



IEEE Taipei Section

Annual Report 2020

**Prepared by
Tsung-Yi Ho
Secretary (2020/2021)**

**Meng-Fan Chang
Chair (2020/2021)**

Suggested Section Report Format

PART A - SECTION SUMMARY

A.1 Executive Summary

- Section Executive Committee Member List

Section Officer (2020-2021)

Chair

Prof. Meng-Fan Chang (National Tsing Hua University)

Email: mfchang@ee.nthu.edu.tw

Vice Chair

Prof. Kea-Tiong Tang (National Tsing Hua University)

Email: kttang@ee.nthu.edu.tw

Secretary

Prof. Tsung-Yi Ho (National Tsing Hua University)

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Treasurer

Prof. Ren-Shuo Liu (National Tsing Hua University)

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Membership Development

Prof. Yung-Hsieh Wu (National Tsing Hua University)

Email: yunhwu@ess.nthu.edu.tw

Professional Activities

Prof. Li-Ping Chang (National Chiao Tung University)

Email: lpchang@cs.nctu.edu.tw

Student Activities

Prof. Min-Kuan Chang (National Chung Hsing University)

Email: minkuanc@dragon.nchu.edu.tw

Educational Activities

Prof. Sheng-Shian Li (National Tsing Hua University)

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Women in Engineering

Prof. Hsiao-Wen Zan (National Chiao Tung University)

Email: hsiaowen@mail.nctu.edu.tw

Industry Relations Coordinator

Prof. Bor-Sung Liang (MediaTek)

Email: bs.liang@mediatek.com

Webmaster

Prof. Yuan-Hao Chang (Academia Sinica)

Email: johnson@iis.sinica.edu.tw

- Section Highlights
 - Taipei Section has 7 newly elevated IEEE Fellow of 2020.
 - Taipei Section organized 2020 Lifetime Achievement Award, Outstanding Chapter/Student Chapter Award, Membership Promotion Award, Best PhD Dissertation Award, and Best Master Thesis Award in 2020.
- Major Events (International, National)
 - **Sponsor**

Category	Meeting	Date
Administrative	Section Executive Committee Meeting	2020.07.27, 2020.11.17
	Taipei Section Annual Meeting	2020.09.22

➤ **Co-sponsor**

Category	Meeting	Date
Technical (Advertisement)	IEEE International Conference on Consumer Electronics (ICCE)	2020.01.04~06
	2020 National Symposium on Systems Science and Engineering (NSSSE)	2020.06.19~20
	2020 Invited Talk by Distinguished Lecturer: Nitrided and Fluorinated Graphene and MoS2 for Transistors, Memristors and Chemical Sensors Applications	2020.08.17
	2020 IEEE Sensors Council Summer School	2020.08.29~30
	2020 IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS)	2020.08.31~09.04
	2020 International Conference on System Science and Engineering (ICSSE 2020)	2020.08.31~09.03
	2019 International Workshop on Hardware Security	2019.09.20
	2020 Electromagnetic Industry-Academia Consortium	2020.09.25
	2020 International Automatic Control Conference (CACS)	2020.11.4~7
	2020 IEEE Asian Solid-State Circuits Conference: Intelligent Chips for AIoT Era	2020.11.09~11
	2020 Invited Talk by Distinguished Lecturer: Differentiated Fully Depleted SOI (FDSOI) technology for highly efficient and integrated mmwave wireless connectivity solution	2020.11.20
	2020 Women in Optics and Women in Engineering, Taiwan	2020.12.05

- **Major Chapter Activities**
 - Encourage members to participate in IEEE activities.
- **Awards**
 - 2020 Lifetime Achievement Award: Prof. Shyu Jyuo-Min.
 - 2020 Outstanding Chapter Award: Solid-state Circuits Society Taipei Chapter.
 - 2020 Outstanding Student Branch/Chapter Award: IEEE National Central University Student Branch
 - 2020 Best PhD Dissertation Award and 2020 Best Master Thesis Award.

A.2 Financial Report

- Summary (as per submitted on NetSuite)
→Refer to the p71-p79.
- Any other financial activities
The financial status of this Section is comfortable for supporting those planned programs. Some of the chapters have contributed a reasonable percentage of their income to this Section. This allows the Section to maintain the routine functions and to hold more conferences. We also sponsored more student activities than before. The total income of the Section in 2020 was NT\$2,031,285 including NT\$562,154 of 2020 rebate in June 2020. The total expenses were NT\$1,359,976. The final balance at the End of 2020 is NT\$14,962,788. More details are included in the 2020 Annual Geographic Unit Financial Report.

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

- Total number of active members in the past 4 years.

IEEE Grade	2017 Members	2018 Members	2019 Members	2020 Members
Affiliate	60	64	51	47
Associate	54	61	50	49
Fellow	94	92	95	90
Graduate Student	331	346	420	386
Life Fellow	29	35	35	38
Life Member	14	19	23	32
Life Senior	12	12	18	18
Member	1815	1778	1795	1648
Senior Member	365	372	381	395
Student	172	194	178	149
Total	2946	2973	3046	2867

- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members
 - We keep recruiting new members and plan activities this and next years, including Rendering Awards (Outstanding Chapter Award and Outstanding Student Branch/Chapter Award).

B.2 Chapter Activities

- Total number of Chapters in the Section: 35
 - Chapter Name: Antennas and Propagation Society Taipei Chapter (AP03)**
Chapter Chair: Tzyh-Ghuang Ma
Title and Affiliation: Professor, Dept. of Electrical Engineering, National Taiwan University of Science and Technology
Email: tgma@mail.ntust.edu.tw
 - Chapter Name: Broadcast Technology Society Taipei Chapter (BT02)**
Chapter Chair: Shih-Chia Huang
Title and Affiliation: Professor, Department of Electronic Engineering, National Taipei University of Technology
Email: schuang@ntut.edu.tw
 - Chapter Name: Computer Society Taipei Chapter (C16)**
Chapter Chair: Yuh-Jye Lee
Title and Affiliation: Research Fellow, Institute of Information Science, Academia Sinica
Email: yuh-jye@citi.sinica.edu.tw
 - Chapter Name: Circuits and Systems Society Taipei Chapter (CAS04)**
Chapter Chair: Hsie-Chia Chang
Title and Affiliation: Professor, Department of Electrical Engineering, National Chiao Tung University
Email: hcchang@mail.nctu.edu.tw
 - Chapter Name: Consumer Electronics Society Taipei Chapter (CE08)**
Chapter Chair: Wen-Chung Kao
Title and Affiliation: Professor, Department of Electrical Engineering, National Taiwan Normal University
Email: jungkao@ntnu.edu.tw
 - Chapter Name: Council on Electronic Design Automation Taipei Chapter (CEDA44)**
Chapter Chair: Jie-Hong Roland Jiang
Title and Affiliation: Professor, Department of Electrical Engineering, National Taiwan University
Email: jhjiang@ntu.edu.tw

7. **Chapter Name: Computational Intelligence Society Taipei Chapter (CIS11)**
Chapter Chair: Li-Wei Ko
Title and Affiliation: Professor, Institute of Bioinformatics and Systems Biology,
National Yang Ming Chiao Tung University
Email: lwko@nctu.edu.tw
8. **Chapter Name: Communications Society Taipei Chapter (COM19)**
Chapter Chair: Rung-Hung Gau
Title and Affiliation: Professor and Director, Institute of Communications Engineering,
National Chiao Tung University
Email: runghunggau@g2.nctu.edu.tw
9. **Chapter Name: Components, Packaging, and Manufacturing Technology Society Taipei Chapter (CPMT21)**
Chapter Chair: Shen-Li Fu
Title and Affiliation: Professor, Department of Electronic Engineering, I-Shou
University
Email: slfu@isu.edu.tw
10. **Chapter Name: Council on RFID (CRFID-741)**
Chapter Chair: Chow-Yen-Desmond Sim
Title and Affiliation: Distinguished Professor, Department of Electrical Engineering,
Feng Chia University
Email: cysim@fcu.edu.tw
11. **Chapter Name: Control Systems Society Taipei Chapter (CS23)**
Chapter Chair: Jih-Gau Juang
Title and Affiliation: Vice President/Professor, Department of Communications,
Navigation and Control Engineering, National Taiwan Ocean University
Email: jgjuang@ntou.edu.tw
12. **Chapter Name: Education Society Taipei Chapter (E25)**
Chapter Chair: Juing-Huei Su
Title and Affiliation: Professor, Department of Electronic Engineering, Lunghwa
University of Science and Technology
Email: suhu@gm.lhu.edu.tw
13. **Chapter Name: Electron Devices Society Taipei Chapter (ED15)**
Chapter Chair: Steve S. Chung
Title and Affiliation: Professor, Department of Electronics Engineering, National Chiao
Tung University
Email: schung@cc.nctu.edu.tw
14. **Chapter Name: Engineering in Medicine and Biology Society Taipei Chapter (EMB18)**
Chapter Chair: Jyh-Horng Chen
Title and Affiliation: Professor, Department of Electrical Engineering, National Taiwan
University
Email: jhchen@ntu.edu.tw
15. **Chapter Name: Electromagnetic Compatibility Society Taipei Chapter (EMC27)**
Chapter Chair: Hsi-Tseng Chou
Title and Affiliation: Professor, Graduate Institute of Communication Engineering
National Taiwan University
Email: chouht@ntu.edu.tw
16. **Chapter Name: Geoscience and Remote Sensing Society Taipei Chapter (GRS29)**
Chapter Chair: Yang-Lang Chang
Title and Affiliation: Professor and Department Chair of Electrical Engineering,
National Taipei University of Technology
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17. **Chapter Name: Industry Applications Society Taipei Chapter (IA34)**
Chapter Chair: Kuo-Lung Lian
Title and Affiliation: Professor, Department of Electrical Engineering, National Taiwan University of Science and Technology
Email: ryanlian@mail.ntust.edu.tw

18. **Chapter Name: Industrial Electronics Society Taipei Chapter (IE13)**
Chapter Chair: Yao-Ching Hsieh
Title and Affiliation: Associate Professor, Department of Electrical Engineering, National Sun Yat-sen University
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19. **Chapter Name: Instrumentation and Measurement Society Taipei Chapter (IM09)**
Chapter Chair: Yao-Joe Joseph Yang
Title and Affiliation: Distinguished Professor, Department of Mechanical Engineering, National Taiwan University
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20. **Chapter Name: Information Theory Society Taipei Chapter (IT12)**
Chapter Chair: Yeong-Luh Ueng
Title and Affiliation: Professor, Department of Electrical Engineering, National Tsing Hua University
Email: ylueng@ee.nthu.edu.tw

21. **Chapter Name: Magnetics Society Taipei Chapter (MAG33)**
Chapter Chair: Ko-Wei Lin
Title and Affiliation: Professor, Department of Materials Science and Engineering, National Chung Hsing University
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22. **Chapter Name: Microwave Theory and Techniques Society Taipei Chapter (MTT17)**
Chapter Chair: Heng-Ming Hsu
Title and Affiliation: Professor, Department of Electrical Engineering, National Chung Hsing University
Email: hmhsu@nchu.edu.tw

23. **Chapter Name: Oceanic Engineering Society Taipei Chapter (OE22)**
Chapter Chair: Forng-Chen Chiu
Title and Affiliation: Professor, Department of Engineering Science and Ocean Engineering, National Taiwan University; Director, National Center for Ocean Research (Preparatory Office), NARL
Email: fcchiu@ntu.edu.tw

24. **Chapter Name: Power and Energy Society Taipei Chapter (PE31)**
Chapter Chair: Chia-Chi Chu
Title and Affiliation: Professor, Department of Electrical Engineering, National Tsing Hua University
Email: ccchu@ee.nthu.edu.tw

25. **Chapter Name: Power Electronics Society Taipei Chapter (PEL35)**
Chapter Chair: Katherine A. Kim
Title and Affiliation: Associate Professor, Department of Electrical Engineering, National Taiwan University
Email: kakim@ntu.edu.tw

26. **Chapter Name: Photonics Society Taipei Chapter (PHO36)**
Chapter Chair: Chien-chung Lin
Title and Affiliation: Professor, Institute of Photonic System, National Chiao Tung University
Email: chienchunglin@faculty.nctu.edu.tw

27. **Chapter Name: Product Safety Engineering Society Taipei Chapter (PSE43)**
Chapter Chair: Claire Tsai

Title and Affiliation: Safety Test Lead, Lenovo Technology B.V. Taiwan Branch
Email: ctsai4@lenovo.com

28. **Chapter Name: Robotics and Automation Society Taipei Chapter (RA24)**
Chapter Chair: Hsueh-Cheng Wang
Title and Affiliation: Assistant Professor, Department of Electrical and Computer Engineering, National Yang Ming Chiao Tung University
Email: hchengwang@nycu.edu.tw
 29. **Chapter Name: Reliability Society Taipei Chapter (RL07)**
Chapter Chair: Shiuhyng Shieh
Title and Affiliation: University Chair Professor, Department of Computer Science, National Chiao Tung University
Email: ssp@cs.nctu.edu.tw
 30. **Chapter Name: Sensors Council Taipei Chapter (SEN39)**
Chapter Chair: Paul C.-P. Chao
Title and Affiliation: Professor, Department of Electrical Engineering, National Chiao Tung University
Email: pchao@mail.nctu.edu.tw
 31. **Chapter Name: Systems, Man, and Cybernetics Taipei Chapter (SMC28)**
Chapter Chair: Chen-Chien James Hsu
Title and Affiliation: Professor, Department of Electrical Engineering, National Taiwan Normal University
Email: jhsu@ntnu.edu.tw
 32. **Chapter Name: Systems, Man, and Cybernetics Taichung Chapter (SMC28-TC)**
Chapter Chair: Ching-Chih Tsai
Title and Affiliation: Professor, Department of Electrical Engineering, National Chung Hsing University
Email: cctsai@nchu.edu.tw
 33. **Chapter Name: Signal Processing Society Taipei Chapter (SP01)**
Chapter Chair: Jing-Ming Guo
Title and Affiliation: Professor, Department of Electrical Engineering, National Taiwan University of Science and Technology
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 34. **Chapter Name: Solid-State Circuits Society Taipei Chapter (SSC37)**
Chapter Chair: Tsung-Hsien Lin
Title and Affiliation: Professor, Department of Electrical Engineering, and Director, Graduate Institute of Electronics Engineering, National Taiwan University
Email: thlin@ntu.edu.tw
 35. **Chapter Name: Vehicular Technology Society Taipei Chapter (VT06)**
Chapter Chair: Jen-Ming Wu
Title and Affiliation: Professor, Department of Electrical Engineering, National Tsing Hua University
Email: jmwu@ee.nthu.edu.tw
 36. **Chapter Name: Microwave Theory and Technique Society Taipei Chapter(MTT17)**
Chapter Chair: Heng-Ming Hsu
Title and Affiliation: Professor, Department of Electrical Engineering, National Chung Hsing University
Email: hmhsu@nchu.edu.tw
- Number of Chapters formed in the current year: 1
 - IEEE Council on RFID Taipei Section Chapter was established in Oct. 28, 2017
 - Number of Active Chapters (Chapters who have reported required number of meetings during the year): 28

- Summary of Chapter activities (Chapter wise with attachment table/information)

1. Chapter Name: Antennas and Propagation Society Taipei Chapter (AP03)

- I. IEEE AP-S Taipei Chapter Co-Sponsor Activities/Conferences/Talk conducted in 2019:

IEEE AP-S Distinguished Lecturer Talk by Prof. Jin-Fa Lee entitled “Non-conformal numerical methods electromagnetic radiation and scattering problems,” National Taiwan University, Taiwan, Date: Jan 6, 2020.

Website: <http://temiac.ee.ntu.edu.tw/news/news.php?Sn=447#>

Attendees	Technical Reports	IEEE Members	IEEE APS-Members
56	1	8	8

- II. 2020 Electromagnetics Workshop-A Bridge to the future, Venue: EDA Royal Hotel Kaohsiung City, Taiwan. Date: 14-17 January 2020.

Website: <http://www.mostcep.tw/telecom2020/index.php?action=programe&cid=8&id=35>

Attendees	Technical Reports	IEEE Members	IEEE APS-Members
200	20	150	50

- III. 2020 EM Education Initiative: Summer Program, Venue: Art & Design Building L401, JinWen University of Science & Technology, New Taipei City, Taiwan. Date: 17th-20th, August 2020.

Website: <https://sites.google.com/view/eire109/>

Attendees	Mini-Workshop	IEEE Members	IEEE APS-Members
80	10	5	75

- IV. Millimeter-Wave Industry Technology Forum, Venue: BL-101, National Taiwan University, Taipei, Taiwan. Date: 25th, September 2020.

Website: <http://temiac.ee.ntu.edu.tw/app/news.php?Sn=462>

Attendees	Technical Reports	IEEE Members	IEEE APS-Members
82	6	20	8

2. Chapter Name: Broadcast Technology Society Taipei Chapter (BT02)

Five meeting reports have been submitted to IEEE. They are listed below.

- i. Workshop on GaN-HFET Zero Voltage Soft-Switching Multi-Resonant Converter for Inductive Power Transfer Applications

Date: 01 Mar 2019

Location: 145 Xingda Rd., South Dist., Taichung City 402, Taiwan (R.O.C.)

Attendance: Member: 44, Guests 60

Inductive power transfer (IPT) systems have been widely applied for a wide variety of industrial, automotive and medical electronics systems. The power converter topology has a key role for achieving high efficiency of IPT systems as well as well as high efficient power device under the condition of high frequency switching such as wide-band-gap power devices. The power regulation of the receiving side is an essential technology for the IPT battery charging system, and a two-stage power converter, i.e. diode rectifier and buck converter is a conventional solution for the technical demand. This multi-stage power conversion is not attractive in terms of efficiency and simplicity of control system. As a solution for this technical issue, the active rectifier that directly converts a high-frequency (HF) ac to dc is a practically effective solution. In this workshop, the speaker, Dr. Mishima will present a new IPT power converter that combines a high-frequency resonant inverter and a HF bridgeless rectifier. The newly developed converter features Gallium Nitride (GaN) power device in the HF inverter and bridgeless rectifier with synchronous rectification. The low-on resistance and first switching transition brings a higher efficiency into the power converter of IPT system. The principles of switching operation and pulse modulation will be briefed, then experimental results of a 700W-85kHz prototype with 650V high voltage Gallium Nitride (GaN) Heterojunction-Filed-Effect Transistor (GaN-HFET) will be presented in this seminar.

