Collaborating internationally with the HKIE Australian Chapter and the Society of Fire Safety – New South Wales, the FE Division organised the "Technical Webinar on Science and Technology of Battery Fire Safety" on 26 January 2021. Nearly 270 participants from Hong Kong, Macau, Sydney and London joined the webinar as Prof Guillermo REIN from the Department of Mechanical Engineering of the Imperial College London discussed recent fire engineering research on lithium-ion battery, a key technology for the present and future of energy storage, transport and consumer electronics.

Nuclear Division

Amidst the pandemic, the NE Division organised its first virtual tour of the Monitoring Assessment Centre and King's Park Radiation Laboratory on 16 January 2021. Joined by around 180 participants, the virtual tour covered the radiation monitoring work of the Hong Kong Observatory (HKO), their microclimate monitoring initiative and a virtual tour of the HKO Headquarters and King's Park Meteorological Station.

February 2021

Aircraft Division

A webinar attracting 70 members and presented by Thomas Anderson, Boeing Director of Product Marketing for 787 and the Confident Travel Initiative (CTI) was held on 10 February 2021. During his lecture, the speaker shared information about the CTI and how it would affect the aviation industry across various aspects like new materials, airflow design and UV disinfection.

Building Division

The BS Division arranged a technical visit to Innocell MiC Hostel at Hong Kong Science and Technology Park for a group of around 20 participants on 20 February 2021. In addition to visiting various parts of the completed building constructed using MiC, the group listened to an informative technical presentation delivered by the construction team.

Building Services Division

The "Technical Webinar on Major Changes of the CoP for the Electricity (Wiring) Regulations 2020 Edition and its Practical Implementation" was well received by an overwhelming attendance of 1,100 participants. Jointly presented by Ir Johnson Sze of the Electrical and Mechanical Services Department (Electricity Legislation Division) of the HKSAR Government and Ir K F Yee, Chairman of the BS Division, the webinar highlighted major changes of the latest Code of Practice for the Electricity (Wiring) Regulations 2020 Edition and the practical approach to its implementation.

Geotechnical Division

The GE Division arranged a virtual site visit to Trunk Road T2 and Cha Kwo Ling Tunnel Construction of Tunnel Boring Machine Launching Shaft and Cut-and-Cover Tunnel on 27 February 2021, which attracted 731 online participants.

The Division also offered a top-up course for TCP T3 on GIFW and building works with significant geotechnical content from February to March 2021. More than 190 participants attended this e-workshop.

Mechanical, Marine, Naval Architecture & Chemical Division

A webinar held on 26 February 2021 for students of The Hong Kong Polytechnic University enabled around 120 HKIE members to share insights about the technology underpinning E-Formula vehicles and their experience of international competitions.

March 2021

Aircraft Division

Delivered by Phill O'Dell, Director of Flight Operations for Rolls Royce plc, the webinar on "Piloting History - from the Spitfire to the electric ACCEL" attracted 110 participants. The speaker has flown a wide variety of aircrafts, ranging from the Rolls Royce-powered MK XIX Spitfire and Airbus A380 to the Boeing 787 and the iconic Vulcan XH 588. Spanning the legendary aircraft at the heart of the Battle of Britain in World War II to the world's fastest electric aircraft, his story captivated the audience.

Building Division

The HKIE Building Division 19th Annual Seminar on "Advancement in Building Industry Through DfMA, Automation and Digitalisation" was held on 18 March 2021. Delivered in a hybrid mode, this full-day event was well received by more than 380 participants. Distinguished speakers were invited to shared insights about the latest developments in the building industry.

Building Services Division

The BS One Day Seminar 2021 entitled "The Endless Journey in Exploring Building Services Development and Sustainability" was held online on 23 March 2021. The seminar aimed to broaden the knowledge of engineers about building services and sustainability engineering. Guest speakers were experienced and professional engineers from various sectors, including consultants, manufacturers, contractors, properties management and the government. The event drew around 150 participants.

Control, Automation & Instrumentation Division

The CA Division held the CAD Online Symposium 2021 on 19 March 2021 with the theme of "New Generation of Automation & Digital Intelligence – TheAI". More than 210 guests, members and sponsors attended the event. Prominent officiating guests included Ir Alfred Sit, Secretary for Innovation and Technology, Ir Eric Pang, Director of the Electrical and Mechanical Services, Ir Dr the Hon W K Lo, and President Ir Prof P L Yuen, and many others.

