

Annual Report for Session 2018/2019

1. **Foreword**

Session 2018/2019 was a very fruitful year of the Electrical Division. With a dedication to adding values to our members under the digital age and the era of climate change, the Division Committee (the Committee) held eleven meetings (including the upcoming Division AGM scheduled on 7 May 2019) in this Session to plan, implement, and review local and overseas activities, ranging from technical seminars and visits to professional short course. Apart from serving our existing members, the Committee also continued to play a key role in nurturing future electrical engineers and upcoming industry talents, by organizing project competitions for secondary school students and arranging career talks. Activity details for this Session are summarized in the following sections.

2. **Annual Dinner** (Chaired by Ir Tony YEUNG)

In order to provide an opportunity for annual gathering of members, the Annual Dinner 2019 is scheduled on 7 May 2019 immediately after the Division AGM. Supports from organizations to the Annual Dinner are very encouraging.

3. **36th Annual Symposium** (Chaired by Ir Dr. Edward LO)

The 36th Annual Symposium was held on 23 October 2018 at Sheraton Hong Kong Hotel & Towers. The Symposium Organising Committee was chaired by Ir Dr. Edward LO, with Ir YK CHU as the Symposium Secretary. The Symposium theme was “Electrical Engineering Digitalization – A, B & C”, where A, B & C stand for Artificial Intelligence, Big Data and Cloud Services. Nine papers were presented. The HKIE Immediate Past President, Ir Thomas KC Chan, delivered an opening speech, followed by the keynote speech by Mr Donald Mak, Assistant Government Chief Information Officer. The Symposium was concluded by Ir Professor Christopher Chao, Dean of Faculty of Engineering, University of Hong Kong, with his closing address. Over 300 participants attended the Symposium and their responses were overwhelming.

4. **Technical Programme Sub-committee** (Chaired by Ir Dr. Bryan PONG)

The Sub-committee had organised/ co-organised a total of fifteen (15) technical seminars in the session. There were more than 80 attendees on average for each event. Local and overseas experts in various areas of electrical engineering were invited to give state-of-the-art developments in the field. These range from hardware equipment such as transformer and PV panel, to software BIM tools for electrical engineering. Moreover, veteran engineers were invited to share their decades of experience in their engineering careers, which is very much welcomed especially by young engineers. The seminars received enthusiastic support and served to provide continuous professional development.

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| Date | Topic | Speakers |
|--------------|---|---|
| 25 July 2018 | Extracting Renewable Energy from the Oceans - What is the potential? | Dr. Bruce POON |
| 5 Sept 2018 | The public service path of a professional engineer | Ir TH TAI |
| 27 Sept 2018 | Old Stories about power systems protection in CLP | Ir Dr. FC CHAN |
| 1 Nov 2018 | Success in Industrial Entrepreneurship | Mr Barry CY CHIN |
| 23 Nov 2018 | Development of electrical equipment in housing in the past decades | Ir Patrick PY YU |
| 12 Dec 2018 | How to successfully witness a Power Transformer Factory Acceptance Test (FAT) Event | Mr. Stephen CHAN |
| 23 Jan 2019 | Photovoltaic Panel Application | Ir MS CHOI, Sam; Ir CY CHENG |
| 24 Jan 2019 | From Steam Engines to High Speed Trains - A Hundred Years of Railway Development in Hong Kong | Ir CL LEUNG |
| 28 Feb 2019 | Analysis of power grid distribution using CYPELEC Networks | Mr David Blanco Liarte |
| 1 Mar 2019 | Talent Development in E&M Industry and additional route to become professional engineers | Ir Paul POON |
| 11 Mar 2019 | Know more on Biomedical Engineering and Latest Technology | Miss Azura CHOI, Miss Carmen SIN, Mr Eric YAU |
| 24 Apr 2019 | Energy Worthiness of Your Solar Investment | Mr. CC NGAN |
| 26 Apr 2019 | Bridging the OT / IT Cybersecurity Gap | Mr. Vineet Kumar Gupta |
| 10 May 2019 | BIM | Mr. George WONG |
| 23 May 2019 | BIM for Electrical & Building Services Engineers | Mr. CM HUI, Sam |

5. **Local Technical Visit Sub-committee (Chaired by Ir Andrew Yan)**

The Sub-committee had organized five technical visits to places of technical interests for members up to end April 2019. Another one is scheduled in June 2019. The main theme of the local technical visits this year was sustainable development. Apart from the mega infrastructure projects, HK-Macau-Zhuhai Bridge and Central Wanchai Bypass, the newly opened Hong Kong Children Hospital and the revitalized project – The Murray were also visited. Response for each visit conducted up to the moment was enthusiastic, with 30 attendees on average.