- ii. Workshop on Latest Developments of Resonant Power Converters with Wide-Band-Gap Power Devices
Date: 02 Mar 2019
Location: No.2, Shi-Da Road, Changhua City, Taiwan (R.O.C.)
Attendance: Member: 45, Guests 61
Resonant power converters are essential for high-frequency power conversions: high frequency inverters, high frequency-link dc-dc converters and high frequency-link ac-ac converters for wireless power transfers, induction heaters and ac/dc microgrid, automotive applications and so forth. In order to pull out the merits of high frequency switching operation, wide-band-gap (WBG) power devices such GaN and SiC MOSFETs are applied in the resonant power converters with innovative soft switching topologies as well as conventional ones. In this workshop, the technical trends on the researches and developments of resonant power converters with WBG devices will be introduced by partly referring to the research records in the past decades such as; LLC converters, isolated dc/dc converters, class-E inverters. Moreover, the innovative single-stage ac-ac converters with SiC-MOSFET for induction heater which was developed by Advanced Power Electronics Research Laboratory of Kobe University will be presented.
- iii. Workshop on Electrification Revolution with Power and Energy Electronics Technologies
Date: 22 Nov 2019
Location: 145 Xingda Rd., South Dist., Taichung City 402, Taiwan (R.O.C.)
Attendance: Member: 43, Guests 60
At present, almost all electrical products require DC power. All residential and factory power distribution systems can also be converted to DC power distribution. These can be achieved by high-frequency power conversion technology. Therefore, it can be said that the current energy and power electronics technology using wide band gap semiconductors is bringing a new generation of electrification revolution.
- iv. Workshop on Digital TV and Digital Brocasting
Date: 19 June 2020
Location: 1, Sec. 3, Zhongxiao E. Rd., Taipei 10608 Taiwan (R.O.C.)
Attendance: Member: 20, Guests 50
The series talks: 1. Digital TV - overview, technologies and trends 2. Video Coding Standards history, concepts and coding tools 3. SIMD overview, hardware and software 4. Career sharing
- v. Workshop on Digital Hardware Design Foundations
Date: 19 June 2020
Location: 1, Sec. 3, Zhongxiao E. Rd., Taipei 10608 Taiwan (R.O.C.)
Attendance: Member: 20, Guests 50
The talk includes the following: 1. Verilog hardware description language 2. Microprocessor hardware system design 3. Instruction system design 4. Simulating FPGA Designs and Testbenches 5. A simple ALU design.

3. **Chapter Name: Computer Society Taipei Chapter (C16)**

- i. The 31st VLSI Design/CAD Symposium, Aug. 4-7, 2020
Venue: Taichung, Taiwan
Attendance: Members, Guests
Website: <https://vlsicad2020.conf.tw/site/page.aspx?pid=901&sid=1342&lang=cht>

The VLSI Design/CAD Symposium, which plays an important role in stimulating local research, is aimed at providing an open forum for professors, industrial engineers and, most important of all, graduate students to exchange cutting-edge R&D knowledge and ideas in the fields of SoC/ASIC design and EDA research.
- ii. Going Beyond Neural Architecture Search for Efficient Training and Inference, July 15, 2020
Venue: Taipei, Taiwan
Attendance: Members, Guests
Website: <https://iis.sinica.edu.tw/zh/page/Events/data/DJ200047.html>

In this talk, we highlight two important topics that improve the performance of a deep neural network (DNN) in general. The first topic is on neural architecture search

(NAS), demonstrating our recent work (NeuralScale) that is able to search for the optimal number of filters for each layer in a convolutional neural network. As the formulation of NeuralScale is not computationally intensive when compared to existing NAS methods, our approach can be adopted without the requirement of multiple GPUs and long search time. The second topic we will discuss is also on our recent work on transductive inference based on meta-learning, applied on the task of remote heart rate estimation. State-of-the-art DNN models usually perform point estimation using a static model (fixed set of weights) once deployed. We argue that such approach is infeasible for practical use since the real world is always changing, hence the model needs to be able to adapt to the time-varying input distribution. The task of remote heart rate estimation using a video camera is a good vehicle to measure the performance of an estimation model in a varying environment. We show that through a transductive meta-learner, we are able to perform well in an environment that is distant from our training set.

4. **Chapter Name: Circuits and Systems Society Taipei Chapter (CAS04)**

In year 2020, we have accomplished the following activities:

Category	Date	Speaker/title/venue
Technical	Jan.2&9, 2020	Lecture: Prof. Hung Wen Li Title: “New Security Technologies in 5G” (@National Tsing Hua University, Taiwan)
	Aug4-7 2020	2020 VLSI Design/CAD symposium (Fullon Hotel Lihpao Resort, Taichung, Taiwan)
	Aug.10-13 2020	2020 VLSI-DAT Conference [@ Ambassador Hotel Hsinchu, Taiwan]
	Aug.31 - Sep 4, 2020	IEEE International Conference on Artificial Intelligence and Systems (AICAS 2020) [@GENOA, ITALY]
	Dec.3, 2020	CAS Emerging and Selected Topics for Industry Forums Dr. Kent Chuang/ Aken Wang/ Dr. Meng-Yi Wu Title: “Security on Chip Tech Froum” (@Taiwan Semiconductor Research Institute)
Education	Jul.17 Aug. 14	Title: HW security modules / Side-channel attacks Mr. Matthew Ma /Prof.Hsie-Chia Chang (@Taiwan Semiconductor Research Institute)
	Aug.27	Hardware Security for Vehicle to Vehicle Communications Prof.Hsie-Chia Chang (@National Chiao Tung University, Hsinchu, Taiwan)

5. **Chapter Name: Consumer Electronics Society Taipei Chapter (CE08)**

i. 2020 IEEE ICCE-TW

Date: Sep 28 – Sep 30, 2020

Topic: Smart Technologies for Consumer Electronics - AI, IoT and More

Venue: South Garden Hotels and Resorts, Taoyuan, Taiwan.

Summary: The IEEE International Conference on Consumer Electronics – Taiwan, 2020 took place from Sep 28 – Sep 30 at South Garden Hotels and Resorts, Taoyuan City, Taiwan. As an excellent platform for worldwide scholars and professionals, ICCE TW aims to provide discussions on research in consumer electronics and the relevant applications. Inherited from the success of ICCE-TW series between 2014 and 2019, the 7th ICCE-Taiwan continues its success and attracts more than 270 attendees with more than 380 paper submissions. The highlight of the meeting is more than 123 papers among 314 accepted papers are submitted from overseas rather than Taiwan.

The main challenge to host the conference is the COVID-19 pandemic. After careful arrangement, the conference is performed with Hybrid mode. Fortunately, the many of paper authors are from R10. Thus the time difference issue should have no problem for most of attendees. Only a few attendees are from US and Europe. These papers are presented in virtual sessions. All authors have prepared the pre-recorded videos and also call in for answering all questions from both on-site and on-line audiences. In addition to the paper presentations, three keynote speeches are offered in the conference. All of on-site and on-line participants enjoyed the conference very much.

- ii. Technical Meeting of IEEE Consumer Technology Society-Taipei Chapter
 Date: Aug. 10, 2020
 Topic: Driving world to 5G and Beyond with Consumer Technology
 Venue: A POINT STEAK, Taipei, Taiwan
 Summary: As Taipei Chapter organizes an annually conference IEEE International Conference on Consumer Electronics – Taiwan (ICCE-TW), IEEE CTSoc - Taipei chapter held a technical discussion meeting to review all submission papers of ICCE-TW2020, also the committee also discussed the new hot topics for being the main theme of the conference in the next year. The chapter chair Prof. Wen-Chung Kao (National Taiwan Normal University) hosted the meeting and review all hot topics inside the scope of CTSoc and invited Prof. Tsung-Han Tsai (National Central University, Taiwan). After many technical discussions, a set of best paper award candidates for ICCE-TW 2020 are selected and the main theme of the ICCE-TW 2021 has been determined. All of the committee members agree to select “Driving world to 5G and Beyond with Consumer Technology” as the main theme of ICCE-TW 2021.

6. Chapter Name: Council on Electronic Design Automation Taipei Chapter (CEDA44)

CEDA Taipei Chapter hosted or supported the following activities in 2020:

i. Chapter Meetings

No	Date	Venue
1	August 5, 2020	Colocated with VLSI Design/CAD Symposium Fullon Hotels & Resorts, Taichung
2	December 12, 2020	Colocated with Taiwan EDA Workshop Landis Inn Chuhu, Hsinchu

ii. Symposium and Workshops

No	Event	Date	Venue
1	VLSI Design/CAD Symposium Keynotes from ADI and M31	August 4-7, 2020	Fullon Hotel Lihpao Land, Taichung, Taiwan
2	EDA Summer Camp	August 20-21, 2020	National Taiwan University
3	EDA Workshop Keynote/invited talks from Cadence, Kneron, Synopsys, MediaTek	December 12-13, 2020	Landis Inn Chuhu, Hsinchu

2020 EDA Summer Camp

Date: August 20–21, 2020

Venue: National Taiwan University, Taipei, Taiwan

Summary: To foster and cultivate talent students in the field of Electronic Design Automation (EDA), CEDA sponsored National Taiwan University (NTU) to host a two-day summer camp for giving students opportunities to learn about EDA in August 20-21, 2020. The goal of this EDA summer camp is to promote EDA to undergraduate students who may not be familiar with this field in order to encourage more talented students to join the graduate study in the EDA area. In the first day of the program, after the opening speech by the CEDA Taipei Section Chair, Prof. Jie-Hong Roland Jiang, many alumni of the EDA program of the Graduate Institute of Electronics Engineering (GIEE) of NTU were invited to share their experiences in a luncheon. The participating students lively interacted with the seniors in person. In

addition, Prof. Tsung-Yi Ho from National Tsing Hua University hosted a Q&A session for students' exercise in team work. In the end, Prof. Iris Hui-Ru Jiang from National Taiwan University delivered a lecture about the design flow of EDA, and EDA-related labs at NTU introduced their research. In the second day, a mini-EDA contest to debug designs using EDA tools in team work was conducted and hosted by Prof. Chung-Yang Ric Huang of NTU. The specialists from Cadence, MediaTek, Synopsys, and TSMC also shared their perspectives. The 57 attendees gave a fairly good feedback about the EDA camp and expressed the helpfulness to their decision about graduate study.

2020 EDA Workshop

Date: December 12–13, 2020

Venue: Landis Inn Chuhu, Hsinchu, Taiwan

Summary: CEDA Taipei Section sponsored the 16th EDA Workshop held in Hsinchu, Taiwan, on December 12-13, 2020. The workshop provides a platform for exchanging and discussing electronic design automation through invited lectures, seminars, and top international academic paper reports. It plays a crucial role in activating the EDA community in Taiwan and promoting its global visibility. On the first day of the program, Mr. Jess Jing-Hsiang Yang, Engineering Director of Cadence, shared his view on "EDA in Post-Moore's Law Era." Dr. Juncheng Liu, CEO of Kneron, talked about "Hardware Design for Machine Learning." The program also includes an interactive poster session for presentations of top conference papers published in 2020 and a side meeting of IEEE CEDA and ACM SIGDA Taipei Section. On the second day, Dr. Kevin Wei, Business Development Manager of Synopsys, presented "EDA for New Era of Smart Chip Design." Dr. Da-Shan Shiu, Director of MediaTek Research Lab, introduced "What's New and Hot in MediaTek Research." The workshop ends with an award ceremony of the 2020 CAD Contest for domestic teams. There are 167 participants in this workshop.

7. Chapter Name: Computational Intelligence Society Taipei Chapter (CIS11)

i. Invited Plenary Speech- (05 Nov., 2020)

Speaker: Prof. Nikhil R. Pal.

Title: **Artificial Intelligence: "Ups and Downs" and what we might be missing!**

Venue: National Chiao Tung University, Hsinchu

Attendance: IEEE member: 60, Guests: 150.

Prof. Nikhil R. Pal is a Professor of Electronics and Communication Sciences Unit, Indian Statistical Institute, India. He was elevated as Fellow, IEEE, USA, Fellow, IFSA (International Fuzzy Systems Association), Fellow, The Indian National Science Academy, Fellow, The National Academy of Sciences, India, Fellow, National Academy of Engineering, India, Fellow, West Bengal Academy of Science and Technology, India. He is the president of IEEE Computational Intelligence Society, 2018~2019.

ii. Invited Plenary Speech- (06 Nov., 2020)

Speaker: Prof. Chin-Teng Lin, Computational Intelligence and Brain Computer Interface Centre, University of Technology Sydney Australia

Title: Brain Computer Interface in Human-Autonomy Teaming

Venue: National Chiao Tung University, Hsinchu

Attendance: IEEE member: 60, Guests: 150.

Prof. Chin-Teng Lin is currently a Distinguished Professor, Co-Director of Centre for AI, and Director of CIBCI Lab, FEIT, UTS. Dr. Lin served as Editor-in-Chief of IEEE Transactions on Fuzzy Systems from 2011 to 2016, and has served on the Board of Governors of IEEE Circuits and Systems Society, IEEE Systems, Man, and Cybernetics Society, and IEEE Computational Intelligence Society. Dr. Lin is an IEEE Fellow, and received the IEEE Fuzzy Pioneer Award in 2017.

iii. Invited talk- (11 Nov., 2020)

Speaker: Professor Gary G. Yen, School of Electrical and Computer Engineering, Oklahoma State University, USA.

Title: KNEE-Driven optimization and Design-Making.

Venue: National Chiao Tung University, Hsinchu

Attendance: IEEE member: 15, Guests: 45.

Professor Gary G. Yen is currently a Regents Professor in the School of Electrical and Computer Engineering, Oklahoma State University. Dr. Yen served as Vice President for the Technical Activities, IEEE Computational Intelligence Society in 2004-2005 and was the founding editor-in-chief of the IEEE Computational Intelligence Magazine, 2006-2009. He has also served as associate editor for a number of prestigious journals including IEEE Transactions on Evolutionary Computation (Impact Factor 11.169), IEEE Transactions on Cybernetics (Impact Factor 11.079), etc. He was elected to serve as the President of the IEEE Computational Intelligence Society in 2010-2011 and is elected as a Distinguished Lecturer for the term 2012-2014, 2016-2018, and 2021-2023. Dr. Yen is a Fellow of IEEE and IET.

- iv. Invited talk- (14 Dec., 2020)
Speaker: Professor Tzyy-Ping Jung, Institute for Neural Computation, University of California San Diego, USA.
Title: Real-World Brain-Computer Interfaces: From Bench to Clinic.
Venue: National Chiao Tung University, Hsinchu
Attendance: IEEE member: 15, Guests: 45.
Professor Tzyy-Ping Jung is the Co-Director of Center for Advanced Neurological Engineering, an Associate Director of the Swartz Center for Computational Neuroscience and an Adjunct Professor of Department of Bioengineering at University of California San Diego, CA, USA. Dr. Jung established transformative techniques for applying blind source separation to decompose multichannel EEG/MEG/ERP and fMRI data and was elevated to an IEEE Fellow for his contributions to blind source separation for biomedical applications in 2015.
- v. Technically Co-sponsored IFUZZY 2020
Conference title: 2020 International Conference on Fuzzy Theory and Its Application
Date: Nov. 4-7, 2020.
Venue: Hsinchu, Taiwan
Attendance: IEEE member: 100, Guests: 350
IEEE CIS, Taipei Chapter co-organized the 2020 International Conference on Fuzzy Theory and Its Application (IFUZZY 2020) held on 4-7 Nov., 2020, Hsinchu, Taiwan. (Website: <https://neuroengineering.nctu.edu.tw/ifuzzy2020/index.php>). The Taiwan Fuzzy Systems Association (TFSA) and National Chiao Tung University hosted the conference. The Chapter Chair, Prof. Li-Wei Ko, also served as a **General Chair** of the conference. Five plenary speakers, Prof. Chin-Teng Lin, Prof. Nikhil R. Pal, Prof. Keum-Shik Hong, Prof. Rüdiger Dillmann and Prof. Jorge Cortés were invited. More than 90 papers were presented in the conference. iFUZZY 2020 is soliciting novel research results on fuzzy theory and its applications and related topics, and this conference provides a very good opportunity for research scientists, investigators, industrial practitioners and government representatives to present their results and to exchange their ideas.
- vi. Technically Co-sponsored CACS 2020
Conference title: 2020 International Automatic Control Conference
Date: November 4-7, 2020.
Venue: Hsinchu, Taiwan
Attendance: IEEE member: 100, Guests: 350
IEEE CIS, Taipei Chapter technically sponsored the 2020 International Automatic Control Conference 4-7 November, 2020, Hsinchu, Taiwan. (Website: <http://cacs2020.nchu.edu.tw/index.html>). The National Chung Hsing University and Chinese Automatic Control Society (CACS) organized the conference. The Chapter Chair, Prof. Li-Wei Ko, also served as a **General Co-Chairs** of the conference. Five keynote speakers, Prof. Keum-Shik Hong, Prof. Rüdiger Dillmann, Prof. Jorge Cortés, Prof. Chin-Teng Lin, and Prof. Nikhil R. Pal were invited. More than 180 papers were presented in the conference. This conference will provide a great opportunity for scientists, engineers, and practitioners to present the latest design concepts, research results, developments, and applications, as well as to facilitate interactions between scholars and practitioners. CACS 2020 is soliciting novel research results in all aspects of control, automation, and related topics.

