

Annual Report for Session [2022/2023](#)

1. Foreword

The Electrical Division has a very blessed session in 2022/2023 with the Division Committee's effort and contribution. While the challenges of the pandemic have sustained during the past few years, our operation is progressively moving back to normal since the beginning of the year when Hong Kong started easing back on social distancing.

With the enlightenment of past Chairmen and great effort of the Committee, we accomplished all planned tasks successfully for the Session. We had unceasingly held eight (8) committee meetings up to April 2023 and two more meetings will be held, including the Division AGM scheduled for 5 May 2023, before the end of this Session.

Most of our events were carried out in physical mode, that covered different technical and social events including technical visits, technical talks, professional short course, student promotion talks, workshops etc. The Overseas Technical Visit and Mainland Technical Visit will be also resumed, scheduled for July and September 2023 respectively.

The "Young CONNECT Sub-committee" continued to operate in this Session which provide an empowering platform for our young members to lead and to serve our members. The sub-committee has unfailingly supported numerous Divisional events and initiatives and with extended service to support the Institution by leading our Electrical Division promotion booth in the Hong Kong Engineers Week held in March 2023. The success of this Session owed much to the effort of our Committee, our innovative young members and members' unreserved support.

Details of activities for this Session are summarized in the following sections.

2. [40th Annual Symposium \(Chaired by Ir Y.H. LEUNG\)](#)

The Annual Symposium was successfully held on 20 October 2022. Like the previous year, the Symposium was conducted in hybrid mode, i.e. physical and virtual ways, with more than 350 participants attending both on-site and online. The Symposium in 2022 marked the 40th Anniversary of the Annual Symposium since it held the first of such an event in 1983.

The theme of the Symposium was "Co-Innovation for Zero", focusing on new initiatives and applications of electrical engineering targeting for carbon neutrality, in response to the Climate Action Plan 2050 of Hong Kong with the vision of Zero-carbon Emissions, and the aim for combating climate change.

The Symposium was kicked off by an Opening Address from Ir Raymond POON, JP, Deputy Director of Electrical & Mechanical Services Department, and the Keynote Speech by Ir Professor Christopher CHAO, Vice President (Research and Innovation), The Hong Kong Polytechnic University. A total of ten technical papers were presented by speakers from public and private sectors, academic institutions and public utilities in different sessions of the Symposium, and the papers were all well received by audience.

Finally, the HKIE President, Ir Aaron BOK, concluded the Symposium with a Closing Address.

3. **Technical Programme Sub-committee (Chaired by Ir Dr. K.F. WONG)**

After the relief of the pandemic, the Committee was well-prepared to restore the normal live with “New Normal”. The Sub-committee organized / co-organized a total of eight (8) technical seminars in this Session with the last one to be held on 16 May 2023. There were more than 300 attendees on average for each event. Local and overseas experts in various areas of electrical engineering were invited to give an account on the state-of-the-art developments in the field. Various topics were discussed ranging from latest updates on electrical vehicle charging standard, BIM integration, as well as the future smart building technologies to achieve carbon neutrality. All these sharing served to provide continuous professional development to our members with well received enthusiastic support.

Date	Topic	Speaker(s)
29 Nov 2022	BIM x BMS, and Integration of PLC with Inverter System	Mr. Joe CHAK & Mr. Francis LOK
21 Dec 2022	The Future of Data Centre Electrification	Mr. Jan CHUI & Ir Ryan HO
31 Jan 2023	Evolution of EV Charging Standard	Mr. Jonathan LAW
23 Feb 2023	E-mobility Integrated High-power Charger Solution & E-House by Modular System	Mr. Martin CHENG & Mr. Kevin LIANG
7 Mar 2023	Sustainable Lighting and Control Solution for Achieving Carbon Neutrality	Mr. Cole SIU
15 Mar 2023	Nurturing Future Talents for E&M Industry and Advancing Career Progression by Latest Advanced Technologies 2023	Ir Professor Paul POON
19 Apr 2023	Smarter Breakers & Digital Twin for Power Distribution Enhancement and Predictive Solution	Mr. Jan CHUI & Mr. Kevin LIANG
16 May 2023	Gas Engines in Energy Transition to Net Zero	Mr. Yanjia SUN