| Date | Place of Technical Visit |
|--------------|--|
| 21 July 2018 | The Murray |
| 22 Sept 2018 | Hong Kong Children's Hospital |
| 8 Dec 2018 | HK-Macau-Zhuhai Bridge Boundary Crossing Facilities and Hong Kong Link Road |
| 2 Feb 2019 | T-Park and WEEE Park |
| 23 Mar 2019 | Central-Wanchai Bypass |
| 15 June 2019 | Combined Heat and Power (CHP) Plant at Alice Ho Miu Ling Nethersole Hospital |

6. **Overseas Technical Visit Sub-committee (Chaired by Ir Edward YEUNG)**

A delegation of 41 had visited Germany from 21 July to 1 August 2018. On 23 July 2018, the delegation visited Siemens Switchgear Factory Frankfurt (SWF) which manufactures secondary distribution switchgear up to 24kV and primary distribution switchgear up to 40.5kV. On 25 July 2018, the delegation visited the Siemens MindSphere Application Centers (MAC) in Nuremberg. MindSphere, a cloud-based IoT operating system, offers a full suite of products and services for digital transformation.

On 30 July 2018, the delegation visited the Schneider factory in Regensburg. This factory manufactures Gas Insulated Switch (GIS) up to 40.5kV for GHA and 24kV for GMA types. Manufacturing processes with highlights on quality control, and testing and commissioning were demonstrated. On 31 July 2018, the delegation also visited TE Connectivity factory in Ottobrunn, close to Munich. This factory manufactures HV, MV and LV cable accessories particularly heat shrink and cold applied products. Laboratory for partial discharge test and DC high voltage test was visited. The delegation was also pleased to see the production line of heat shrink cable sleeves.

7. **Mainland China Technical Visit Sub-committee (Chaired by Ir WS TAM)**

In the 2-day technical visit to Guangzhou (廣州) and Conghua (從化) on 1 and 2 December 2018, 23 participants visited a 530m super high-rise complex building of retail/office/serviced apartment/hotel in Guangzhou and 20 visited the power station in Conghua, which is one of the largest Pumped Storage Power Stations in the World.

8. **Membership Drive Sub-committee** (Chaired by Ir YH CHAN)

Five membership drive talks were organized in 2018/2019 session at IVE (Chai Wan), IVE (Tsing Yi), IVE (Haking Wong), University of Hong Kong and Hong Kong Polytechnic University. The presentation included an introduction on the HKIE and Electrical Division, career opportunities in the Government, power utilities, consulting and contracting sectors, the need and path of joining HKIE. The responses were enthusiastic.

9. **Energy Innovation Fund Project** (Chaired by Ir HO Siu Kwong)

The programme was sponsored by the CLP Power Hong Kong Limited and has been organised yearly since 2009 for 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 re-named as “Energy Innovation for Smart City Competition” to give more focus on smart use of energy in a modern city. Over 250 students joined the Competition in 65 teams this year, with 39 teams competing in the second round. Ten teams will then enter the Competition Final on 18 May 2019.

10. **Electrical Model Design Contest** (Chaired by Ir Tony YEUNG)

For the past 7 years, the Division had been organizing a contest for lower form secondary school students with an aim to promoting electrical engineering, enhancing the knowledge and awareness of renewable energy and encouraging low carbon living among them. This year, the Division continued to organize the same event with the main theme of solar energy. The event was supported by the Education Bureau of the Government of the HKSAR and the Hong Kong Polytechnic University with encouraging sponsorships from The Hongkong Electric Co., Ltd. and CLP Power Hong Kong Ltd. In 2018/19 session, over 100 lower form secondary school students from 45 schools participated in the contest. The contest was held on 5 May 2019.

11. **International Council on Electrical Engineering (ICEE) Conference**
(Led by Ir Dr. FC CHAN)

The International Council on Electrical Engineering (ICEE) Conference 2018 with the theme “Future Power & Energy Technologies for Sustainability and Reliability” was held at the Korea University, Seoul Korea during 24-28 June 2018. It offered 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. There were over 600 papers/presentations presented with attendance of 700 delegates from 14 regions. The International Council on Electrical Engineering (ICEE) Conference 2019 with a theme of “Towards Intelligent Electrical Engineering” will be held in Hong Kong during 3-6 July 2019 at The Hong Kong Polytechnic University.

12. **Professional Short Course in Electrical Engineering** (Chaired by Ms Candy LEUNG)

Four professional short courses covering various aspects of electrical engineering were held in March 2019. As in the past years, the courses attracted over 300 registrations, and the Committee was greatly encouraged by the overwhelming response. The professional short course of 2018/19 continued to be endorsed by EMSD as satisfying with the requirements of “CPD Module 2: Technical Knowledge Training” for the registration of Registered Electrical Worker.

13. **The HKIE Boards and Committees**

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

- Learned Society Board (represented by the Chairman, Ir TK CHIANG)
- Public Service Committee (represented by the Deputy Chairman, Ir Tony YEUNG)
- Council (represented by Ir YK CHU)
- Discipline Representative (represented by Ir Gary KO)
- Continuing Professional Development Committee (represented by Ir Raymond SZE)

14. **Learned Society Board (LSB)** (Represented by the Chairman, Ir TK CHIANG)

Ir TK CHIANG represented the Division to participate in the LSB to coordinate learned society activities and provide recommendation to the Council at strategic level. One past Chairman was nominated to join the Mainland visit organized by the LSB under the Belt and Road Initiative.