8. **Chapter Name: Communications Society Taipei Chapter (COM19)**

Chapter COM19 hosted or supported the following activities during 2019.

- i. **2020-Winter IEEE Taiwan Workshop on Information Theory and Communications**
Date: January 16 – January 17, 2020
Venue: Eda Royal Hotel, Kaoshiung, Taiwan
Summary: The 2020-Winter IEEE Workshop on Information Theory and Communications was held in Taichung, Taiwan, on Jan. 16 and Jan. 17, 2020. The website of the workshop is at <http://www.mostcep.tw/telecom2020/index.php?action=programe&cid=1&id=53>. The primary goal of the workshop is to promote information exchange between the researchers in Taiwan in the fields of information theory and communications. The workshop is co-sponsored by IEEE Communications Society Taipei Chapter, IEEE Communications Society Tainan Chapter, IEEE Information Theory Taipei Chapter, and the Ministry of Science and Technology in Taiwan. The workshop program includes 6 invited talks, and a joint member meeting for IEEE Communications Society Taipei Chapter, IEEE Communications Society Tainan Chapter, and IEEE Information Theory Society Taipei Chapter. Among the 6 invited speakers, four speakers are professors from four universities in Taiwan or Canada and two speakers are from industry. Totally, approximately 160 persons attend the workshop. Among them, about 60 are professors and 100 are graduate students.

- ii. **2020 Summer School on Information/Communication Theory and Technologies**
Date: August 24 – August 26, 2020
Venue: National Chiao Tung University, Hsinchu, Taiwan
Summary: The 2020 Summer School on Information/Communication Theory and Technologies was held at National Chiao Tung University, Hsinchu, Taiwan in August 2020. The summer school contains 5 half-day short courses from Aug. 24, 2020 to Aug. 26, 2020. The topics of the short courses are “Introduction to Digital Communication Systems”, “Detection and Estimation”, “5G and Massive MIMO”, “Latest Progresses and Technology in 3GPP 5G Standardization”, and “Quantum Error-Correction Codes and Fault-Tolerant Quantum Computation”. The website of the summer school is at <https://sites.google.com/g2.nctu.edu.tw/2020summerschool/index>. More than 85 persons registered and attended the summer school. Most of the attendees are graduate students (master students or PhD students) in Taiwan. In addition to National Chiao Tung University, the graduate students come from more than 8 universities in Taiwan including National Taiwan University, National Tsing-Hwa University, and National Cheng Kung University, to name just a few. The five speakers are well-known professors in the field of communications engineering and information theory in Taiwan. They are affiliated with three different universities including National Chiao Tung University, National Tsing Hwa University, and National Taipei University. The summer school on information/communication theory and technologies has been held in Taiwan for more than 20 years. It is a great event for students and scholars in related field to get together and learn new knowledge.

9. **Chapter Name: Components, Packaging, and Manufacturing Technology Society Taipei Chapter (CPMT21)**

- i. International Microsystems, Packaging, Assembly and Circuits Technology Conference (IMPACT) 2020
Date: 10/21/2020~10/23/2020
Venue: Taipei Nangang Exhibition Hall
Attendance: 507 Guests
Activities: 5 plenary speeches, 27 invited speeches and 21 sessions
IMPACT 2020 Conference, organized by IEEE EPS-Taipei, iMAPS-Taiwan, ITRI and TPCA, is the largest gathering of packaging and PCB professionals in Taiwan. IMPACT 2020 was held in conjunction with TPCA SHOW 2020 from Oct. 21 to 23 at Taipei Nangang Exhibition Center. For grasping the latest trend, the symposium this year highlights the theme “IMPACT-EMAP on HPC - Toward the Data Era”. In the big data era, the fifth-generation (5G) mobile communication network brings out innovative technologies like mmWave and MIMO, which will change everything we

know in cellular systems. Driven by high-frequency and high-speed transmission, the demand for processing huge amounts of information has emerged. Big data processing and high-speed computing have become key requirements for the development of the new generation. Moreover, plenary speeches, special sessions, invited talks, sponsored industrial sessions, posters and outstanding paper presentations are arranged. IMPACT Conference keeps collaborating with international organizations such as ICEP and JIEP from Japan and iNEMI from U.S.A.

10. Chapter Name: Council on RFID (CRFID-741)

- i. Jan 16, 2020 (Attendance: Members 150, Guests 20), Venue: Kaoshiung, Taiwan
Conference Activity and IEEE Council of RFID Taipei Chapter 3rd Meeting
The IEEE Council of RFID Taipei Chapter was successfully established on the 26th October 2017 by Professor Chow-Yen-Desmond Sim from Feng Chia University, Taiwan. To celebrate the founding of this Chapter with 68 members, a call for 1st meeting was planned by the founding Chapter Chair Prof. Sim, and it was held on the 26th Jan 2018 in Feng Chia University, Taichung, Taiwan. A total of 29 persons have attended this 1st meeting, including 15 members of the IEEE CRFID and 4 persons from the RFID industry. The second IEEE CRFID meeting was held on the 25th Jan 2019 during the 2019 Taiwan Telecommunications Annual Meeting. This was a joint IEEE Chapter meeting and around 80 IEEE Members has attended. One of the general chair of this Annual meeting was Prof. Desmond Sim (CRFID Chair), and he was the one that suggested a joint meeting with all the IEEE Chapter members. Furthermore, this annual meeting has approx. 700 participant. The 3rd IEEE CRFID meeting was held on the 16th Jan 2020 during the 2020 Taiwan Telecommunications Annual Meeting. This was a joint IEEE Chapter meeting and around 150 IEEE Members has attended. One of the general chair of this Annual meeting was Prof. Desmond Sim (CRFID Chair), as he was suppose to organize this conference twice in a row. This annual meeting has attracted approx. 900 participants with around 40 booths occupied by the industry.
- ii. March 18, 2020 (Attendance: Non-members: 15, Members: 3, Guest: 3), Venue: Feng Chia University
Title of the Workshop: Introduction to Comsol Electromagnetic Software for Antenna Designs
Prof. Desmond Sim (CRFID Chair) has invited the Pitotech Co. LTD (Chuanghua, Taiwan) to organize this two hours seminal on the 18 Mar. 2020. The speaker was a Multi-Physics CAE Consultant and his presentations cover the fundamental knowledge in designing all forms of antenna using the latest Comsol Multiphysics Modeling Software. New solution for 5G mmWave Array Antenna type were also presented during the workshop as well.
- iii. Prof. Sim has decided to handover his Chapter Chair position for CRFID over to Prof. Wen-Jiao Liao. The exact handover ceremony of this Chapter Chair position for CRFID-741 will be conducted during the 2021 Taiwan Telecommunications Annual Meeting (19-22 Jan 2021).

11. Chapter Name: Control Systems Society Taipei Chapter (CS23)

- i. 2020 International Automatic Control Conference (CACS 2020)
The 2020 International Automatic Control Conference (CACS 2020) was hosted by the Chinese Automatic Control Society and National Chung Hsing University, Taiwan in Nov. 4-7, 2020. The 14th international conference of CACS was held in Hsinchu, Taiwan. This event will provide a great opportunity for scientists, engineers, and practitioners to present the latest design concepts, research results, developments, and applications, as well as to facilitate interactions between scholars and practitioners. CACS 2020 is soliciting novel research results in all aspects of control, automation, and related topics. Accepted full papers can be included in IEEE Xplore and EI indexed. Best paper awards has been given to those with outstanding achievements. Selected high-quality papers will be published in the Special Issues of Asian Journal of Control (SCIE) and International Journal of Fuzzy Systems (SCIE).

- There are more than 130 papers presented in the conference. More than 300 industries, government and science experts, and scholars participated this great event.
- ii. 2020 National Symposium on Systems Science and Engineering (NSSSE 2020)
 NSSSE 2020 was held in Taichung, Taiwan in June 19-20, 2020. The topics include, Systems Modeling, Tools and Simulation, Systems Application in Business and Industry, Foundations of Information Systems and Technology, Biological Systems and Evolution, Medical and Health Systems, Decision and Control Systems, System Engineering Language, Communication Systems, intelligent Systems with Deep Learning, Agile System Engineering, Systems Complexity and Optimization, Social Systems and Social Change, Educational and Political Systems, Human Machine Interface Systems, Information and System Engineering Management, Industrial Organization and Management, Traffic Science and Engineering, E-Commerce Systems and Fintech, Decision Support System Modeling and Techniques, Fuzzy Systems, Soft Computing and Grey System Theory, Industrial 4.0, Industrial Network Systems, Integrated Automation, IoT and Cloud\Mobile\Portable Computing, Multi-Objective Optimization, Novel Applications of Systems Engineering, Power Systems and Energy Saving, Robotics Systems, Smart Manufacturing 2, Systems Architecting, Systems Risk Management, and Systems Safety and Security.
 - iii. 2020 International Conference on System Science and Engineering (ICSSE 2020)
 ICSSE 2020 is an annual international conference focused on System Science and Engineering. This conference was organized by the Taiwan Association of Systems Science and Engineering (TASSE) and got sponsored from Ministry of Science and Technology, Taiwan, R.O.C. and National Taiwan University of Science and Technology. The ICSSE 2020 was soliciting novel research results on Systems Science, Engineering and related topics. Due to the pandemic of COVID19, this conference took place both virtually and physically during August 31- September 3, 2020. The physical conference was held in the National Taiwan University of Science and Technology. More than one hundred papers were presented with worldwide participants from the Systems Science, Engineering, Intelligent Systems, deep learning and Industry 4.0 Systems.

12. **Chapter Name: Education Society Taipei Chapter (E25)**

- i. 16TH TAIWAN MICROMOUSE AND INTELLIGENT ROBOT CONTEST (9/6/2020)
 Attendance: 350
 The international contest is supported by the Taiwan Ministry of Education, whose objective is to encourage those vocational and technical university students in Taiwan to implement a complete robotic system and to improve their implementation skills through contests. It is due to the influence of pandemic of COVID19 that those invited famous international contestants cannot participate in the contest. Two new contest categories for elementary and high school students, Robotrace and Line-maze are introduced this year.
- ii. WORKSHOP FOR 16TH TAIWAN MICROMOUSE AND INTELLIGENT ROBOT CONTEST (7/11/2020)
 Attendance: 35
 The objective of this workshop is to introduce the mobile robot kits, BitRacer Pro and BitMouse Pro, devised by the Lunghwa University of Science and Technology to both the elementary and high school students in Taiwan. The kits can be used to learn the following robot implementation skills
 1. Servo control structure of a differential driven mobile robot with block based programming environment, MakeCode;
 2. How to use and to create blocks for BitRacer Pro and BitMouse Pro in MakeCode environment;
 3. Line Mazing solving and feedback motion control algorithms for Robotrace and line-maze contests.
- iv. WORKSHOP FOR INTELLIGENT MOBILE ROBOT- BITRACER (7/16/2020)
 Attendance: 20
 This is a hands-on workshop for local high school students to learn about intelligent mobile robots by using the BitRacer, which is devised by us, the Lunghwa University of Science and Technology in Taiwan. Line following with analog sensor readings, interpolation techniques in line prediction, sensor calibration, and line maze solver are

the main topics.

13. Chapter Name: Electron Devices Society Taipei Chapter (ED15)

Five technical activities were organized by the chapter, in which two were joint event with the EDS NCTU Student chapter. They are listed below.

- i. June 9, 2020 (co-organized with the EDS NCTU Student Chapter)
High-k Dielectric and Interface Engineering for Si/SiGe-Based CMOS Transistors (speaker: K. S. Chang-Liao)
Attendance: Members 30, Guests 60
Activities: DL Talk
- ii. June 13, Hawaii (Virtual conference)
IEEE SNW (PW Li served as TPC chair, Steve Chung as Treasurer)
Attendance: Members 60, Guests 40
- iii. July 28, 2020 (co-organized with the EDS NCTU Student Chapter)
Post SNW and VLSI Workshop (K. S. Chang-Liao, PW Li, TH Hou, HC Lin, C. J. Su, KN Chen, 6 speakers)
Attendance: Members 50, Guests 80
Activities: invited talk
- iv. August 10, 2020 (Both Virtual and On-site Hybrid format)
2020 VLSI-TSA (speakers: T. Hiramoto, Wentai Liu, Mark Ritter)
Attendance: Members 200, Guests 300
Activities: Invited Keynote

14. Chapter Name: Engineering in Medicine and Biology Society Taipei Chapter (EMB18)

- i. fMRI Educational Training I 2020
Functional MRI Educational Training I 2020, which was sponsored by the Ministry of Science and Technology, organized by the Department of Electrical Engineering, Department of Psychology and Neurobiology and Cognitive Science Center of National Taiwan University was held on Jan 15th, 2020. There were 26 participants joining the event. The event aimed at promoting fMRI techniques to Humanities researchers, engineers, and psychologists, and educating students the interdisciplinary Science and Social Science.
- ii. fMRI Educational Training II 2020
Functional MRI Educational Training II 2020, which was sponsored by the Ministry of Science and Technology, organized by the Department of Electrical Engineering, Department of Psychology and Neurobiology and Cognitive Science Center of National Taiwan University was held on Jul 14th, 2020. There were 53 participants joining the event. The event aimed at promoting fMRI techniques to Humanities researchers, engineers, and psychologists, and educating students the interdisciplinary Science and Social Science.
- iii. MEG Educational Training II 2020
2020 MEG Educational Training II, organized by the Ministry of Science and Technology and National Taiwan University, was held in National Taiwan University on Jul 15th. There were 27 participants joined in the training course. The course aimed at providing in-depth courses in experimental design, data collection, data analysis, and result interpretation to researchers interested in using magnetoencephalography (MEG) to study brain function and its correlation with social sciences.
- iv. Biomedical Electronics and Bioinformatics Camp, 2020
The 2020 National Taiwan University Biomedical Electronics and Bioinformatics Camp was held from Sep 3th to Sep 4th at NTU Barry Lam Hall. We hoped to give our participants a broad introduction to emerging and innovative technologies with the theme, "Cancer Medical Innovation Breakthrough and Rise: Detection, Treatment and Care". We invited eight speakers with academic or industry background to discuss about this topic from different aspects such as biology, software, hardware, etc.
Meanwhile, combining interdisciplinary expertise, grasping opportunities for effective cross communication, and preparing for upcoming biomedical applications are all challenging tasks that need further exploration by researchers.
A total of 80 participants joined the event, including high school students, college students, graduated students and members of the community. Apart from biomedical

and engineering professionals, there were also people with financial and management backgrounds. According to our questionnaires, all participants were quite satisfied with the program and were willing to participate again. At the same time, they gave high ratings to speaker presentations.

Next year, we will foster new talent from academics and the industry and continue to hold the Biomedical Electronics and Bioinformatics Camp.

15. Chapter Name: Electromagnetic Compatibility Society Taipei Chapter (EMC27)

In 2020, IEEE EMC-S Taipei Chapter (EMC27) held and sponsored two technical activities as follows:

- i. SmartLife for Next Generation - Quantum Leap in Linking 5G Science and Technology
Date: Sept. 10, 2020
IEEE EMC Taipei Chapter together with AUDEN Techno Corp. organized the fifth symposium in Taipei on the topic of “SmartLife for Next Generation - Quantum Leap in Linking 5G Science and Technology” on September 10, 2020. The full event, hosted at Hua Nan Bank International Convention Center, began with General Session of Technologies and Bio-electromagnetic Keynote Speeches and Technical Sessions with three major tracks.
- ii. 5G RF Technology and Verification
Date: Sept. 25, 2020
On Sept. 25, 2020, a full-day workshop on “5G RF Technology and Verification” was held at National Taiwan University, Taipei, Taiwan. This workshop was organized by IEEE EMC Taipei Chapter, Taiwan Electromagnetic Industry-Academic Consortium (TEMIAC), and 5G RF Technology Industry-Academic Consortium. It was also supported by the Talent Cultivation Program 5G Mobile Broadband Technologies – 5G Antenna and Radio Frequency Technology Alliance Center and the Project of Advanced Technology Developments for the Applications in Massive MIMO and Smart Antennas in Next Generation of Mobile Communications.