4. **Membership Drive Sub-committee** ([Chaired by Ir Ian LEE](#))

Date	Institution	Speakers	No. of Students
27 Feb 2023 1900 – 2030	Royal Melbourne Institute of Technology University (RMIT)	Ir Ian LEE Ir Eric LUN Ir Simon CHUNG Ir Edmund LAU Mr Franky WONG Ms Gloria WONG	90
8 Mar 2023 1700 – 1750	City University of Hong Kong (CityU)	Ir Ian LEE Ir Dr. Sam LAM Ir Ben LAM	45
24 Mar 2023 1700 – 1800	Hong Kong Institute of Vocational Training (Haking Wong/Chai Wan/Tsang Yi)	Ir Ian LEE Ir Ben LAM Ir Eric LUN Ir Dr. Sam LAM Mr. Franky WONG Ms. Gloria WONG	88
1 Apr 2023 1000 – 1130	Hong Kong Polytechnic University (PolyU) and School of Professional Education and Executive Development, PolyU (SPEED)	Ir Ian LEE Ir Dr. Sam LAM Ir Tim LEUNG Ir Edmund LAU Ms. Gloria WONG	28
21 Apr 2023 1800 – 1930	University of Hong Kong (HKU)	Ir Ian LEE Ir Dr. Sam LAM Ir Eric LUN Ir Edmund LAU Mr. Franky WONG Ms. Gloria WONG	22

In this Session, the Sub-committee organized five membership drive / career talk presentations in physical, online or hybrid mode for students of University of Hong Kong (HKU), the Hong Kong Polytechnic University (PolyU), School of Professional Education and Executive Development (SPEED), City University of Hong Kong (CityU), Royal Melbourne Institute of Technology University (RMIT) and the Hong Kong Institute of Vocational Education (IVE) in Chai Wan, Tsing Yi and Haking Wong.

The presentations included an introduction on the HKIE and the HKIE Electrical Division, career opportunities in the sectors of Government, power utilities, suppliers, consultants and contractors, as well as the needs and pathway in joining membership of the HKIE. Many questions from students about career path planning and the upcoming opportunities in the industry and emerging technologies in the electrical engineering like BIM-AM, MiMEP, DfMA, VR application and data analytics were well answered. The image of professional engineers has

been uplifted where the students were enthusiastic about the nowadays construction technology comparing to their knowledge on traditional methods, and keen to have more in-depth understanding by joining the industry after their graduation.

5. **Energy Innovation for Smart City Competition 2022/2023** ([Chaired by Ir Kit CHAN](#))

The programme has been sponsored by CLP Power Hong Kong Limited and has been organised annually since 2009 for higher form secondary students. It aims to provide an opportunity for the students to propose and implement innovative projects on energy efficiency initiatives and promote energy efficiency to the community. It was firstly launched as the “Energy Innovation Project Competition” and was subsequently re-named “Energy Innovation for Smart City Competition” to give more weight on smart use of energy in a modern city.

There were total of 55 teams, taking part in the competition where each team struck their best to develop innovative ideas into project. The screening session was held on 15 Apr 2023 while judging panel session will be conducted on 20 May 2023, and a prize presentation ceremony on 23 June 2023.

6. **Electrical Model Design Contest** ([Chaired by Ir Stephen YIP](#))

For the past 11 years, the Division has been organizing a contest for lower form secondary school students with an aim to promote electrical engineering, enhance the knowledge and awareness of renewable energy, and encourage low carbon living. The event was supported by the Education Bureau and Construction Industry Council. In 2022/2023 session, overwhelming responses were received from 90 lower form secondary school students that formed a total of 20 teams. The contest will be conducted at Zero Carbon Building of CIC on 7 May 2023.

7. **International Council on Electrical Engineering (ICEE) Conference**
([Led by Ir Dr Edward LO](#))

The ICEE Conference is an event jointly organised by the HKIE, the Chinese Society for Electrical Engineering (CSEE), the Institute of Electrical Engineers of Japan (IEEJ) and the Korean Institute of Electrical Engineers (KIEE) to offer a very good and precious opportunity for electrical engineers from all over the world with various specialties to meet, inspire each other and share vision towards our sustainable future.