Gas & Energy Division and Mechanical, Marine, Naval Architecture & Chemical Division

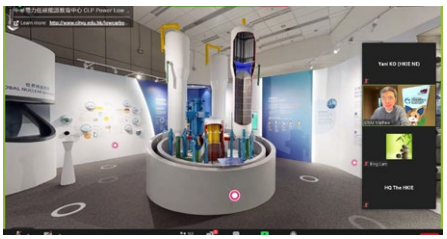
The webinar on "Planning, Construction and Operation Experience of New CCGT Unit D1" was held on 16 March 2021. Joined by around 500 participants, the webinar showcased the successful completion of the new combined cycle power generation unit D1 at Black Point Power Station operated by CLP Power, as well as the innovative methods used to overcome challenges from construction to commissioning.

Manufacturing, Industrial & Systems Division

Held on 20 March 2021, a webinar on "The Deployment of Autonomous Delivery and Follow-Me Robotics During Outbreak of COVID-19 in Hong Kong" attracted an attendance of around 330 participants. Three speakers were invited to share their experiences about adopting smart technologies to tackle the effects caused by the pandemic outbreak and the challenges associated with deploying robotic systems in local hospitals and commercial living areas. A Follow-me robot using Ultra-Wideband positioning technologies and an automatic guided in-door virus disinfecting robot were also introduced at the event.

Nuclear Division

Held on 13 March 2021, a virtual tour of the CLP Power Low Carbon Energy Education Centre of the City University of Hong Kong offered some 160 participants an inspiring and enlightening experience as they learned about the importance of low carbon energy in addressing the environmental challenges facing us.



Structural Division

The Structural Excellence Awards aims to promote excellence in structural engineering as demonstrated through research, design and construction of buildings and structures completed within the last two years. This year, 18 project submissions and 5 research paper submissions were received. An assessment meeting was arranged in March 2021 for the judges to evaluate the submissions and reach a final decision.

Young Members Committee

A webinar on "Introduction of Isolation Ward Design and Adoption of Modular Integrated Construction (MiC) Technology in Healthcare Facilities" was held on 26 March 2021. While MiC has been gradually adopted in projects across different sectors, the speakers - Ir Prof Thomas Chan and Ir K F Tsui of WSP (Asia) Ltd shared their experience in the adoption of MiC in the medical sector, including isolation wards and community treatment facilities of Hong Kong. The webinar attracted 350 participants.

April 2021

Associate Members Committee

The AMC organised a "Seminar cum Webinar for Application of Associate Membership" to introduce the application process for Associate Membership, including the procedure, assessment and sharing by successful applicants. More than 100 participants joined the event physically or virtually.

Biomedical Division

Ir Dr Kannie Chan delivered a seminar on "Frontier Molecular Imaging for Early Detection of Alzheimer's Disease" on 21 April 2021. Meanwhile, the BM Division also organised a virtual tour of a medical device manufacturing facility during which around 45 participants delved into product demonstration, production, quality assurance system and cleanroom.

Electronics Division

The Hong Kong Electronics Symposium 2021 was the second edition conducted in the Session. Delivered online under the theme of "Heading Towards Smart City Blueprint 2.0", it attracted more than 750 participants eager to listen to the presentations of prominent speakers on various topics.

Environmental Division

Called off in 2020 due to the outbreak of COVID-19, the EV Division's Annual Forum was held on 29 April 2021 under the same theme of "Decarbonisation - How do we prepare for the Transformation". Held online, the flagship event of the Division overcame the challenges of organising a whole-day online forum featuring local and overseas guests and speakers to attract 400 participants. Mr K S Wong, Secretary for the Environment, was the guest of honour of the event.

Building Services Division and Fire Division

Held on 16 April 2021, the "Joint Technical Webinar on Introduction of Practical Guide for Design, Installation, Acceptance and Maintenance of Fire Service Installations and Equipment" attracting more than 900 participants. The event featured various speakers from the Fire Services Department of the HKSAR Government.

Logistics & Transportation Division

The LT Division's Annual Symposium entitled "New Innovative Technologies in Logistics and Transport Safety" was held online on 17 April 2021. It offered an interactive platform for professionals from across the industry to share their experience and insights on smart mobility. The event was attended by around 250 participants.

In the same month, a group of 10 members visited the Hong Kong International Arbitration Centre (HKIAC) to gain insight into HKIAC's practice on logistics and transportation disputes.

Manufacturing, Industrial & Systems Division

With the objective of recognising the achievements of Hong Kong's manufacturing industry, the HKIE-MIS Industry Award 2021 was launched. Four judges were invited to review submissions for the three categories – namely Smart Manufacturing Award,

Reindustrialisation Award and Innovation Award – which had to be submitted in April 2021. Scheduled for 10 July 2021, the Final Round Presentation was to be held at HKIE Headquarters, with 15 organisations invited to present their projects.