16. Chapter Name: Geoscience and Remote Sensing Society Taipei Chapter (GRS29)

I. Technical Seminars:

1.1 Date: March 21th, 2020

Speaker: Prof. ZHANG, DE-REN

Affiliation: Department of Electrical Engineering National Defense University

Title of Talk: Artificial Intelligence and Big Data Application

Location: National Taipei University of Technology, Taipei, Taiwan

1.2 Date: April 11th, 2020

Speaker: Prof. SU, SHUN-FENG

Affiliation: Department of Electrical Engineering Taiwan University of Science and Technology

Title of Talk: Learning Control: Ideas and problems in Adaptive Fuzzy Control

Location: National Taipei University of Technology, Taipei, Taiwan

1.3 Date: May 2th, 2020

Speaker: Prof. WU, MU-EN

Affiliation: Department of Finance, National Taipei University of Technology

Title of Talk: Application of artificial intelligence in quantitative trading

Location: National Taipei University of Technology, Taipei, Taiwan

II. Other Technical Activities:

2.1 Date: June. 29th, 2020

Speaker: Prof. FAN, KUO-CHIN

Affiliation: Dean of the School of EECS, National Central University

Title of Talk: The latest development of AI in pattern recognition

Location: National Taipei University of Technology, Taipei, Taiwan

2.2 Date: September 26th, 2020
Speaker: Dr. XU,HENG-YANG.
Affiliation: HuaYi Life Technology Co., Ltd.
Title of Talk: 5G Network Architecture Overview
Location: National Taipei University of Technology, Taipei, Taiwan

2.3 Date: October 2th, 2020
Speaker: Prof. PAN,MENG-XUAN
Affiliation: National Taipei University of Technology
Title of Talk: Control smart home devices by smartphones
Location: National Taipei University of Technology, Taipei, Taiwan

2.4 Date: October 23th, 2020
Speaker: Prof. LIN, QING-HAI
Affiliation: National Marine Science and Technology Museum
Title of Talk: Development of genetic testing kits based on huge amounts of biomedical data
Location: National Taipei University of Technology, Taipei, Taiwan

2.5 Date: December 9th, 2020
Speaker: Prof. LEE,JUN-XIAN
Affiliation: National Taipei University of Technology
Title of Talk: Technology and Application of Wireless Sensor Network
Location: National Taipei University of Technology, Taipei, Taiwan

III. Professional Development (career advising, mentoring, etc.):

3.1 Date: May. 28th, 2020
Speaker: Prof. WANG,WEN-AN
Affiliation: Department of Architecture TamKang University
Title of Talk: Alienation and Control of Climate Change in the Era of Green Environment
Location: National Taipei University of Technology, Taipei, Taiwan

3.2 Date: June. 12th, 2020
Speaker: Prof. WANG,YONG-MING
Affiliation: Department of Asset Management Long-Hua University of Science and Technology
Title of Talk: How do the high-tech talents respond to the changes in the new knowledge economy?
Location: National Taipei University of Technology, Taipei, Taiwan

3.3 Date: November 11th, 2020
Speaker: Prof. BAI, DUN-WEN
Affiliation: CSIE, National Taipei University of Technology
Title of Talk: Exploring New Marine with Electrical Engineering Technology
Location: National Taipei University of Technology, Taipei, Taiwan

IV. 2020 IEEE GRSS Taipei Chapter Best Thesis Award.

The IEEE GRSS Taipei Chapter Best Thesis Award has been established to recognize both college and graduate students who are excellent in the field of geoscience and remote sensing. The Best Thesis Award is granted on an annual basis to full-time students who excel in the academic pursuits during their studies. Each geoscience and remote sensing related academic department is allowed to nominate some candidates, who have to compete with other top students in the same faculty for the Award. In selecting the individuals, the factors considered are significance of both academic and educational contributions in terms of innovation and the extent of its overall impacts. The 2019 IEEE GRSS Taipei Chapter Best Thesis Award is presented to 6 students who come from different universities.

V. Professional Activities

Involvement with GRSS (participation in IGARSS and other GRSS-sponsored conferences, number of papers vs. number of membership, sessions organized at such conferences, hosting conferences, etc.)

5.1 IGARSS 2020 Involvement: There were more than 30 papers submitted and presented by IEEE GRSS Taipei Chapter members in IGARSS 2020

5.2 IEEE GRSS Taipei Chapter participated the ChapNet and IWGRS2020 activity of GRSS Malaysia

CHAPNET Composition:

Chapter Name	Chapter Chair
GRSS Malaysia	Prof. Ewe Hong Tat
GRSS Taipei	Prof. Yang-Lang Chang
GRSS Japan	Prof. Hiroyoshi Yamada
GRSS Singapore	Prof. Yilong Lu
GRSS Indonesia	Prof. Arifin Nugroho

We joined with GRSS Malaysia and proposed and organize in 2020: IEEE South East Asia Summer School on SAR Technology *for Young Professionals*. In 2019, with the support from ChapNet, we had successfully organized a regional GRSS workshop (called IWGRS2019) with 120 participants coming from Brunei, Indonesia, Japan, Philippines, Singapore, Taiwan, Thailand, and Malaysia. In 2020, we organized an extended tutorial session in conjunction with IWGRS2020, a virtual conference (online due to the COVID-19 outbreak), Kuala Lumpur, Malaysia.

Objectives:

1. To provide an in-depth training on advance topics of remote sensing for postgraduate students and young scientists in South East Asia.
2. To provide a forum for young professionals to exchange ideas, share knowledge and experience.
3. To strengthen IEEE GRSS chapter cooperation among the South East Asia members and beyond.

The topic for year 2020 is Synthetic Aperture Radar (SAR) Technology. Distinguished international experts will be invited to deliver guest lectures and conduct practical hands-on sessions. IEEE South East Asia Summer School on SAR Technology in conjunction with IWGRS2020.

17. **Chapter Name: Industry Applications Society Taipei Chapter (IA34)**

- i. IAS Taipei Seminar – *Research of optimization algorithm in power electronics and my working experience in Japan*

Time: Sept. 30, 2020; 10:30 AM to 12:00 PM.

City: Taipei

Country: Taiwan

Location: National Taiwan University of Science and Technology, International Building, Room 201

Speaker: Prof. Yu-Shan Cheng of National Taiwan Ocean University

IEEE Member Attendance: 6

Guest Attendance: 33

Invited Students: Yes

- ii. IAS Taipei Seminar – *Research on current measurement devices and my research experience overseas*

Time: Sept. 25, 2020; 10:00 AM to 12:00 PM.

City: Taipei

Country: Taiwan

Location: National Taiwan University of Science and Technology, IB building, Room 408

Speaker: Prof. Kun Lung Chen of National Taiwan Ocean University

IEEE Member Attendance: 4

Guest Attendance: 22

Invited Students: Yes

18. Chapter Name: Industrial Electronics Society Taipei Chapter (IE13)

- i. Symposium on Electronics Design
Date: 2020/3/31
Attendance: 70
Activity: The R&D manager of Chroma, Mr. Chou, came to EE Dept. NSYSU to talk about the design philosophy and procedure for electronics system. The graduate students and professors had a good discussion in the event!
- ii. Technical tour to CTC INC.
Date: 2020/12/17
Attendance: 17
Activity: The tour is sponsored by CTC (Coil Technology Corp.). CTC is the largest DC/DC power module manufacturer in Taiwan. They share expertise on Flyback converter design, current market profile and future prospects with the attendees.

19. Chapter Name: Instrumentation and Measurement Society Taipei Chapter (IM09)

One of the merits granted to the chapter members is free or discounted admission to the chapter activities, which are listed below in chronological order.

- i. IEEE IMS Technical Lecture Given by Professor Shervin Shirmohammadi from Electrical Engineering and computer science of the University of Ottawa, Canada –*Measurement without Measuring: Applied AI Meets Applied Measurement*
Time: 03/09/2020; 2:00 p.m.- 4:00 p.m.
City: Hsinchu
Country: Taiwan
Guest Attendance: 10-15
IEEE Member Attendance: 15
Invite Students: Yes
Professor Shervin Shirmohammadi is Director of the Distributed and Collaborative Virtual Environment Research Laboratory, doing research in measurement methods and Applied AI for multimedia systems and networks, specifically video systems, gaming systems, and multimedia-assisted healthcare systems. Dr. Shirmohammadi is an IEEE Fellow for contributions to multimedia systems and network measurements, winner of the 2019 George S. Glinski Award for Excellence in Research, a Lifetime Senior Member of the ACM, a University of Ottawa Gold Medalist, and a licensed Professional Engineer in Ontario. The technical seminar of “Measurement without Measuring: Applied AI Meets Applied Measurement” was delivered on March 9, 2020.
- ii. Chapter Feature Activity: 12-inch Cluster ALD Advanced Equipment Launch & ALE/ALD Conference
Time: 09/08/2020; 10:00 a.m.-5:00 p.m.
City: Hsinchu
Country: Taiwan
Guest Attendance: 120-150
IEEE Member Attendance: 35
Invite Students: Yes
Event Description: IEEE IMS Workshop entitled “12-inch Cluster ALD Advanced Equipment Launch & ALE/ALD Conference” was held on September 8, 2020. The IEEE IMS Taipei Section Chapter Chair gave an opening speech and provided technical assistance in coordinating the workshop. Four outstanding experts in the field were invited to the workshop, including Dr. Vin Lin from Skytech Inc., Prof. Chao-Hsin Chien from Department of Electronics Engineering, National Chiao Tung University, Dr. Che-Chin Chen from Taiwan Instrument Research Institute, and Dr. Chan-Yuen Chang from Taiwan Instrument Research Institute.
- iii. Chapter Feature Activity: The 12th NARLabs *i*-ONE Instrument Technology Innovation Competition
Time: 10/17/2020; 09:00 a.m.-7:00 p.m.
City: Hsinchu
Country: Taiwan

Guest Attendance: 60
IEEE Member Attendance: 20
Invite Students: Yes

Event Description: NARLabs *i*-ONE Instrument Technology Innovation Competition was a student innovation competition jointly held by the IMS Taipei Chapter, Taiwan Instrument Research Institute, and ASME Taiwan Section from August through October. This competition was known as *i*-ONE International Instrument Technology Innovation Competition, and was renamed “NARLabs *i*-ONE Instrument Technology Innovation Competition” in 2017. At the year of 2020, *i*-ONE entered its 12th year and has attracted nearly 80 students from Taiwan countries to attend. 14 proposals from two groups (8 youth groups and 6 amateur groups) were selected to the final competition and presented their ideas on October 17, 2020. All the participants had showed the impressive designs and amazed the committee. During the final competition, participants had the opportunity to demonstrate their workpiece and observed others at the same time. The awards and their prizes (NTD \$350,000 in total) were presented at the award ceremony right after the competition.

iv. Chapter Feature Activity: Optical Systems Integration R&D Consortium Winter Workshop

Time: 11/21/2020; 1:00 p.m.-6:00 p.m.

City: Taipei

Country: Taiwan

Guest Attendance: 40

IEEE Member Attendance: 25

Invite Students: No

Event Description: IEEE IMS Taipei Section Chapter sponsored the annual featured activity - Optical Systems Integration R&D Consortium Winter Workshop. This consortium attains to reinforce understanding between the academia and industry, and achieves the goal of “Academia-Industry Translation for Entrepreneur Initiative.” Technical communication meetings and short-term training courses are channels for bilateral connections. In 2020, the consortium winter workshop was held in Spring City Resort, Taipei. Around 60 persons from the academia and industry participated in this event. During the workshop, two distinguished professionals were invited to share their expertise, including Dr. Lance Li from tsmc and Dr. Tzu Huan Cheng, CEO of LiveStrong Optoelectronics Co.,Ltd..

20. Chapter Name: Information Theory Society Taipei Chapter (IT12)

The major activities of the information Theory Society, Taipei Chapter in 2020 are as follows:

- i. The 2020 Taiwan Workshop on Information Theory and Communications was held at Eda Royal Hotel, Kaohsiung City, Taiwan, from Jan. 14 to Jan. 17 (The website is available at <http://www.mostcep.tw/telecom2020/index.php>). The workshop is to promote information exchange between the researchers in Taiwan in the fields of information theory and communications. The workshop was co-sponsored by IEEE ITSoc Taipei, ITSoc Tainan, IEEE ComSoc Taipei, IEEE ComSoc Tainan and Ministry of Science and Technology. The workshop includes 5 invited talks, 4 keynote speeches, 2 IT-Comm talks from the academia, 3 invited talks and 2 keynote speeches from the industry, and 2 poster sessions. There are 876 participants, containing 111 people from the industry, 31 from the government, 32 from the research institute, and 702 from the academia (including 99 IEEE member). For the agenda and photographs, please refer to the Appendix A.
- ii. The 2020 Summer School on Information/Communication Theory and Technologies was held at National Chiao Tung University, Hsinchu, in north Taiwan from Aug. 24 to Aug. 26. The summer school was sponsored by both IEEE Information Theory Society Taipei Chapter and IEEE Communication Society Taipei and Tainan Chapter. The summer school program includes 5 invited talks, such as 5G massive MIMO systems, quantum error correction codes, latest technology in 3GPP 5G standardization, digital communication systems, and the topic of detection and estimation. There are 96 participants, including 1 IEEE student member. The link of the summer school program is as follows:
<https://sites.google.com/g2.nctu.edu.tw/2020summerschool/index?authuser=0>

21. Chapter Name: Magnetics Society Taipei Chapter (MAG33)

- i. Distinguished Lecturers 2020:
Professor Tim Mewes, University of Alabama
Topic: **Magnetization Dynamics and Damping**
Time: 12/15, 10:00am-11:00am (via ZOOM)

- ii. Other Activities:
2020 Taiwan Association Magnetic Technology Annual Meeting
Time: 7/29-7/31
We invite the following speakers (selected):
(1) Chi-Feng Pai: National Taiwan University
(2) Hwang-Wei Chang: National Chung Cheng University
(3) She-Yun Chen: National Taiwan University of Science and Technology
(4) Hua-Shu Hsu: National Pingdong University
(5) Tzi-Sheng Tsai: National Taiwan Normal University
(6) Chao-Ming Fu: National Taiwan University
(7) Po-Yao Wang: National Changhua University of Education

22. Chapter Name: Microwave Theory and Techniques Society Taipei Chapter (MTT17)

Asian Wireless Power Transfer week
Date: Dec. 16-18, 2020
Location: Howard International Civil House, Taipei
Attendees: 177 (on-line & on-site)

Keynote Speakers:

1: Far-Field Wireless Power Transfer in Japan

Speaker: Naoki Shinohara / Kyoto University, Japan

Abstract:

In Japan, new radio regulation for the far field wireless power transfer (WPT) is discussed and created in 2020. It is based on recent advance of research and development of the far field WPT in Japan, for example, effective in-room WPT system, WPT aided drone by beam, IoT sensor by beam from driving car, development of highest efficiency rectenna and THz rectenna, etc. In this talk, I introduce recent R&D activities of the far field WPT and new radio regulation of the far field WPT in Japan.

2: The Future of Wireless Power Technologies

Speaker: Jenshan Lin / University of Florida, USA

Abstract:

In this modern era of wireless power technology development, we finally saw a few technologies successfully being adopted by wireless industry and becoming part of the vast market of wireless mobile devices - a good indicator that it will sustain the momentum by attracting more R&D investments. So, what's next? To project the future of wireless power technologies, it might be worth looking at the development of other wireless technologies and learn from them. This talk will review the history of wireless technology development in a broader perspective by including and comparing communications, sensing, and energy delivery. Then, we will examine the current state of wireless technologies to understand the challenges including spectrum policy and security. Finally, I will share my personal predictions of how wireless power technologies might evolve and shape the future world.

Paper Title	Speakers
2-D waveguide power transfer operating at 6.78 MHz with a meander surface sheet	Yuichi Masuda
A 6.78 MHz Class-E Power Amplifier with Resonant Load	Yi-Jan Emery Chen

A Diversity Vivaldi Antenna Design for Power Emitter Direction Detection Used for RF Energy Harvester	Yi-Yuan Lin
A Free Standing Electromagnetic Energy Harvester for Condition Monitoring in Smart Grid	Guowei An and , Congzheng Han
A Wide Dynamic Range Rectifier Based on HEMT Device with a Variable Bias Voltage	Jinyao Zhang
A Wireless Power Transmitter with Supply Voltage Control for Transmission Power Extension	Po-Hung Chen
An Efficiency-Optimized RF Energy Harvester with Tunable Matching Network and Rectifier	Horng-Yuan Shih
An omnidirectional coupler for 2-D waveguide power transfer	Yuki Matsuzaki
An X-band Rectifier with Dynamic Compensation	Hang Lin
Asymmetric Rectification for Inductor-Less Load Impedance Conversion in Wireless Power Transfer Systems	Yoshiaki Narusue
Basic Characteristics of Microstrip Patch Antenna with Class-F Load and DC Block Function for Microwave Power Transfer	Takase Oshima
Basic study of cross coupling canceling in power transmission by two pairs of coils using magnetic resonance coupling	Keiichi Ikeda, Takehiro Imura
Basic Study on Efficient Two-Receiver Wireless Power Transfer Satisfying Specified Power Ratio with Controllable Capacitance and Load Resistance	Mai Yamamoto
Characteristics of 4x1 MISO Magnetic Resonance Beamforming WPT using Square and Pulse waves	Tomoaki Harada, Ayako Suzuki, Satoshi Yoshida, Kenjiro Nishikawa
Design of the Lightweight Rectenna Array for Microwave Power Transfer to a Small-sized Drone	Nobuyuki Takabayashi
Development of 2.4-GHz Wireless Charging System with Beamforming Technology	Pin-Chun Wang
Development of a 24GHz WiCoPT System and Power Transfer Experiment	Kota Kinugawa, Takayuki Matsumuro, Toshio Ishizaki
Development of a High Conversion Efficiency Rectifier Circuit for 920 MHz Wireless Power Transmission	Katsumi Kawai
Distributed Equivalent-Circuit Representation of Capacitive Coupler	Yasumasa Naka
EM Filed Visualization Technique by Utilizing Illumination Intensity of $\lambda/2$ Dipole LED Antenna	Daiki Ikeno
Experimental Evaluation of Short-Range 4x4 MIMO Wireless Communication and Power Transfer System	Shintaro Miya, Taishi Nara, Satoshi Yoshida, Kenjiro

	Nishikawa, and Shigeo Kawasaki
Experimental of the Information and Power Transfer System with Magnetron Phased Array	Bo YANG
Experimental Verification of Rectifier's Theoretical Input Impedance Dependent on RF Source and DC Load Resistance	Shinji Abe
Fundamental Research on Wave-focusing Reflector for Realizing of Highly Efficient Microwave-type Wireless Power Transfer	Yasuhiro Kurata, Tsunayuki Yamamoto, Hiroshi Kubo, Masashi Hotta
High Efficiency Class-E ² Topology of Resonance Wireless Power Transfer System	Hsin-Lin Cho
High efficient 2.4 GHz band 10 W bridge rectifier	Koichi Kikkawa, Naoki Sakai, and Kenji Itoh
Investigation on Impact of Phase Difference on Series Resonant 2x2 MIMO IPT System	Yugo Sakamaki
Investigation on the effects of snow characteristic difference for electric coupled WPT using discontinued rails as a feeder	Kazusa Ohno
Measurement Method of High-Frequency and High-Power Complex Impedance, Voltage and Current using Directional Coupler and its Calibration	Takuma Nakae, Takase Oshima, Hiroshi Hirayama
Mobile Wireless Charging System for Electric Vehicles	李 蓁
NFC Antenna on the Fingertip for Wireless Power Transmission System	Hina Watanabe
Novel bent dipole rectenna with transparent dielectric material for energy harvesting using WPT	Tai Kimura
Novel Design of Right- and Left-handed Waveguide Arrays for Snow Melting with Microwave Radiation	Yuji Koita
Quarter-Wavelength Wireless Coupler for Continuous Powering to Running Electric Vehicles on a Long Electrified Roadway	Daigo Ito
Reconfigurable device-to-device wireless power transmission system for wireless sensor nodes	Mu-Chun Chen
Research on Dependence of an Output Impedance on Distance Between Two Coils Facing Each Other in a MRC-WPT System	Yashiki Maekawa, Tsunayuki Yamamoto, Masashi Hotta, Hiroshi Kubo
Self-resonant antenna design for wireless power transfer systems	Yukina ONO
Stability of Wireless Power Transfer using Gamma-Ray irradiated GaN power HEMTs	Shun-Wei Tang
Study on Injection-Locked Magnetron and Rectifier for Microwave Power Transfer	Naoki Hasegawa
Two-frequency One-to-Two Inductive Power Transfer System with Load-independent Output	Quoc-Trinh Vo