The ICEE Conference 2022, hosted by the CSEE, was successfully held in Seoul, Korea in online mode from 26 June to 2 July 2022. Out of more than 300 technical papers presented from 11 countries/regions, our delegates had presented 16 technical papers in the Conference. The ICEE Conference 2023 will be hosted by the HKIE in the University of Hong Kong from 2 to 6 July 2023, in face-to-face format.

8. **Professional Short Course in Electrical Engineering (Chaired by Ir Vincent LEUNG)**

The professional short course with four classes on the theme of “Smarter Design for our Electrified Living” was held in March 2023. Experienced engineers and industry practitioners from government department, public utility companies and academics were invited to enrich our members with the latest knowledge of electrical systems under rapid development and active exploration. In addition to classroom lectures, parallel online classes had also been arranged. It was encouraging that over 60 participants in average attended each class of the course.

Date	Theme	Speaker	No. of Participants
8 March 2023	Briefing of BIM-AM Standards & Guidelines v3.0 and the New Guidelines for the Handover of E&M Installation to EMSD	Ir Steve CHAN, Senior Engineer Ir Grace YIP, Electronics Engineer and Ms. Tracy CHEUNG, Senior Technical Officer, the Electrical and Mechanical Services Department of the HKSARG	56
22 March 2023	Protection Systems for Distribution Network & General Requirements on Customer HV/LV Main Switch Protection Scheme	Ir C.L. CHAN, Protection Engineer from The Hongkong Electric Co., Ltd	98
27 March 2023	Electric Vehicle and Charging System Development	Ir Prof. Eric CHENG, Professor & Director of Power Electronics Research Centre, The Hong Kong Polytechnic University	73
29 March 2023	Railway Signalling System Development and East Rail Line Signalling Replacement Project	Mr. Clifford CHOW, Deputy Project Manager-NSL Signalling and Mr. Isaac TSANG, Acting Chief Construction Manager-Signalling, The MTR Corporation	37

9. **Annual Dinner (Chaired by Ir Andrew YAN)**

The Annual Dinner always serves as a platform for fellow engineers to meet each other to exchange professional ideas and also another good opportunity for networking. The Annual Dinner 2022 was postponed due to the outbreak of the 5th wave of COVID-19 but was successfully restored on 18 November 2022. The Annual Dinner 2023 is scheduled for 5 May 2023 immediately after the Division AGM and the Committee is pleased to see very encouraging support from fellow engineering organizations.

10. **Local Technical Visit Sub-committee** ([Chaired by Mr. Keith WONG](#))

The main theme of the local technical visits this year was smart and digitalize electrification. The objective was to facilitate the members' understanding on how technology can enhance our engineering solution through more digital applications and to achieve sustainability and safety goals. The Sub-committee organized five technical visits to places of technical interests up to end April 2023. Schneider Electric Innovation Hub, HKSTP Experience Centre, HKT Integrated Services & Operation Centre (ISOC), China Mobile 5G Innovation Centre and CLP Power's Power Quality Workshop were visited. Response for each visit conducted was very encouraging, each with about 30 attendees in average.

Date	Place of Technical Visit/ Theme
26 August 2022	Schneider Electric Innovation Hub <i>/ A co-innovation platform with digital facilities of Schneider Electric</i>
9 September 2022	HKSTP Experience Centre <i>/ Showcase transformative ideas generated from our vibrant community</i>
18 November 2022	HKT Integrated Services & Operation Centre (ISOC) <i>/ The central hub managing round the clock operations for all HKT services for both consumers and commercial customers</i>
31 March 2023	China Mobile 5G Innovation Centre <i>/ "Joint Innovation Plus" Hong Kong 5G Open Lab to foster the development of 5G ecology.</i>
14 April 2023	CLP Power – Power Quality Workshop <i>/ Illustrates power quality issues to the customers</i>

11. **Overseas Technical Visit Sub-committee** ([Chaired by Ir Edward YEUNG](#))

No cross-border visit could be arranged in 2022 due to the pandemic outbreak of COVID-19. However, the pandemic situation has been gradually improved and international travel restrictions have been much relaxed since early 2023, an overseas technical visit to Scotland and England of UK was confirmed for 15 to 26 July 2023. 3 technical visits were organized for visiting a cable factory in Edinburgh, a transformer & rectifier factory in Guildford and the new Elizabeth Line depot & workshop in London. About 35 participants have already registered for the visit.