Nuclear Division

Held on 21 April 2021, a webinar on "Small Modular Reactors and their Future" attracted 60 participants. The speaker, Ir Richard Fung, introduced the small modular reactors and their technology before discussing their adoption as a possible solution to sustain the growth of nuclear power particularly in the west.

May 2021

Civil Division

Co-organised by the CV Division, the Smart Infrastructure Conference 2021 was held both physically and online on 13-14 May 2021. Featuring Ir S H Lam – Permanent Secretary for Development (Works), as guest of honour, and a total of 56 speakers, including the Government Chief Information Officer, nine directors of government departments and various speakers from the Greater Bay Area and overseas, the event attracted around 400 participants.

Electrical Division

The EL Division organised two competitions in May 2021 for secondary school students. Conducted in hybrid mode, the Electrical Model Design Contest attracted the participation of around 90 junior secondary school students from 17 secondary schools. Meanwhile the Energy Innovation for Smart City Competition received more than 100 applications, of which 15 were shortlisted to enter the final stage. Results were announced during a Prize Presentation Ceremony held on 9 July 2021.

Environmental Division

The Award Presentation Ceremony of "2020 Environmental Paper Award" was held on 7 May 2021. This Award was established to recognise engineers' efforts in environmental projects and research, attracting 12 high quality submissions from universities, environmental consultants and individuals.

Geotechnical Division

Held on 18 May 2021, the GE Division's 41st Annual Seminar, themed "Adapt to Challenges, Create to Thrive", featured 18 speakers from Hong Kong, Taiwan and Malaysia who addressed 80 participants in person and more than 360 participants online.

Logistics & Transportation Division

The HKIE LTD Best Students Papers Awards were organised for outstanding students studying logistics, engineering or supply chain management degree programmes in Hong Kong while promoting innovative ideas and

research in the design and implementation of sustainable logistics and transportation systems in the territory. Division Chairman Ir Prof S C Wong presented awards to six winners at a ceremony held on 10 May 2021.

Materials Division

20 participants joined a technical visit to Nano and Advanced Materials Institution (NAMI) on 22 May 2021. The visit enabled participants to understand NAMI's operations and how materials science contributes to the development of Modular Integrated Construction (MiC).

Safety Specialist Committee

The SSC co-organised a technical visit with the EL Division to the electric kitchen of ClubONE restaurant in HKSTP on 29 May 2021. A group of 20 participants learned about the operations of cooking equipment and the benefits of using an electric kitchen to create a quieter, cooler and safer working environment.

Structural Division

Held under the theme of "Modernisation and Modularisation in Structural Engineering and Construction", the Annual Seminar 2021 of the ST Division attracted more than 300 participants. Ir Albert Cheng, Executive Director of the Construction Industry Council, served as guest of honour.

Young Members Committee

20 participants joined a technical visit to Smart Site for Safety System at Tseung Kwan O Area 137 Fill Bank on 22 May 2021. The fill bank adopted the innovative "Smart Site for Safety" system to monitor the safety-related behaviours of workers and high-risk operation activities.

June 2021

Electrical Division and Safety Specialist Committee

A joint webinar entitled "Electrifying Construction Site by Battery Energy Storage System (BESS)" was held on 17 June 2021. Speakers Mr Simon Ng of the Business Environment Council, Ir K Y Lo of CLP Power and Ir Andy Wong of Gammon Construction Limited promoted the adoption of BESS for construction sites as a step towards carbon neutrality, enhanced health and improved safety. 600 participants joined the webinar.

Materials Division

A group of 25 participants joined a technical visit to Shiu Wing Steel Manufacturing Factory – the sole steel mill left in Hong Kong – to learn about steel production, testing and how the metal acquires required properties through various processes.