Voltages	
Wireless Power Distribution System Keeping Constant Output Voltage Tolerant to Load Impedance Variation for Tri-Axial Orthogonal Robots	Ryoichi Baba
Wirelessly Powered Temperature Sensing System Using Unmanned Aerial Vehicle for Environmental Monitoring	Hao-Yi Kuo

23. Chapter Name: Power Electronics Society Taipei Chapter (PEL35)

PELS Day Celebration 2020
Date: 22 Jun 2020
Time: 1:00 PM to 3:30 PM
Location: Barry Lam Hall, National Taiwan University, Taipei, Taiwan
Description: Official PELS Day Celebration for the PELS Taipei Chapter. The PELS became a full-fledged society within the IEEE on June 20, 1987. The PELS Taipei Chapter will hold a technical seminar at 13:00-15:00 on June 22 to celebrate PELS Day.
Agenda:
13:00 Welcome (Prof. Katherine A. Kim, NTU)
13:05 Opening Remarks (Prof. Yaow-Ming Chen, NTU)
13:10 Work experience in US and industrial revolution (Prof. Shih-Chin Yang, Natl. Taiwan Univ., Taiwan)
13:30 Dynamic power decoupling strategy for three-phase PV power systems under unbalanced grid voltages (Prof. Cheng-Yu Tang, Natl. Taipei Univ. of Tech., Taiwan)
13:50 Group Photo / Break
14:10 Research of optimization algorithm in power electronics and my working experience in Japan (Dr. Yu Shan Cheng, Tokyo Metropolitan Univ., Japan & National Taiwan Ocean University, Taiwan)
14:30 Experiences in International Power Electronics Research at CPES (Chen Chen, Natl. Taiwan Univ. of Sci. & Tech., Taiwan)
IEEE Member Attendance: 17
Guest Attendance: 27

PELS SEMINAR EVENT
Date: 14 Dec 2020
Time: 5:30 PM to 6:30 PM
Location: Engineering Building 2, National Taiwan University, Taipei, Taiwan
Description: Seminar on "Design Challenges for High Power Precision Instrument in New Energy Era" by Bill Tsou (鄒明穎), R&D Senior Manager, Test & Measurement at Chroma.
IEEE Member Attendance: 4
Guest Attendance: 25

24. Chapter Name: Product Safety Engineering Society Taipei Chapter (PSE43)

- i. IEEE PSES Taipei Chapter – Technical Forum Meeting of July

Date: July 10, 2020

Location : Bureau Veritas Office, Taiwan

Attendance: Member: 6, Guests 17 : Lenovo, Dell, Compal, HPE, HPI, LCFC and Certify Body BV, Dekra, UL Taipei, Nemko.

Topic	Presented by
5G NR Technical difference between and Application	Ellis Wu, Bureau Veritas

SAR Requirements and Introduction	Eric Chu , Bureau Veritas
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ii. IEEE PSES Taipei Chapter – Regular Technical Forum Meeting of Sep

Date: September 25, 2020

Location : Lenovo, Data Center Group, Nankang Office, Taiwan

Attendance: Member: 5, Guests 30 : Lenovo, Dell, Compal, Foxconn, HPE, HPI, LCFC and Certify Body BV, UL Taipi, CSA, Nemko.

Topic	Presented by
• Lenovo DCG Dev Site Executive	Gregory Moore, Lenovo
• TCO Roadmap Briefing	Martin Söderberg, TCO
• The criteria in TCO certified, Requirements and Cert process	Jeff Chuang, Nemko
• From Linear to Circular Economy	Justin Wu, Lenovo
• Hazloc of product application and safety requirements	Joanne Wu, IBM

25. Chapter Name: Power and Energy Society Taipei Chapter (PE31)

- i. PES Taipei Webinar – *Power Dispatch Center Developments of USA Under Highly Penetrated Renewable Energies*
Time: May 21, 2020; 9:00 AM to 12:00 PM.
City: Taipei
Country: Taiwan
Location: Taipei Science and Technology Building
Speaker: Dr. Shun-Hsien Huang, ERCOT, USA
IEEE Member Attendance: 30
Guest Attendance: 100
Invited Students: Yes
- ii. PES Taipei Webinar – *Offshore Wind Farms Developments in Taiwan*
Time: July 22, 2020; 9:00 AM to 17:00 PM.
City: Taipei
Country: Taiwan
Location: Room 801, Chang Yung-Fa Foundation
Speaker: Mr. Steve Holliday Former Chief, Executive/Energy Institute President & National Grid plc, Mr. Steve Holliday Former Chief Executive/Energy Institute President & National Grid plc
IEEE Member Attendance: 21
Guest Attendance: 56
Invited Students: Yes
- iii. IEEE PE-31 Taipei Section Annual Meeting and PES Taipei Seminar – *Researve Margin Assesement in Taipower.*
Time: 09/03/2020; 14:00-15:00
City: Taipei
Country: Taiwan
Location: GIS Convention Center, National Taiwan University
IEEE Member Attendance: 34
Guest Attendance: 250
Invited Students: Yes

- iv. PES Taipei Seminar – *Taipower R&D Activities for Highly Penetrated Renewable Energy*.
 Time: 09/04/2019; 13:00-14:00
 City: Taipei
 Country: Taiwan
 Location: GIS Convention Center, National Taiwan University.
 IEEE Member Attendance: 33
 Guest Attendance: 57
 Invited Students: Yes

26. Chapter Name: Photonics Society Taipei Chapter (PHO36)

Chapter PHO36 has submitted three L31 meeting reports in this year:

The wide-spread of pandemic caused by COVID-19 has caused the travel impossible globally. Many activities were transformed into on-line type .

i. 2020 Optical Design Workshop:

Several prominent software companies in Taiwan sponsored this workshop and it was held in National Chiao Tung University in Hsinchu, Taiwan. The purpose of this workshop is to have a one-and-half day training course/technical talks to help young college or graduate students to understand the beauty and breadth of the optical design. About fifty attendees participated this event. We also set up an IEEE desk for students to get acquaintance to IEEE photonics society and promote the participation and even the membership of the Photonics society.

ii. The 2020 OECC conference:

The 25th Optoelectronics and Communications Conference is an important photonic conference originated by Japanese optoelectronic and communication colleagues, and the papers presented in the conference are also collected by IEEEExplore database. Many exciting results were demonstrated in this meeting. Especially this conference was held in the early autumn time (from Oct. 4 to Oct. 8) and became one of the major events after we experienced the first wave of pandemic. On-line streaming and video talk were set up and also there are face-to-face talks as well. This conference is also jointly sponsored by Taipei chapter of the IEEE Photonic Society.

iii. The Optics & Photonics Taiwan, International Conference-Annual Meeting of Taiwan Photonics Society, 2020 (from Dec. 3 to Dec. 5, 2020):

This is an annual meeting of Taiwanese photonic community, and also serves for the international conference for photonics. The conference is held in National Taipei University of Technology in Taipei this year. The IEEE photonic society Taipei Chapter is glad to support this conference for many years as a technical sponsor. As an important venue for students' research, this conference also provides Best Student Paper Awards that are supported by Taipei Chapter of IEEE Photonic Society. There are about 1000 people participating the conference (including students, researchers, faculty members, and professionals) and more than 50 IEEE members also participated in this conference. The annual meeting of IEEE Photonics Society Taipei Chapter was also held during this time, and we had an election for the officers of next term. Prof. Tien-Chang Lu of National Chiao Tung University will be our chairman for the next two years.

27. Chapter Name: Robotics and Automation Society Taipei Chapter (RA24)

i. 2/27/2019

The Technical Exchange Event

Title: University of Washington: Information Processing Lab and Team NCTU for the DARPA SubT Challenge

Technical exchange meeting between Prof. JN Hwang's Information Processing Lab and the students from National Chiao Tung University led by Prof. Hsueh-Cheng Wang.

Speaker: Prof. Jenq-Neng Hwang, University of Washington, USA

Attendance: Attendance 30

ii. 3/30/2019

The Technical Lecture

Title: Right Tool for the Right Job - Vision-guided Tool Changing

The talk will cover the followings:

- Scenarios, problems and metrics in robot material handling.
- Current technology at XYZ.

- Lessons learned and essential capabilities for making great robotics products.
 - Open problems in the field.
 - Career opportunities at XYZ Shanghai and Boston.
- Speaker: Dr. Kuan-Ting Peter Yu, CTO at XYZ Robotics
Attendance: Attendance 40

- iii. 5/15/2019
The Technical Event
Title: AI Robotics Workshop
Speaker: Prof. Hsueh-Cheng Wang, NCTU
The workshop introduced 1) unmanned ground vehicles for search and rescue missions in the DARPA Subterranean Challenge, 2) unmanned surface vehicles (USV), and 3) manipulation applications in logistics and agriculture.
Attendance: 54

28. Chapter Name: Reliability Society Taipei Chapter (RL07)

Our Chapter received the first place in the 2020 Reliability Society Chapter Award. Due to persisting concerns over travel safety in the wake of COVID-19, the upcoming 2021 IEEE Conference on Dependable and Secure Computing (DSC 2021) will accept video (or online) presentation if the authors are unable to attend the DSC 2021 conference. It will be held on Jan. 30–Feb. 2, 2021 Our chapter Chair Shiuhyng Shieh will serve as the Steering Committee Chair of the conference and the VP of IEEE Reliability Society. Other activities are listed as follows:

- i. 2020.05.04
Chapter Sponsored Technical Meetings
Topic : Member discussion meeting
Speaker : Dr. Shiuhyng Shieh
Attendance: 8
- ii. 2020.08.29-2020.08.31
Chapter Sponsored Technical Meetings
Topic : Member discussion meeting
Speaker : Dr. Shiuhyng Shieh
Attendance: 5
- iii. 2020.10.15
Chapter Sponsored Technical Meetings
Topic : Member discussion meeting
Speaker : Dr. Shiuhyng Shieh
Attendance:4
- iv. 2020.03.04
The Technical Lecture
Topic : Internet Addiction : Psychiatric Perspective
Speaker : Dr. Wei-Lieh Huang
Attendance : 9
- v. 2020.03.18
The Technical Lecture
Topic : Optimizing Immersive Video Streaming for Head-Mounted Virtual Reality
Speaker : Prof. Cheng-Hsin,Hsu
Attendance : 11
- vi. 2020.04.08
The Technical Lecture
Topic : Real-World EEG-Based Brain-Computer Interfaces: Challenges and Trends
Speaker : Prof. Chun-Shu, Wei
Attendance : 8
- vii. 2020.04.15
The Technical Lecture
Topic : Toward Taming the Training Data Complexity in Smart Manufacturing
Speaker : Prof. Wei Chao, Chen
Attendance : 19
- viii. 2020.04.29
The Technical Lecture
Topic : CS Talents in The Quantitative Trading Industry

- Speaker : Mr. Hank Huang
Attendance : 11
- ix. 2020.05.13
The Technical Lecture
Topic : Combining movement data and mathematical models to understand the potential spread of COVID-19 in Taiwan
Speaker : Prof. Hsiao-Han Chang
Attendance : 13
- x. 2020.05.20
The Technical Lecture
Topic : Unsupervised Domain-Specific Deblurring via Disentangled Representations
Speaker : Dr. Jun-Cheng, Chen
Attendance : 8
- xi. 2020.06.10
The Technical Lecture
Topic : Data-Intensive Routing in Delay-Tolerant Networks
Speaker : Prof. Min-Te, Sun
Attendance : 10
- xii. 2020.06.17
The Technical Lecture
Topic : Choose No More: Combining Keyword Search and Supervised Learning
Speaker : Mr. Eugene Yang
Attendance : 12
- xiii. 2020.09.23
The Technical Lecture
Topic : Climate Change, Smart City, and 5G
Speaker : Mr. KJ Liu
Attendance : 12
- xiv. 2020.09.30
The Technical Lecture
Topic : CS technology Application & Talent Career Development with Case Study in Fabless Semiconductor Company
Speaker : Ms. Karen Hsu
Attendance : 11
- xv. 2020.10.14
The Technical Lecture
Topic : Lighting Up Your Research with Library Resources.
Speaker : Michael Li, Division Director
Attendance : 7

29. Chapter Name: Sensors Council Taipei Chapter (SEN39)

- i. Technical Talk
Prof. Chao gave a talk with title, “Flexible PPG Sensor Patch,” at Digital Medical Business Model Forum: Serious I Artificial Intelligent held by Foundation of Medical Professionals Alliance at International Conference Center of Chang Tung-Fa Foundation, Taipei City, Taiwan on 19th of February 2020. Attendees: 200.
- ii. Technical Talk
Prof. Chao gave a talk with title, “Trend and Challenge: Development of Medical Devices in Taiwan,” at SEMI-FlexTech Taiwan, Zhubei City, Taiwan on 23rd of July 2020. Attendees: 23.
- iii. Technical Talk
Prof. Chao gave a talk with title, “Noninvasive Blood-Flow Volume Sensor,” at the Forum of Digital Medical Technology × Digital New Technology for academic-industrial consortiums by Ministry of Science and Technology, Taipei City, Taiwan on 27th of August 2020. Attendees: 200.
- iv. Technical Talk

Prof. Chao gave a talk with title, “A New Flexible Photoplethysmography (PPG) Sensor Patch for for Continuous Measurement of Blood Flow Volume and Pressure based on AI algorithms,” at 2020 IEEE Sensors Council Summer School held by IEEE Sensors Council Taipei Chapter at National Sun Yat-sen University, Kaohsiung City, Taiwan on 29th ~30th of August 2020. Physical attendees: 62 and On-line participants: 300

v. Technical Talk

Prof. Chao gave a talk with title, “Development of a Hand-Held BFV Sensor,” at 2020 Workshop on Flexible PPG Sensor Patch Technology Development and Security for IoT Sensors held by IEEE Sensors Council Taipei Chapter at CPT International Conference Hall, National Chiao Tung University, Hsinchu City, Taiwan on 10th of November, 2020. Attendees: 41.

vi. Technical Talk

Prof. Chao gave a talk with title, “Towards Batteryless IOT Sensors,” at IEEE Sensors France International Workshop 2020 held by IEEE Sensors France Chapter through Virtual on 26th ~ 27th of November, 2020. Attendees: 200.

vii. Technical Talk

Prof. Chao gave a talk with title, “2020 New Vision for ICT Business after Epidemic Wave,” at Year-end Performance for academic-industrial projects held by Hsinchu Science Park Bureau, MOST at GIS HSP Convention Center, Hsinchu City, Taiwan on 2nd of December, 2020. Attendees: 100.

30. Chapter Name: Systems, Man, and Cybernetics Society Taipei Chapter (SMC28)

i. The International Conference on System Science and Engineering 2020 (ICSSE 2020)

Date: Aug. 31-Sep. 3, 2020.

City: Taipei

Country: Taiwan

Attendance: 250

Event Description: The International Conference on System Science and Engineering 2020 (ICSSE 2020) is an international conference that will take place in Sunport Hall Takamatsu, Kagawa, Japan during August 31 - September 3, 2020. This event will provide a great opportunity for scientists, engineers, and practitioners from all over the world to present the latest system design concepts, research results, developments and applications, as well as to facilitate interactions between scholars and practitioners.

ii. The International Conference on Image Processing and Robotics (ICIPRob2020)

City: Negombo

Country: Sri Lanka

Attendance: 200

Event Description: ICIPRob2020 (International Conference on Image Processing and Robotics) will take place in Negombo, Sri Lanka on 6th-8th March, 2020.

ICIPRob 2020 is a premier interdisciplinary platform for researchers, scholars and engineers to discuss their latest research findings related to image processing, robotics and their connected disciplines.

iii. The National Symposium on Systems Science and Engineering (NSSSE 2020)

City: Taichung

Country: Taiwan

Attendance: 100

Event Description: 2020 National Symposium on System Science and Engineering (NSSSE) was held in National Chung-Hsing University, Tai-Chung, Taiwan during June 19-20, 2020. This event provided a great opportunity for scientists, engineers, and practitioners from all over the world to present the latest system design concepts, research results, developments and applications, as well as to facilitate interactions between scholars and practitioners.

31. Chapter Name: Systems, Man, and Cybernetics Society Taichung Chapter (SMC28-TC)

- i. 2020 National Symposium on System Science and Engineering (NSSSE2020)
 Date: 2020.06.19~2020.06.20, Taichung, Taiwan.
 Location: National Chung Hsing University
 Attendance : 75
 Activity : National Chung Hsing University (NCHU) together with The Taiwan Association of System Science and Engineering (TASSE) hosted the 2020 National Symposium on Systems Science and Engineering, NSSSE 2020, held at National Chung Hsing University over June 19-20, 2020. Attendees contribute many papers and academic seminars to achieve the purpose of information exchange and experience exchange. NSSSE 2020 promoted the upgrading of Taiwan's industrial competitiveness and product upgrades. The symposium was hosted by Prof. Ching-Chih Tsai from EE department, NCHU. About 75 people attended the meeting and published 80 papers.
 In addition, three plenary lectures were given in the symposium. The first invited speaker, Prof. Kao-Shing Hwang, delivered his lecture on "Introduction to Deep Reinforcement Learning and its applications". The second invited speaker, Prof. Wei-Yen Wang, gave a lecture on "Deep Learning- Based Hypothesis Generation Model and Its Application in Robots' learning". The third speaker, Prof. Shun-Feng Su, made his speech regarding "Learning Control: Ideas and Problems in Adaptive Fuzzy Control".