12. **Mainland China Technical Visit Sub-committee** ([Chaired by Ir WS TAM](#))

As the border between Hong Kong and Mainland China has been fully reopened since February 2023 after nearly 3 years of COVID-19 restrictions, the Committee is expecting another Mainland technical visit in September 2023.

13. **YOUNG Connect Sub-committee** ([Chaired by Ir Alex FU](#))

The Young CONNECT Sub-committee strives to establish a networking group for young engineers to enhance their sense of belonging within the HKIE Electrical Division. The Sub-committee actively encourages young members to participate in the Institution's affairs and is led by a group of young members. During the 2022/23 session, the Sub-committee organized several activities, including the "Inspire the Next" workshop, which focused on preparing young members for the Corporate Membership application process. The workshop provided participants with an understanding of the assessment criteria and key points to note during the assessment interview, equipping them with solid techniques and boosting their confidence to participate in the HKIE

In addition, the Sub-committee also arranged some leisure activities for members to broaden their knowledge in different aspects. The "Enjoy the Balance Series" offered two successful activities, including the Wine and Cheese Appreciation Workshop and Coffee Tasting Workshop in January and April 2023, respectively. Overall, the Young CONNECT Sub-committee aims to cultivate a supportive and inclusive environment for young engineers within the HKIE Electrical Division. Through the organized activities, members are able to not only enhance their professional development but also pursue personal interests, strengthening their overall engagement with the Institution - Corporate Membership application.

14. **The HKIE Boards and Committees**

The Division actively supported and participated in the work of the HKIE and had representation/ ex-committee members in the following Boards and Committees:

- Learned Society Board (represented by the Chairman, Ir Mandy LEUNG)
- Public Service Committee (represented by the Deputy Chairman, Ir Andrew YAN)
- Council (represented by Ir W.S. TAM)
- Discipline Representative (represented by Ir Tony YEUNG)
- Continuing Professional Development Committee (represented by Ir Raymond SZE)

15. **Learned Society Board (LSB)** ([Represented by the Chairman, Ir Mandy LEUNG](#))

Ir Mandy LEUNG represented the Division to participate in the LSB to coordinate learned society activities and provide recommendation to the Council at strategic level in upholding and enhancing the integrity and status of the HKIE, representing the profession to the public, and promoting and advancing the science and practice engineering.

16. **Public Service Committee (PSC)** ([Represented by Ir Andrew YAN](#))

The Public Service Committee is responsible to the Learned Society Board for developing and coordinating public relations policies; reviewing / revising these policies from time to time and enhancing the HKIE's public image. The Working Groups for Publicity Activities and Promotion to Schools under the Public Service Committee had continued their works to promote

the image of engineers to different stakeholders. Also, the new self-nomination mechanism for serving the external boards and committees with the aims to engage those engineers who have the interest in serving the community was rolled out in early 2023.

17. **Council** (Represented by [Ir W.S. TAM](#))

Ir W.S. TAM represented the Division in the HKIE Council for the Session 2022/2023 to update the latest development, policy, and direction to be implemented by the Council to Division members.

18. **Discipline** (Represented by [Ir Tony YEUNG](#))

Ir Tony YEUNG is the Discipline Representative who chairs the Electrical Discipline Advisory Panel. Being responsible to advise on aspects in relation to Qualifications and Professional Membership, there were major tasks of the Discipline in Session 2022/2023 including review and finetuning of professional assessment with an aim to attract more local applications, reciprocal recognition agreement of professional qualification between professional bodies of Mainland China and overseas, accreditation of engineering-related Bachelor and Masters degree programme in Hong Kong and overseas, etc.

19. **Continuing Professional Development Committee (CPD)** ([Represented by Ir Raymond SZE](#))

Ir Raymond SZE represented the Division in the CPD Committee providing update to Division members on all matters relating to CPD requirements.

20. **Publication and Communication with Members** (Chaired by [Ir Stanley LEUNG](#))

Ir Stanley LEUNG served as the authorized representative of the Division to coordinate the publication and communication for the Division covering divisional events, event reports and newsletters, via the HKIE eNewsletters system, the Team-up Calendar, the journal of the HKIE (Hong Kong Engineer) as well as the divisional website (<http://el.hkie.org.hk>).