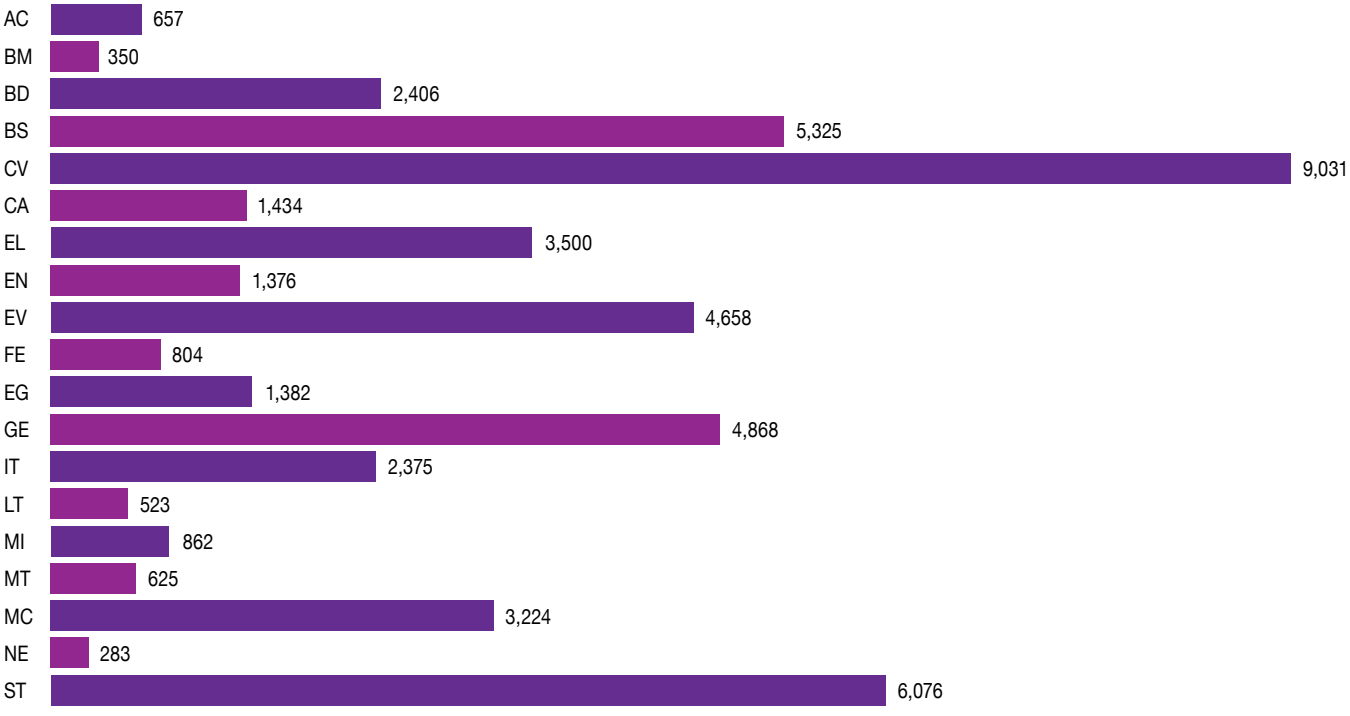
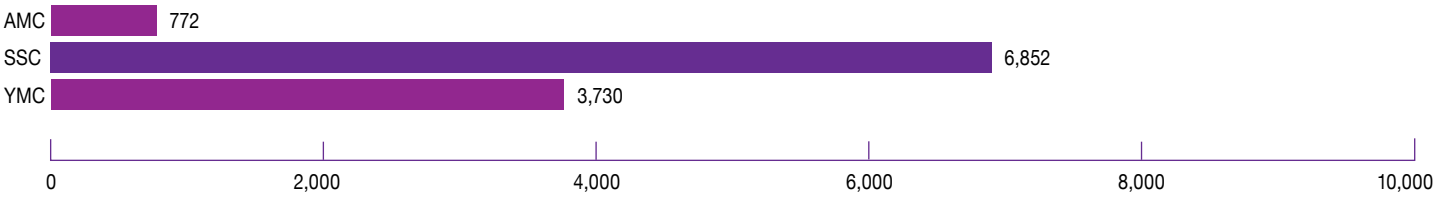
Membership of Divisions/Committees

As at 28 June 2021

Division		Membership
Aircraft Division	AC	657
Biomedical Division	BM	350
Building Division	BD	2,406
Building Services Division	BS	5,325
Civil Division	CV	9,031
Control, Automation & Instrumentation Division	CA	1,434
Electrical Division	EL	3,500
Electronics Division	EN	1,376
Environmental Division	EV	4,658
Fire Division	FE	804
Gas & Energy Division	EG	1,382
Geotechnical Division	GE	4,868
Information Technology Division	IT	2,375
Logistics & Transportation Division	LT	523
Manufacturing, Industrial & Systems Division	MI	862
Materials Division	MT	625
Mechanical, Marine, Naval Architecture & Chemical Division	MC	3,224
Nuclear Division	NE	283
Structural Division	ST	6,076

Committee		Membership
Associate Members Committee	AMC	772
Safety Specialist Committee	SSC	6,852
Young Members Committee	YMC	3,730

Division



Committee