- ii. The International Conference on System Science and Engineering 2020 (ICSSE 2020)
 Date: 2020.08.31~2020.09.03, Taipei, Taiwan
 Location: National Taiwan University of Science and Technology
 Attendance : 150
 Activity : The International Conference on System Science and Engineering 2020 (ICSSE 2020) was an international conference that took place in National Taiwan University of Science and Technology, Taipei, Taiwan, over August 31 - September 3, 2020. This conference was aimed to provide a great opportunity for scientists, engineers, and practitioners from all over the world to present the latest system design concepts, research results, developments and applications, as well as to facilitate interactions between scholars and practitioners.
 System Science and Engineering has emerged as a research field that covers a wide spectrum of modern technology. A system can be considered as a collection of entities and their interrelationships gathered together to form a whole greater than the sum of the entities. It also involves people, organizations, cultures, activities and interrelationships among them. While systems composed of autonomous subsystems are not new, increased data density, connectivity and ubiquitous computational resources have increased their interdependence and interaction complexity. This has in turn made the already difficult job of planning, developing and deploying complex systems even more difficult. Technology advancement not only provides opportunities for improving system capabilities but also introduces development risks that must be weighed and managed. Thus, it is our goal to bring together scholars from all areas to have a forum to discuss, demonstrate and exchange research ideas in the scope of system science and engineering.
 In addition, two lectures were given in the conference. The first talk was given by Prof. Witold Pedrycz who gave his lecture on "Bridging Numeric and Symbolic System Modeling With the Principles of Granular Computing". The second talk invited Prof. Fei-Yue Wang to give his lecture on "The Origin and Goal of Cyber-Physical-Social Systems: From Systems Learning to Systems Intelligence" via online video.

- iii. The 2020 International Automatic Control Conference (CACS 2020)
 Date: 2020.11.04~2020.11.07, Hsinchu, Taiwan
 Location: National Chiao Tung University, Taiwan
 Attendance : 150
 Activity : The 2020 International Automatic Control Conference (CACS 2020) was hosted by the Chinese Automatic Control Society and National Chung Hsing University, Taiwan. The 14th international conference of CACS was held in Hsinchu, Taiwan, in order to provide a great opportunity for scientists, engineers, and practitioners to present their state-of-the-art, latest concepts, innovative research results, and novel applications, as well as to facilitate interactions between scholars and practitioners. CACS 2020 was made by presenting novel research results in all

aspects of control, automation, robotics, servomechanisms, and related topics. Accepted full papers can be included in IEEE Xplore and EI indexed database. Best paper awards were given to those with outstanding achievements. Selected high-quality papers were published in the Special Issues of Asian Journal of Control (AJC) and International Journal of Fuzzy Systems (IJFS).

In particular, five lectures were given in CACS 2020. The first invited speaker, Prof. Keum-Shik Hong, gave his keynote speech on "Feedback Neuro-modulation: Invasive vs. Noninvasive"; the second invited Prof. Rüdiger Dillmann gave his lecture on "Building Brains for Robots: Neuromorphic SNN-based Robot Controls for Visuomotor Tasks". The third invited speaker, Prof. Jorge Cortés, made his speech on "Network Control for Engineered and Natural Systems", the fourth invited speaker, Prof. Chin-Teng Lin gave a lecture on "Brain Computer Interface in Human-Autonomy Teaming", and the fifth invited speaker, Prof. Nikhil R. Pal, made his speech on "Artificial Intelligence: "Ups and Downs" and what we might be missing!"

- iv. SMC Taichung Chapter organized workshops to promote and recruit new members to join IEEE SMCS, Taichung, Taiwan, over 19-20, 2020.
Total Participants:36
- v. The chapter also organized a Christmas dinner party to let all the chapter members enjoy food and friendship on 25 December, 2020.
Total Participants:43

32. Chapter Name: Solid-State Circuits Society Taipei Chapter (SSC37)

We held 13 invited talks within 2 press conferences; 15 presentations in the speaker rehearsal program. Total number of attendees is ~140.

i. 2020 IEEE ISSCC Speaker Rehearsal

Title: Technical Presentation Rehearsal (15 presentations)

Date: Jan. 17, 2020

Place: National Chiao-Tung University, Hsinchu, Taiwan

Attendance: 26

ii. SSCS Taipei Chapter Meeting

Title: SSCS Annual Member Meeting (1 presentation)

Date: Aug. 5, 2020

Place: Taichung, Taiwan

Attendance: 30

iii. 2020 A-SSCC Press conferences (5 presentations)

Date: Oct. 15, 2020

Place: NTU Alumni Center, Taipei, Taiwan

Talks: 5

Attendance: 34

iv. 2021 ISSCC Press conferences (8 presentations)

Date: Nov. 18, 2020

Place: Sheraton Grand Taipei Hotel, Taipei, Taiwan

Talks: 8

Attendance: 48 (including ISSCC FE officers, Taiwan committee members, authors, VIP, press)

33. Chapter Name: Vehicular Technology Society Taipei Chapter (VT06)

IEEE VTS Taipei Chapter has sponsored or co-sponsored 3 events during the year of 2020, each of which is described in more detail as follows:

1. VTS Taipei Chapter Highlight
VTS Taipei Chapter VT06 has 1 newly elevated IEEE Fellow of 2020.
2. Awards & Recognition Activities
IEEE VTS Taipei Chapter 2020 Awards
 - 2020 Chapter Outstanding Service Award
Prof. Kai-Ten Feng (National Chiao Tung University)
 - 2020 Taipei Chapter Best Paper Award
Prof. Ai-Chun Pang (National Taiwan University)
3. Technical Activities
 - i. 2020 Summer School on Information/Communication Theory and Technologies

Time: August 24, 2020; 09:00 a.m.- August 26, 2020: 04:30 p.m.

City: Hsinchu

Country: Taiwan

Talks: 5

Attendance: 100

Event Description:

The 2020 Summer School on Information/Communication Theory and Technologies was held at National Chiao Tung University, Hsinchu, Taiwan in August 2020. The summer school contains 5 half-day short courses from Aug. 24, 2019 to Aug. 26, 2020. The topics of the short courses include

Day1 (8/24/2020) "5G and Massive MIMO" Instructor: Prof. Wen-Rong Wu, National Chiao Tung University, Taiwan

Day2 (8/25/2020) "Quantum Error-Correction Codes and Fault-Tolerant Quantum Computation", Instructor: Prof. Ching-Yi Lai , National Chiao Tung University, Taiwan

Day2 (8/25/2020) "Latest Progresses and Technology in 3GPP 5G Standardization", Instructor: Prof. Hsin-Lin Shieh, National Taipei University, Taiwan

Day3 (8/26/2020) "Introduction to Digital Communication Systems", Instructor: Prof. Jen-Ming Wu, National Tsing Hua University, Taiwan

Day3 (8/26/2020): "Detection and Estimation", Prof. Shau-Hsun Wu, National Chiao Tung University, Taiwan.

The website of the summer school is at <https://sites.google.com/g2.nctu.edu.tw/2020summerschool/index>. More than 100 persons registered and attended the summer school. Most of the attendees are graduate students (master students or PhD students) in Taiwan. In addition to National Chiao Tung University, the graduate students come from more than 10 universities in Taiwan including National Taiwan University, National Tsing-Hwa University, and National Cheng Kung University, to name just a few. The five speakers are well-known professors in the field of communications engineering and information theory in Taiwan. They are affiliated with three different universities including National Chiao Tung University, National Tsing Hwa University, and National Taipei University. It is a great event for students and scholars in related field to get together and learn new knowledge.

- ii. Technical speech given by Prof. Jen-Ming Wu from National Tsing Hua University, with the title "Unlimited Opportunities in Wireless Communications"

Time: 11/11/2020; 15:30 p.m.-17:00 p.m.

City: Hsinchu

Country: Taiwan

Attendance: 90

Event Description:

The event is co-sponsored by the IEEE VTS Taipei Chapter and the IEEE-Eta-Kappa-Nu NCTU Honor Society-National Chiao Tung University Student Branch. The talk introduces the past and the future of wireless communication technology evolutions. The talk tries to lead students to experience the pulse of cutting-edge technology in an interactive way, while enhancing everyone's understanding of engineering enthusiasm in the field. The talk will also discuss the career development in the field of information and communication. Those freshmen and sophomores who are still looking for fields of interest under the devastation of various compulsory courses, will learn about communication technology while also being helpful to the future. The website of the event is at <https://eecshp.nctu.edu.tw/posts/1083>

34. Chapter Name: Signal Processing Society Taipei Chapter (SP01)

- i. IEEE Life Science Workshop--IEEE Region 10/APSIPA Special Industry Track

Date: 2020/12/19

Location: Tainan, Taiwan

Attendance: Approximately 137 onsite and 157 online with total 294

Website: <https://ics2020.ncku.edu.tw/SpecialIntrustryTrack.html>

Organizers:

Michael Condry-Chair, Advisory Board, ClinicAI, former CTO Intel, USA, IEEE TEMS Past Chair

Myung Sunwoo-IEEE CASS VP-Conferences, Director, MIIDS (Medical Image-based Intelligent Diagnosis Solution) Research Center, Professor, Ajou University, Korea, IEEE Fellow

Takako Hashimoto-Secretary, IEEE Region 10, IEEE CS BoG (2021-23), Vice President, Professor, Chiba University of Commerce, Japan

Chris Gwo Giun Lee-Chair, IEEE Region 10, Industry Relations Committee, Deputy VP, APSIPA Industry Relations & Development, Director & Founder, Bioinfotonics Research Center, Professor, National Cheng Kung University, Taiwan)

Jing-Ming Guo-Distinguished Professor, Department of Electrical Engineering, National Taiwan University of Science & Technology, Director, Advanced Image and Visual Technology Research Center, Chair, IEEE Signal Processing Taipei Chapter, General Secretary, APSIPA Taiwan Local Chapter

Event Description: Featuring Industry Forum, Entrepreneurship, and Internship, and as an initiative in responding to the vibrant Telehealth ecosystem brought forth by pandemics foreseeing directions in Digital Health 4.0 including bioelectronics, the workshop is a one-day joint, industry, academia, and government track co-located with International Computer Symposium 2020. As the program consisted of Industry Forum, Entrepreneurial Panels, Internship Panels, etc., this track was led by Taiwanese, United States, Canadian, and Japanese Government; global industry leaders including, former Intel CTO, Nvidia, NTT, prestigious Taiwan, US, India, and Australian healthcare and consumer electronics industries; and global academia including Korea.

30. Chapter Name: Latest Developments of Resonant Power Converters with Wide-Band-Gap Power Devices

Attendees	Technical Reports	IEEE Members	IEEE APS-Members
154	15	18	12

Resonant power converters are essential for high-frequency power conversions: high frequency inverters, high frequency-link dc-dc converters and high frequency-link ac-ac converters for wireless power transfers, induction heaters and ac/dc microgrid, automotive applications and so forth. In order to pull out the merits of high frequency switching operation, wide-band-gap (WBG) power devices such GaN and SiC MOSFETs are applied in the resonant power converters with innovative soft switching topologies as well as conventional ones. In this seminar, the technical trends on the researches and developments of resonant power converters with WBG devices will be introduced by partly referring to the research records in the past decades such as; LLC converters, isolated dc/dc converters, class-E inverters. Moreover, the innovative single-stage ac-ac converters with SiC-MOSFET for induction heater which was developed by Advanced Power Electronics Research Laboratory of Kobe University will be presented.

B.3 Professional and Continuing Education Activities

Summary of continuing Educational activities including conferences, technical activities, training courses, and distinguished lecture programs with attachment table / information

➤ **Conferences**

- The 2018 International Symposium on VLSI Technology, Systems and Applications (2018 VLSI-TSA), 2018.4.16~19
- 2018 3rd International Conference on Intelligent Green Building and Smart Grid (IGBSG), 2018.4.22~25
- 2018 27th Wireless and Optical Communication Conference (WOCC), 2018.4.30-5.1
- 2018 International Conference on System Science and Engineering (ICSSE), 2018.6.28~30
- 2018 11th International Symposium on Chinese Spoken Language Processing (ICSLP), 2018.11.26 ~29
- 2018 9th International Symposium on Parallel Architectures, Algorithms and Programming (PAAP), 2018.12.26~28

B.4 Students Activities

- Total number of Student branches in the Section: 20
- 1. **Student Branch Name: IEEE Chung Yuan Christian University Student Branch**
Student Branch Chair: Hsu-You Kao
Student Branch Counselor: Shih-Hsu Huang
- 2. **Student Branch Name: IEEE National Central University Student Branch**

Student Branch Chair: Jia-Mei Wu
Student Branch Counselor: Jen-Inn Chyi

3. **Student Branch Name: IEEE National Chiao Tung University Student Branch**
Student Branch Chair: Hung-Cheng Huang
Student Branch Counselor: Bo-Cheng Lai
4. **Student Branch Name: IEEE National Chiao Tung University CE Society (CES)**
Student Branch Chair: Jia-Ching Chou
Student Branch Counselor: Wai-Chi Fang
5. **Student Branch Name: IEEE National Chiao Tung University ED Society (EDS)**
Student Branch Chair: Ming-Chun Hong
Student Branch Counselor: Tuo-Hung Hou
6. **Student Branch Name: IEEE National Chung Hsing University Student Branch**
Student Branch Chair: Kuo Chia Wei
Student Branch Counselor: Ching-Chih Tsai
7. **Student Branch Name: IEEE National Chung Hsing University SMC Society (SMCS)**
Student Branch Chair: Kuo Chia Wei
Student Branch Counselor: Ching-Chih Tsai
8. **Student Branch Name: IEEE National Kaohsiung University of Science and Technology Student Branch**
Student Branch Chair: Jing-Ting Yu
Student Branch Counselor: Chun-Lien Su
9. **Student Branch Name: IEEE National Sun Yat-sen University Student Branch**
Student Branch Chair: Bin-Han Liu
Student Branch Counselor: Jen-Hao Teng
10. **Student Branch Name: IEEE National Taipei University of Technology Student Branch**
Student Branch Chair: Yi-Hao Chen
Student Branch Counselor: Hai-Han Lu
11. **Student Branch Name: IEEE National Taiwan University Student Branch**
Student Branch Chair: Rui-Fu Xu
Student Branch Counselor: Shih-Yuan Chen
12. **Student Branch Name: IEEE National Taiwan University of Science and Technology Student Branch**
Student Branch Chair: Yun-Chen Chu
Student Branch Counselor: Shyi-Ming Chen
13. **Student Branch Name: IEEE National Taiwan University of Science and Technology SMC Society (SMCS)**
Student Branch Chair: Yun-Chen Chu
Student Branch Counselor: Shyi-Ming Chen
14. **Student Branch Name: IEEE National Taiwan University of Science and Technology IA Society (IAS)**
Student Branch Counselor: Huang-Jen Chiu
15. **Student Branch Name: IEEE National Tsing Hua University Student Branch**
Student Branch Chair: Yue Ming Wu
Student Branch Counselor: Ta-Shun Chu
16. **Student Branch Name: IEEE National Tsing Hua University ED Society (EDS)**
Student Branch Chair: Hong-Wei Chen
Student Branch Counselor: Chih-Fang Huang

17. **Student Branch Name: IEEE National Tsing Hua University IA Society (IAS)**
 Student Branch Chair: Yong-Yao Shen
 Student Branch Counselor: Po-Tai Cheng
18. **Student Branch Name: IEEE National Tsing Hua University PEL Society (PELS)**
 Student Branch Chair: Yu-Chen Su
 Student Branch Counselor: Po-Tai Cheng
19. **Student Branch Name: IEEE Yuan Ze University Student Branch**
 Student Branch Chair: Chien-Min Chen
 Student Branch Counselor: Jeng-Kuang Huang
20. **Student Branch Name: IEEE Yuan Ze University SMC Society (SMCS)**
 Student Branch Chair: Ming-Hung Lin
 Student Branch Counselor: Chih-Min Lin
21. **Student Branch Name: IEEE ED National Taiwan University Student Branch Chapter**
 Student Branch Chair: Yi-Chen Huang
 Student Branch Counselor: Chih-Ting Lin

- Number of Student Branches formed in the current year: 1
 - National Kaohsiung Marine University Industry Applications Society Student Branch Chapter was established this year.
- Section level student activities (student congress, paper and other contests, awards etc)
 - Rendering Awards for outstanding Student Branch/ Chapter.
- Number of Active Student Branches (Student Branches who have reported required number of meetings during the year): 14
- Summary of Student Branch activities (Student Branch wise with attachment table/information)

1. **Student Branch Name: IEEE Chung Yuan Christian University Student Branch**

Date	2020/6/1 (yyyy/mm/dd)			
Event	Technical Discussion Meeting			
Location	Electrical Engineering and Computer Science Building, Chung Yuan Christian University			
Category	Professional	Sub-Category	Professional Development	
Attendances	IEEE Members	5	Guests	3

Date	2020/7/13 (yyyy/mm/dd)			
Event	Technical Discussion Meeting			
Location	Electrical Engineering and Computer Science Building, Chung Yuan Christian University			
Category	Professional	Sub-Category	Professional Development	
Attendances	IEEE Members	4	Guests	4

Date	2020/8/24 (yyyy/mm/dd)			
Event	Technical Discussion Meeting			
Location	Electrical Engineering and Computer Science Building, Chung Yuan Christian University			