21. **Concluding Remarks**

The pandemic restrictions have gradually faded away since the beginning of 2023, with social distancing measures are being relaxed, the Committee see the gratitude of having our operation being put back to normal. We, electrical engineers, have demonstrated the highest resilience of powering the “new normal”. The Committee organized and completed various technical events including Annual Symposium, technical visits, technical webinars, professional short course, etc. for broadening our members’ technical knowledge and to keep in pace with the latest technologies. The Overseas Technical Visit and Mainland Technical Visit will be resumed very soon in July and September 2023 respectively. Professional talks were organized for universities

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and higher education institutions to share our members' working experience with students in different sectors of electrical industries, and to inspire students with insightful achievement of what electrical engineers do in Hong Kong.

The Division has been actively supporting the initiatives and participating in the events of the HKIE in particular the iconic events of the Session, the Hong Kong Engineers Week 2023 held in March 2023 and the ICEE Conference to be held in July 2023 which boost the Institution's status and public image. As always, the Division has continued nominating members to join various External Boards and Committees to push high professional standard of works in electrical industries.

Being the Chairman of this Session, I would like to thank the Past Chairmen and Committee Members for their guidance, dedication, contribution, and commitment to the Division. Without their unfailing support, I would not be able to lead the Division through this challenging but successful session. I am proud to be an electrical Engineer and proud to be part of the team. In the meantime, I would also like to extend my sincere thanks to our members, supporters and sponsors for their continuous support to our Division's activities. Last, but not least, I am confident that the Electrical Division will be able to upkeep the momentum in serving the electrical engineering industry and professional development in the coming sessions.



(Ir Mandy LEUNG)
Chairman, Electrical Division Session 2022/2023
25 April 2023

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Electrical Division Committee Session 2022/2023

Chairman	Ir Mandy LEUNG	
Immediate Past Chairman	Ir Y.H. LEUNG	
Deputy Chairman	Ir Andrew YAN	
Honorary Secretary	Ir Banson LAM	
Honorary Treasurer	Ir Y.K. CHU	
Members	Ir Walter AU Ir Kit CHAN Ir Alex FU Ir Steve CHAN Ir Ian LEE Ir Yani KO Mr. Stan MOU	Ir Hugo CHAN Ir Stephen YIP Ir Stanley LEUNG Ir Raymond SZE Ir Tim LEUNG Ir Vincent LEUNG Mr Keith WONG
Ex-officio Members	Ir W.S. TAM Ir Tony YEUNG Mr. Indi WONG Mr. Owen WAN Ir Victor TSE	(Council Member (Division)) (Discipline Representative) (AMC Representative) (YMC Representative) (SSC Representative)
Co-opted Members	Ir Kevin LEUNG Ir Ben LAM Ir Dr. K.C. Wong	
In Attendance	Ir Tony YEUNG Ir T.K. CHIANG Ir C.F. CHAN Ir Dr. F.C. CHAN Ir Geoffrey CHAN Ir Simon CHUNG Ir C.L. LEUNG Ir Sai King HO Ir Gary KO Ir Albert TO Ir Edward YEUNG Ir Perry PUN Ir Joseph LEUNG	Past Chairman as advisor Past Chairman as advisor Past Chairman as advisor Past Chairman as advisor Past Chairman as advisor Past Chairman as advisor Past Chairman as advisor Past Chairman as advisor Past Chairman as advisor Past Chairman as advisor Past Chairman as advisor Ir Dr. K.F. WONG Ir Alan NG Ir C.L. WONG

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Ir W.I. HO
Ir Kelvin LI
Ir W.K. LEE
Ir Henry CHAN
Ir Dr. W.L. CHAN
Dr. Sam LAM
Mr. Franky WONG
Mr. Jason CHAN
Mr Wilson KOT
Mr. Smith TSAI
Mr. Ryan CHAN
Mr. Jackie CHOI

Ir Simon TSUI
Ir Dennis LEUNG
Ir S.S. TANG
Ir Sherman TONG
Ir Edmund LAU
Ir Gordon WOO
Ir Dr. Albert LEE
Ir Eric LUN
Ms. T.T. SUEN
Ms. Gloria WONG
Ms. Jenny LIN
Ms. Jacqueline LO