15. **Public Service Committee (PSC)** (Represented by Ir Tony YEUNG)

To further promote the image of HKIE and to enhance the communication with media, a new committee called Public Service Committee 公共事務委員會 was established to replace both of the existing Public Relation Committee and Community Services Committee. The Committee is responsible to Learned Society Board for developing and co-ordinating public relations policies; for reviewing/ revising these policies from time to time and for enhancing HKIE’s public image. The first meeting was held on 27 September 2018. In addition to the tasks in school ambassadors programme, editorial contributions, relationship with District Council etc., two working groups namely “Promotion to Schools” and “Publicity Activities” were formed to oversees the co-ordination and planning of these activities.

16. **Council** (Represented by Ir YK CHU)

Ir YK CHU represented the Division in the Council. Four Council meetings were held in Session 2018/19.

17. **Discipline** (Represented by Ir Gary KO)

Ir Gary KO is the Discipline Representative who chairs the Electrical Discipline Advisory Panel. Being responsible to advise on aspects in relation to Qualifications and Professional Membership, one major task of the Discipline in 2018/2019 is to respond to the requirements of

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Competence-based Professional Assessment especially in ensuring sufficient Assessors to cope with the commencement of new protocol of Professional Assessment in April 2019.

18. **Continuing Professional Development Committee (CPD) (Represented by Ir Raymond SZE)**

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

19. **Publication and Communication with Members (Chaired by Ir Stanley LEUNG)**

Ir Stanley LEUNG served as the authorised representative of the Division to notify members the activities and events of the Division through HKIE e-newsletters, the journal of the HKIE (*Hong Kong Engineer*) and divisional website (<http://el.hkie.org.hk>).

20. **Concluding Remarks**

The Committee has been organising different activities, such as technical seminars and visits, and overseas visits, professional short courses, etc. to advance the profession of electrical engineering and support the professional development of our members. In addition, the Committee formulated and implemented initiatives to introduce the profession to the younger generation, for the sustainable development of the Division as well as the industry. Furthermore, we support the initiatives of the HKIE HQs, such as the HKIE Engineer Day and Technical visit to Guizhou under LSB. All in all, we would continue the missions of the Division to add values to our members.

Finally, I would like to thank all Committee Members for their dedication and commitment to the Division. Without their unfailing support, I would not be able to lead the Division to another successful session. I would also like to extend my sincere thanks to our members and sponsors for their continuous support in the activities. Immersed in a culture of dedication and continuous improvement and with support from our members and sponsors, the Division is prepared to meet the needs and aspiration of our members in the coming sessions.

(Ir TK CHIANG)
Chairman, Electrical Division Session
2018/19
7 May 2019

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Electrical Division Committee Session 2018/2019

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|-------------------------|---|---|
| Chairman | Ir TK CHIANG | |
| Immediate Past Chairman | Ir Dr. Edward LO | |
| Deputy Chairman | Ir Tony YEUNG | |
| Honorary Secretary | Ir WS TAM | |
| Honorary Treasurer | Ir YK CHU | |
| Members | Ir Walter AU Ir YH CHAN Ir Alex FU Ir WI HO Ms. Candy LEUNG Ir Mandy LEUNG | Ir Stanley LEUNG Ir YH LEUNG Ir Dr. Bryan PONG Ir Raymond SZE Ir CL WONG Ir Andrew YAN |
| Ex-officio Members | Ir YK CHU Ir Gary KO Mr. Indi WONG Ir Vincent LEUNG Ir Simon TSUI | (Council Member (Division)) (Discipline Representative) (AMC Representative) (YMC Representative) (SSC Representative) |
| Co-opted Members | Ir Kit CHAN Ir Ian LEE | Ir Joseph LEUNG |
| In Attendance | Ir Dr. FC CHAN Ir PN IP Ir Sai King HO Ir Simon CHUNG Ir Geoffrey CHAN Ir Dr. KM LEUNG Ir Albert TO Ir Siu Kwong HO Ir PK CHAN Ir CF CHAN Ir Hugo CHAN Mr. Jason CHAN Ir Dr. Ken CHAN Mr. Ryan CHAN Ir Steve CHAN Ir Dr. WL CHAN Ms. Yani KO Ir Ben LAM Ir WK LEE Ir Dr. Tony LEE Ms. Jacqueline LO Mr. Stan MOU | 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 Henry NGAI Ir Venus TAM Ir SS TANG Ir Sherman TONG Mr. Smith TSAI Ir WH YAN Ir Edward YEUNG Ms. June YIP Ir Stephen YIP Ms. Karen WONG Mr. Keith WONG Ir Gordon WOO |