Category	Professional	Sub-Category	Professional Development
Attendances	IEEE Members	6	Guests 8

Date	2020/11/30 (yyyy/mm/dd)		
Event	Technical Discussion Meeting		
Location	Electrical Engineering and Computer Science Building, Chung Yuan Christian University		
Category	Professional	Sub-Category	Professional Development
Attendances	IEEE Members	5	Guests 9

Date	2020/12/21 (yyyy/mm/dd)		
Event	Technical Discussion Meeting		
Location	Electrical Engineering and Computer Science Building, Chung Yuan Christian University		
Category	Professional	Sub-Category	Professional Development
Attendances	IEEE Members	7	Guests 9

2. **Student Branch Name: IEEE National Central University Student Branch**

Date	Event	Topic	Attendees
2020/5/4	Student Online Presentation 1	The Operation of Touch Screens	Presenters: 張詠菱、卓胤蓉
2020/5/5	Student Online Presentation 2	3D Detection	Presenters: 蘇育聖、陳俊安、
2020/5/6	Student Online Presentation 3	Organs-On-a-Chip (OOC)	Presenters: 丁浩軒、陸家豪、張金騏
2020/5/6	SCRUM Courses 1	1. Software Development Life Cycle 2. The Theorem of SCRUM	Presenter: Teamyoung(天揚精密) project manager --詹子平 Participants: All student members
2020/5/7	Student Online Presentation 4	Distributed System (DS)	Presenters: 王子博
2020/5/8	Student Online Presentation 5	Generate Recipe from Image	Presenters: 謝子潁、詹昆翰、馬世勸
2020/5/13	SCRUM Courses 2	Examples of SCRUM: Cloud Computing Industry, Medical Instrument Industry	Presenter: Teamyoung(天揚精密) project manager --詹子平 Participants: All student members
2020/5/20	SCRUM Courses 3	1. Examples of SCRUM: Smart Home Industry 2. The Importance of Coding Convention	Presenter: Teamyoung(天揚精密) project manager --詹子平 Participants: All student members

2020/5/27	SCRUM Courses 4	<ol style="list-style-type: none"> How to learn a new field quickly. How to improve communication skills and interpersonal interaction skills The concept of Automated Testing 	Presenter: Teamyoung(天揚精密) project manager --詹子平 Participants: All student members
2020/6/3	SCRUM Courses 5	<ol style="list-style-type: none"> The Application of VM & Docker The Software Certification of Medical Device 	Presenter: Teamyoung(天揚精密) project manager --詹子平 Participants: All student members
2020/6/9	Final Party	<ol style="list-style-type: none"> Semester Activities Review Financial Reports 	All student members
2020/9/17	Orientation Party	<ol style="list-style-type: none"> Introduction of IEEE Student Branch in NCU Introduction of IEEE Xplore resource and IEEE student membership 	All student members
2020/9/29	Career Speech 1	The Selection of the Stages of Life: University, Graduate School, Jobs	Speaker: Realtek Engineer -- 曾天鴻 Participants: All student members
2020/10/13	Career Speech 2	Observation of the Digital Transformation of Domestic Industries	Speaker: CIO Chief Writer -- 施鑫澤 Participants: All student members
2020/10/27	Career Speech 3	The Transformation and Demand of IT industry	Speaker: Microsoft Technical Support Assistant manager -- 曾華煜 Participants: All student members
2020/11/24	Laboratory visit	Visit laboratories of NCU electronic engineering (Microwave & Optoelectronic Devices Laboratory, EDA Lab)	All student members up to 40
2020/12/15	Student Presentation	5G Technology	Presenters: 馬世勸、吳圳昇、王予博、謝凱宇 Participants: all student members
2020/12/22	Final Party	<ol style="list-style-type: none"> Semester Activities Review Financial Reports 	All student members

3. **Student Branch Name: IEEE National Chiao Tung University Student Branch**

Topic	How to prepare for studying abroad?
Speaker	夏子翔 學長, 黃竝錚
Time/Date	May 16 2:00pm~4:pm
Attendances	All student members and guests online

Topic	From School to Career.
Speaker	吳奕樂 學長
Time/Date	May 30 10:30am~12:00pm
Attendances	40 student members

Topic	NCTU Study Abroad association introduction.
Speaker	黃竑錚, 李思賢
Time/Date	October 15, 12:00pm~13:10pm
Attendances	All student members

4. Student Branch Name: IEEE National Chiao Tung University ED Society (EDS)

In the year 2020, the student chapter has co-organized with the ED Taipei Chapter to implement three technical events as the following:

Topic	How can chip technology realize electronic virus sensing?
Speaker	Prof. Hiroshi Watanabe
Time/Date	May 5, 13:00am~15:00pm, 2020
Attendances	All student members

Topic	High-k Dielectric and Interface Engineering for Si/SiGe-Based CMOS Transistors
Speaker	K. S. Chang-Liao
Time/Date	June 9, 13:00am~15:00pm, 2020
Attendances	All student members

Topic	Post SNW and VLSI Workshop
Speaker	H. C. Lin
Time/Date	July 10, 14:30pm~15:00pm, 2020
Attendances	All student members

5. Student Branch Name: IEEE National Chung Hsing University Student Branch

- (1) This student branch organized two special sessions in the 2020 National Symposium on Systems Science and Engineering, NSSSE 2020, held at National Chung Hsing University over June 19-20, 2020. The two special sessions were entitled by “Intelligent robots” and “Some Core Software Technologies for Industry 4.0”, respectively. The number of the branch member to attend NSSE2020 is 10. Mr. Shih-Ting Chen won the best conference paper award, and Mr. Hung-Sheng Chen won the second place of the best student paper award.
- (2) This student branch organized one workshop in the International Conference on System Science and Engineering 2020 (ICSSE 2020) hosted by National Taiwan University of Science and Technology, Taipei, Taiwan, over August 31 - September 3, 2020. The workshop was entitled by “Smart Manufacturing-Industry 4.0”. The number of the branch member to attend NSSE2020 is 2. The student member, Mr. Hung-Sheng Chen, wrote the paper entitled by “Adaptive PID-Like Control Using Fuzzy Broad Learning System for Nonlinear Dynamic Systems”, which won the best paper award. Note that this paper was orally presented by Dr. Feng-Chun Tai.
- (3) This student branch helped hosting the special party to celebrate the Teacher Day on 28 September, 2020.

6. Student Branch Name: IEEE National Chung Hsing University SMC Society (SMCS)

- (1) This student branch organized one workshop in the 2020 International Automatic Control Conference (CACS 2020), hosted by the Chinese Automatic Control Society and National Chung Hsing University, Taiwan, and held in Hsinchu, Taiwan, over 4-7 November, 2020. The workshop was entitled by “Smart Manufacturing-Industry 4.0”, where the four student branch members orally presented their four papers in this workshop, respectively. Worthy of mention is that one student branch member, Mr. Hong-Yu Zheng, won a honorable mention certificate in attending the best master thesis contest.
- (2) Two student branch members orally presented their two papers in the 2020 International Conference on Fuzzy Theory and Its Applications (iFuzzy 2020), hosted by National Chiao-Tung University, Taiwan, Hsinchu, Taiwan, over 4-7 November, 2020. The student member, Mr. Hung-Sheng Chen, wrote the paper entitled by “Adaptive Model Predictive Control Using Iterative Fuzzy Broad Learning System for Nonlinear Digital Time-Delay Dynamic Systems”, which won the iFuzzy 2020 best paper award.

This student branch helped organizing a Christmas dinner party and invited the elderly alumni graduated from our laboratory, Advanced Electronic Control Laboratory, to join this party held on 25 December, 2020.

7. **Student Branch Name: IEEE National Kaohsiung University of Science and Technology Student Branch**

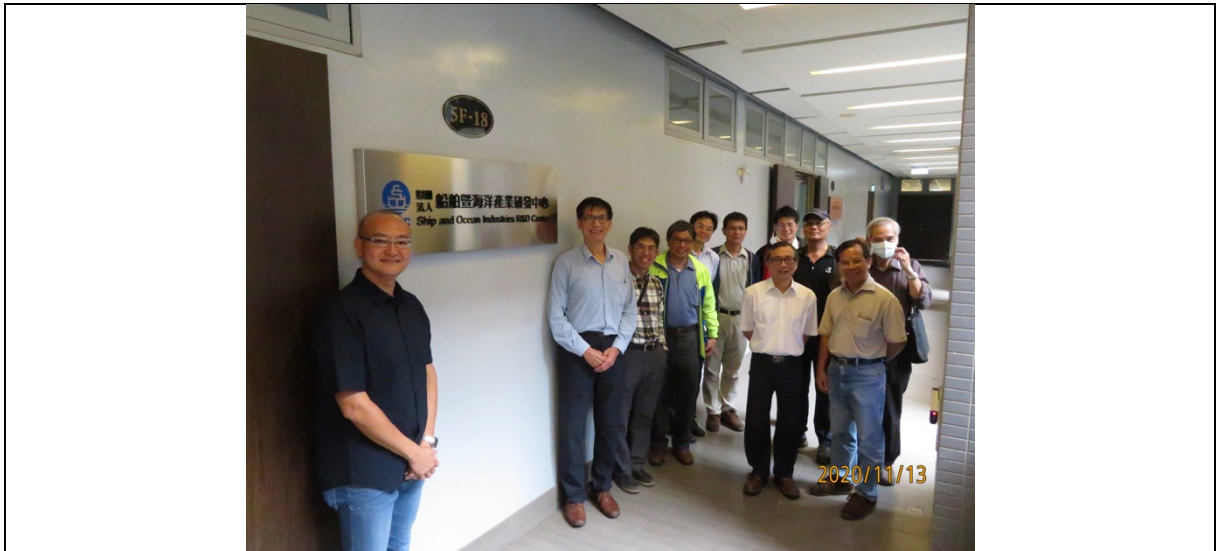
Date	2020/5/9 (yyyy/mm/dd)			
Event	離岸風場場址調查作業實務			
Speaker	黃宗宸/環球測繪公司技術總監			
Location	National Kaohsiung University of Science and Technology(Cijin Campus)			
Attendances	IEEE Members	3	Guests	12

Date	2020/5/7 (yyyy/mm/dd)			
Event	鋰電池特性分析與電池管理系統設計應用			
Speaker	孫建中/工研院儲能材料及技術研究組			
Location	National Kaohsiung University of Science and Technology(Cijin Campus)			
Attendances	IEEE Members	3	Guests	12

Date	2020/8/26 (yyyy/mm/dd)			
Event	電力系統調度及再生能源整合			
Speaker	寧嘉慶/台灣電力股份有限公司電力調度處副調度監			
Location	National Kaohsiung University of Science and Technology(Nanzi Campus)			
Attendances	IEEE Members	8	Guests	35

Date	2020/8/25~26 (yyyy/mm/dd)			
Event	ABYC marine electrical(美國船艇委員會)電機實務課程			
Speaker	陳聖樺/財團法人船舶暨海洋產業研發中心副處長			
Location	National Kaohsiung University of Science and Technology(Jiangong Campus)			
Attendances	IEEE Members	4	Guests	20

Date	2020/11/13 (yyyy/mm/dd)			
Event	財團法人船舶暨海洋產業研發中心參訪			
Location	財團法人船舶暨海洋產業研發中心高雄辦公室			



Date	2020/11/13	(yyyy/mm/dd)
Event	嘉信遊艇參訪	
Location	嘉信遊艇股份有限公司	



8. Student Branch Name: IEEE National Taipei University of Technology Student Branch

Date	2020/02/25	(yyyy/mm/dd)
Event	High-Speed Free-Space Optical Communication Discussion Meeting	
Location	Everlight Building, Nation Taipei University of Technology	
Category	Professional	Sub-Category Professional Development
Attendances	IEEE Members 10	Guests 20

Date	2020/07/22	(yyyy/mm/dd)
Event	Underwater Wireless Optical Communication Discussion Meeting	
Location	Everlight Building, Nation Taipei University of Technology	

Category	Professional	Sub-Category	Professional Development
Attendances	IEEE Members	10	Guests 22

Date	2020/10/23 (yyyy/mm/dd)		
Event	Fiber-FSO-5G/6G Convergence Discussion Meeting		
Location	Everlight Building, Nation Taipei University of Technology		
Category	Professional	Sub-Category	Professional Development
Attendances	IEEE Members	10	Guests 15

9. Student Branch Name: IEEE National Taiwan University Student Branch

Category	General Assembly
Event	Determine branch and committee structure
Time/Date	16:30-17:30 2020-09-30
Location	R455, EE Building II, NTU

Category	General Assembly
Event	Introduce branch constitution
Time/Date	16:30-17:30 2020-10-28
Location	R455, EE Building II, NTU

Category	General Assembly
Event	Committee update on current progress
Time/Date	16:30-17:30 2020-11-25
Location	R455, EE Building II, NTU

Category	General Assembly
Event	Committee update on current progress
Time/Date	15:30-16:30 2020-12-21
Location	R101, Multi-Purpose Classroom Building, NTU

10. Student Branch Name: IEEE National Taiwan University of Science and Technology Student Branch and Student Branch Name: IEEE National Taiwan University of Science and Technology SMC Society (SMCS)

Time/Date	Speaker	Topic
2020/11/24	Shao-Hung Yu	An Improved Multiattribute Decision Making Based on New Score Function of Interval-Valued Intuitionistic Fuzzy Values and Linear Programming Methodology
2020/11/24	Guan-Lin Lu	Multiattribute Decision Making Based on Interval-Valued Intuitionistic Fuzzy Values and Linear Programming Methodology
2020/11/24	Shao-En Huang	An Improved MADM method Using Interval-Valued Intuitionistic Fuzzy Values
2020/12/01	Heng-Li Deng	Multiattribute Decision Making Based on Interval-Valued Intuitionistic Fuzzy Values and Linear Programming Methodology, and the TOPSIS Method
2020/12/01	Min-Han Hsu	Multiattribute Decision Making Based on Non-Linear Programming Methodology with Hyperbolic Function and Interval-Valued Intuitionistic Fuzzy Values

2020/12/15	Pei-Hsun Kao	A New Multiple Attribute Decision Making Method Based on Linear Programming Methodology and Novel Score Function and Novel Accuracy Function of Interval-Valued Intuitionistic Fuzzy Values
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11. Student Branch Name: IEEE National Tsing Hua University IA Society (IAS)

Topic	Real-Time Algorithm for Minimizing the THD in Multilevel Inverter
Speaker	吳有基 教授 國立聯合大學電機工程學系
Time/Date	13:30-15:00, March 20, 2020
Location	Rm 104, EECS

Topic	Solid-State Transformer Topologies, Applications & Challenges
Speaker	李聖華 博士 台達電子SST事業處處長
Time/Date	13:30-15:00, May 22, 2020
Location	Rm 104, EECS

Topic	電力電子研究經驗分享
Speaker	蔡孟江 盧旻澤 國立清華大學電機系
Time/Date	14:00-15:00, June 19, 2020
Location	Rm 104, EECS

Topic	UPS數位控制設計與挑戰
Speaker	陳信智 主任韌體工程師 台達電子資通訊電源方案事業部
Time/Date	13:30-15:00, October 16, 2020
Location	Rm 104, EECS

Topic	Matrix Converter-Based Motor Drive Systems
Speaker	劉添華 教授 國立台灣科技大學電機工程學系
Time/Date	14:00-16:00, November 06, 2020
Location	Rm 104, EECS

Topic	AI for Industry 4.0
Speaker	林尚毅 鴻海科技處長 清華大學統計所博士
Time/Date	13:30-15:00, November 27, 2020
Location	Rm 104, EECS

Topic	軌道列車行控系統簡介
Speaker	曾萬存 教授 雲林科技大學電機工程學系
Time/Date	14:00-16:00, December 04, 2020
Location	Rm 104, EECS

Topic	Research of optimization algorithm in power electronics and my working experience in Japan
Speaker	鄭于珊 助理教授 國立台灣海洋大學電機工程學系
Time/Date	13:30-15:00, December 18, 2020
Location	Rm 104, EECS

Topic	電動載具動力馬達設計概論
Speaker	陳盛基 教授 南台科技大學電機工程學系
Time/Date	14:00-16:00, January 08, 2021
Location	Rm 104, EECS

12. Student Branch Name: IEEE National Tsing Hua University PEL Society (PELS)

Topic	Semiconductor Specialty Technologies (More than Moore)
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Speaker	段孝勤 資深處長 台灣積體電路製造股份有限公司
Time/Date	14:00-16:00, April 24, 2020
Location	Rm 104, EECS

Topic	高功率電力電子應用
Speaker	黃永福 經理 工業技術研究院綠能與環境研究所
Time/Date	13:30-15:00, May 29, 2020
Location	Rm 104, EECS

Topic	與壓力共處之人要克服困難而不是被困難克服
Speaker	鄭秋娥 諮商心理師 好日子心理治療所
Time/Date	14:20-16:20, September 25, 2020
Location	Rm 104, EECS

Topic	藉由即時動態模擬技術精進電力設備分析診斷
Speaker	林閔洲 台灣電力公司綜合研究所 高壓研究室
Time/Date	13:30-15:00, October 30, 2020
Location	Rm 104, EECS

Topic	因應再生能源發展併網儲能系統之建置及願景
Speaker	艾祖華 處長 台達電子智慧能源解決方案事業部
Time/Date	13:30-15:00, December 11, 2020
Location	Rm 104, EECS

Topic	電業自由化
Speaker	莊景勝 博士 台灣經濟研究院
Time/Date	13:30-15:00, December 25, 2020
Location	Rm 104, EECS

13. Student Branch Name: IEEE National Tsing Hua University Student Branch

Topic	類比數位轉換器設計簡介
Speaker	吳書豪 聯發科技股份有限公司
Time/Date	18:00-21:00, Oct 5, 2020
Location	Delta Building 201

Topic	音頻積體電路設計簡介
Speaker	溫松翰 聯發科技股份有限公司
Time/Date	18:00-21:00, Oct 12, 2020
Location	Delta Building 201

Topic	高速傳輸介面與鎖相迴路電路設計簡介
Speaker	高健凱 聯發科技股份有限公司
Time/Date	18:00-21:00, Oct 19, 2020
Location	Delta Building 201

Topic	射頻與感測計設計簡介
Speaker	高侑賢, 邱衍智 聯發科技股份有限公司
Time/Date	18:00-21:00, Oct 26, 2020
Location	Delta Building 201

Topic	電源管理晶片設計簡介
Speaker	曾俊彥 聯發科技股份有限公司
Time/Date	18:00-21:00, Nov 2, 2020
Location	Delta Building 201

Topic	聯發科技公司參訪
Speaker	詹景宏 聯發科技股份有限公司
Time/Date	18:00-21:00, Nov 9, 2020
Location	聯發科技股份有限公司

14. Student Branch Name: IEEE Yuan Ze University Student Branch

Topic	MOST WiCMA(Wireless Communication Measurement Alliance) 2020 Q3 Technology Forum and Industry-University Exchange Platform: CSP VST Vector Signal Tester and RF Communication Experimental Platform		
Speakers	Jeng-Kuang Hwang, Director of the YZU Communication Research Center Juinn-Horng Deng, Deputy director of the YZU Communication Research Center Jian-Yu Li, Professor, Electrical Engineering of YZU		
Time/Date	Oct. 19 (Monday), 14:00am~16:30pm, 2020		
Location	YZU, Building 7, 10F, R71006		
Organizer	WiCMA	Co-organizer	IEEE YZU SB

Topic	MOST WiCMA(Wireless Communication Measurement Alliance) TECH EXPO		
Exhibitors(10)	CSPTek, YZU EE Program B, YZU CRC, YZU 5G RF Industry Technology Alliance, Homsun, Anritsu, Haleytech, Auden, Weft, R&S		
Time/Date	Jan. 27 (Wednesday), 14:00am~17:00pm, 2021		
Location	On-line seminar. (https://wicma.crc.yzu.edu.tw/expo2021.html)		
Organizer	WiCMA	Co-organizer	IEEE YZU SB YZU 5G RF Industry Technology Alliance

15. Student Branch Name: IEEE National Tsing Hua University ED Society (EDS)

Topic	New Channel and Gate Structures for GaN-on-Si Planar FETs
Speaker	Prof. Kevin J. Chen (IEEE Fellow)
Time/Date	2019/10/25
Location	Room304, Delta Building, National Tsing Hua University, Taiwan
Description	<p>In this talk, a new channel structure, namely, GaON channel instead of the conventional GaN channel, will be introduced. The GaON is identified as a new nanophase of GaN that is formed after oxygen plasma treatment and high temperature annealing. The GaON exhibits a valence band offset of ~0.6 eV with GaN and can effectively block holes from the gate dielectric, and thus significantly improve the gate reliability.</p> <p>The second part of this talk is focused on the exploration of the MoS₂/GaN 2D/3D Van der Waals heterostructure. The 2D layered MoS₂ is deployed as a semiconducting gate (SG) in place of the conventional conducting gate of GaN HEMT. The MoS₂ semiconducting gate first maintains its conducting state to turn on the underlying channel and then seamlessly changes to its insulating state to completely decouple itself from the underlying channel, leading to effective gate voltage clamping and gate protection.</p>

16. Student Branch Name: IEEE ED National Taiwan University Student Branch Chapter

Topic	Practice of strategy in IP authorizations			
Speaker	David W. Su (宿文堂), Vice President and General Counsel, MediaTek, Inc.			
Time/Date	2 pm - 5 pm, June 17, 2020			
Location	Room 112, Barry Lam Hall, National Taiwan University			
Attendances	IEEE Members	7	Guests	133

Topic	IEEE EDS Distinguished Lecturer Talk & Academic Workshop
Speaker	Prof. Chao-Sung Lai, Dean, College of Engineering, Chang Gung University, IEEE, Electron Device Society, Distinguished Lecturer

	Dr. Po-Han Chen, Staff engineer, Himax Technologies, Inc.			
Time/Date	2 pm - 6 pm, August 17, 2020			
Location	Room 114, Barry Lam Hall, National Taiwan University			
Attendances	IEEE Members	5	Guests	15

Topic	Differentiated Fully Depleted SOI (FDSOI) technology for highly efficient and integrated mmwave wireless connectivity solution			
Speaker	Dr. Anirban Bandyopadhyay, Director, Strategic Applications, GLOBALFOUNDRIES, Inc., Santa Clara, California, USA			
Time/Date	11 am - 12 am, November 20, 2020			
Location	Room 103, E. E. building No. 2, National Taiwan University			
Attendances	IEEE Members	7	Guests	17

B.5 Affinity Group Activities

- **Young Professionals Group**

- **2020 IEEE Taipei Section Young Professionals Talk**

IEEE Young Professionals of Taipei Section conducted a seminar on 20th November, 2020 at Chinese Culture University, Taiwan, from 9:10 am. to 12 noon, followed by a lunch party with the speaker and members. The speaker was Prof. W.-H. Cheng from National Chao-Tung University, Dr. H.-A. Kao from Legislative Yuan, Taiwan, respectively. Their research focus is on AI and Computer applications.

- **2020 IEEE International Conference on Consumer Electronics- Taiwan**

The 2019 IEEE International Conference on Consumer Electronics– Taiwan was held from Sept. 28-30 at National Central University, Taiwan. As a grand venue for scholars and professional persons all around the world, IEEE ICCE-Taiwan aims to initiate profound discussions on research and discovery in electronics and relevant professional field. Furthermore, the vision is to set IEEE ICCE-Taiwan as a milestone in consumer electronic field and become a historic and dominant conference year by year with strong and resourceful support from the IEEE Taipei Section. This year, despite the world pandemic of Coronavirus (COVID-19) outbreak, the 2020 ICCE-Taiwan Conference has received around 490 technical paper submissions and accepted 314. This shows that the ICCE-Taiwan conference attains high reputation internationally. The 2020 ICCE-Taiwan, this time, will be held as a hybrid conference, allowing the participants the choice of attend the conference either in-person or virtually. This new format will provide a valuable and abundant experience for all attendees, the Young Professionals event was held in conjunction with the reception as follows:

Speaker: Dr. Tihao Chiang, Sr Managing Director, Ambarella Taiwan Ltd., and IEEE Fellow.
Title: From HD Encoder to Ultra HD Computer Vision Processor for Edge AI Applications

Abstract: The Low power computer vision processor has found its wide applications such as robotics, sports camera, cell phone, flying camera and automotive camera for ADAS and autonomous driving applications. To achieve a computer vision processor with high quality, ultra HD definition image processing and encoding, it is critical to consider various design parameters such as features, complexity, die size, power while maintaining maximal flexibility for the system designers to innovate and customize for product differentiation. We will discuss the market opportunities and key technical differentiations in designing a cost-effective edge computer vision multimedia processor for mobile and low power applications.

- **Women In Engineering (WIE)**

A membership promotion meeting was organized on 11/10/2020 in NCTU, Hsinchu, Taiwan. Most of the attendees were students and two of the attendees are professors (Hsiao-Wen Zan and Li-Yi Chen, both are in Department of Photonics, NCTU, Taiwan) who are also IEEE members. In the event, Professor Zan first introduced the missions and visions of IEEE WiE to the attendees. And then call for volunteers to attend the following activity held on 12/05/2020. Professor Chen showed the design of the 12/05 activity and the proposal of “Science Tour” for the accompanying kids.

A seminar and also a children care activity were held on 12/05/2020. For the first time, IEEE Taipei Section Women in Engineering (WiE) collaborated with Women in Optics (WiO) to

held an activity 「2020 WiO and WiE @ Taiwan」 on 12/05/2020 in National Taipei University of Technology. We have 116 participants, including 42 IEEE Members. The event held technical seminar in one lecture room and also thh “Science Tour for Kids” in a lounge room. In the seminar room, OSA VP Prof. Satoshi Kawata, OSA Meredith Smith, Prof. CC Sun (President in Taiwan Photonic Society), Prof. Meng-Fan Chang (President in IEEE Taipei Section), and Prof. Yi-Jen Chiu (former president in OSA Taipei Section) gave us blessings.

Then, Prof. Ray-Hua Horng (Female IEEE Fellow) and Prof. Hsiao-Wen Zan (IEEE Taipei Section WiE Chair, IEEE Senior Member) introduced the organization of WIO & WIE. Dr. Chuang-Chiang Tsai, CTO in E ink, shared her personal experience how she struggled with family and work in Xerox in US. Prof. Pau-Choo Chung (Female IEEE Fellow) in NCKU shared her experience about society services in IEEE. After the talks, all members were keen to share life experiences and the responses bounced around the meeting room. Ultimately, Prof. Horng wrapped up the event. The attendees picked up the kids/husbands in ““Science Tour for Kids”” and then had light lunch together. The event was sponsored together by OSA and IEEE WiE.

B.6 Awards & Recognition Activities

- Award constituted by the section
 - **Outstanding Chapter Award**
Computational Intelligence Society Taipei Chapter
 - **Outstanding Student Branch/Chapter Award**
IA Society Student Branch Chapter at NTHU (National Tsing Hua University)
 - **The 2018 Membership Promotion Award (highest percentage increase)**
Product Safety Engineering Society Taipei Chapter
 - **The 2018 Membership Promotion Award (highest number increase)**
Solid-State Circuits Society Taipei Chapter
 - **Lifetime Achievement Award**
Prof. Jing-Shown Wu, Prof. Jin-Fu Chang, and Prof. Wen-Tsuen Chen
 - **2018 Best PhD Dissertation Award and 2018 Best Master Thesis Award**
- Please list all Awards and Recognitions received by the Section, and members in the Section, from R 10 and IEEE HQ during the year 2018
 - Based on Section’s three-year performance, IEEE Taipei Section was recognized as “2018 Outstanding Section Membership Recruitment Performance”.

B.7 Communication Activities (Newsletter, Home Page, E-mail, etc.)

- Home Page of the section (give the URL and frequency which it is updated)
 1. IEEE Taipei Section: <http://www.ieee.org.tw/>
 2. IEEE CYCU Student Branch:
 3. IEEE NCHU Student Branch: http://www.ieee.org.tw/chapters/index.php?web_class=45
 4. SMC Society (SMCS) Student Branch Chapter at NCHU:
http://www.ieee.org.tw/chapters/index.php?web_class=53
 5. IEEE NCTU Student Branch: http://www.ieee.org.tw/chapters/index.php?web_class=36
 6. CE Society (CES) Student Branch Chapter at NCTU:
http://www.ieee.org.tw/chapters/index.php?web_class=46
 7. ED Society (EDS) Student Branch Chapter at NCTU:
 8. IEEE NCU Student Branch: <http://ncuieee.blogspot.tw/>
 9. National Kaohsiung Marine University Industry Applications Society:
 10. IEEE NSYSU Student Branch: http://vlsi.ee.nsysu.edu.tw/html/Student_Branch.htm
 11. IEEE NTHU Student Branch: http://www.ieee.org.tw/chapters/index.php?web_class=44
 12. ED Society (EDS) Student Branch Chapter at NTHU:
 13. IA Society (IAS) Student Branch Chapter at NTHU:
 14. PEL Society (PELS) Student Branch Chapter at NTHU:
http://www.ieee.org.tw/chapters/index.php?web_class=51
 15. IEEE NTU Student Branch: <https://www.facebook.com/ieeentu.taipei/>
 16. IEEE NTUST Student Branch: <http://studentbranch.csie.ntust.edu.tw/>
 17. SMC Society (SMCS) Student Branch Chapter at NTUST:
<http://studentbranch.csie.ntust.edu.tw/smc/>
 18. IEEE YZU Student Branch: <http://ieeeyzusb.pixnet.net/blog>

19. SMC Society (SMCS) Student Branch Chapter at YZU:
http://www.ieee.org.tw/chapters/index.php?web_class=50
20. Antennas and Propagation Society (AP03):
<https://apstaipeichapter.wixsite.com/aps-taipei-chapter>
21. Broadcast Technology Society (BT02):
http://www.ieee.org.tw/chapters/index.php?web_class=5
22. Computer Society (C16): http://www.ieee.org.tw/chapters/index.php?web_class=6
23. Circuits and Systems Society (CAS04):
http://www.ieee.org.tw/chapters/index.php?web_class=7
24. Consumer Electronics Society (CE08):
http://www.ieee.org.tw/chapters/index.php?web_class=8
25. Council on Electronic Design Automation Chapter (CEDA-44):
http://www.ieee.org.tw/chapters/index.php?web_class=34
26. Computational Intelligence Society (CIS11):
http://www.ieee.org.tw/chapters/index.php?web_class=9
27. Communications Society (COMM19):
<https://taipei.chapters.comsoc.org>
28. Components Packaging, and Manufacturing Technology Society (CPMT21):
http://www.ieee.org.tw/chapters/index.php?web_class=12
29. IEEE Council on RFID Taipei Chapter (CRFID741):
<http://www.ieee.org.tw/chapters/crfid741>
30. Control Systems Society (CS23):
http://www.ieee.org.tw/chapters/index.php?web_class=13
31. Education Society (E25): http://www.ieee.org.tw/chapters/index.php?web_class=14
32. Electron Devices Society (ED15):
http://www.ieee.org.tw/chapters/index.php?web_class=15
33. Engineering in Medicine and Biology Society (EMB18):
http://www.ieee.org.tw/chapters/index.php?web_class=16
34. Electromagnetic Compatibility Society (EMC27):
http://www.ieee.org.tw/chapters/index.php?web_class=1
35. Geoscience and Remote Sensing Society (GRS29):
http://www.ieee.org.tw/chapters/index.php?web_class=18
36. Industry Applications Society (IA34):
http://www.ieee.org.tw/chapters/index.php?web_class=292
37. Industrial Electronics Society (IE13):
http://www.ieee.org.tw/chapters/index.php?web_class=19
38. Instrumentation and Measurement Society (IM09):
http://www.ieee.org.tw/chapters/index.php?web_class=44
39. Information Theory Society (IT12):
http://www.ieee.org.tw/chapters/index.php?web_class=21
40. Magnetics Society (MAG33): http://www.ieee.org.tw/chapters/index.php?web_class=23
41. Microwave Theory and Techniques Society (MTT17):
http://www.ieee.org.tw/chapters/index.php?web_class=24
42. Oceanic Engineering Society (OE22):
http://www.ieee.org.tw/chapters/index.php?web_class=25
43. Power and Energy Society (PE31):
http://www.ieee.org.tw/chapters/index.php?web_class=26
44. Power Electronics Society (PEL35):
http://www.ieee.org.tw/chapters/index.php?web_class=20
45. Photonics Society (PHO36):
http://www.ieee.org.tw/chapters/index.php?web_class=22
46. Product Safety Engineering Society (PSE43):
http://www.ieee.org.tw/chapters/index.php?web_class=27
47. Reliability Society (R07): http://www.ieee.org.tw/chapters/index.php?web_class=28
48. Robotics and Automation Society (RA24):
http://www.ieee.org.tw/chapters/index.php?web_class=29
49. Sensors Council (SEN39):
http://www.ieee.org.tw/chapters/News/news_more.php?web_class=45&id=145
50. Systems, Man, and Cybernetics (SMC28):
http://www.ieee.org.tw/chapters/index.php?web_class=30
51. Systems, Man, and Cybernetics Society-Taichung Chapter (SMC28-TC):
http://www.ieee.org.tw/chapters/index.php?web_class=41

- 52. Signal Processing Society (SP01):
http://www.ieee.org.tw/chapters/index.php?web_class=31
- 53. Solid-State Circuits Society (SSC37):
http://www.ieee.org.tw/chapters/index.php?web_class=32
- 54. Vehicular Technology Society (VT06):
http://www.ieee.org.tw/chapters/index.php?web_class=33
- 55. Women In Engineering (WIE): http://www.ieee.org.tw/chapters/index.php?web_class=34
- 56. Young Professionals (YP): http://www.ieee.org.tw/chapters/index.php?web_class=299
- 57. Microwave Theory and Technique Society (MTT17)
<http://iee-eliteschool.org/speech.html#LDORPCWWBGPD>

- Other means of contacts with section members
In order to further improve connections among its members, Taipei Section has formed its Facebook page at <https://www.facebook.com/IEEE.Taipei.Section.fans> in 2011.

B.8 Industry Relations

- Activities for/with industrial members
- **Affinity: Women in Engineering**
In the 「2020 WiO and WiE @ Taiwan」 on 12/05/2020 in National Taipei University of Technology. We invited Dr. Chuang-Chiang Tsai, CTO in E ink Holdings Inc., to share her personal experience how she balanced family and work in Xerox in US when her kids were young. The core value she shared inspired the audience, including 35 female professors and 15 male professors.
- **Chapter Name: Antennas and Propagation Society Taipei Chapter (AP03)**
Each year, the IEEE AP-S Taipei Chapter (AP03) will involve in inviting the industry to join the local conference “Electromagnetics Workshop--A Bridge to the Future”, and making sure that the industrial members and APS members are actively communicating with and getting to know each other in a yearly basis. In addition to the regular event, this year, we continued to involve in the “Millimeter-Wave Industry Technology Forum” held on 25th September 2020, Venue: BL-101, National Taiwan University. Website:
<http://temiac.ee.ntu.edu.tw/app/news.php?Sn=462#> The workshop was open for industrial partners in Taiwan, and at least 50 RD engineers from different local leading companies attended this event.
- **Chapter Name: Communications Society Taipei Chapter (COM19)**
In 2020, Chapter COM19 had one activity involving industrial members. These activities are listed as follows:
 - i. **2020-Winter IEEE Workshop on Information Theory and Communications from January 16 to 17, 2020**
This symposium was partially sponsored by industry partners including but are not limited to:
Chunghwa Telecom
MediaTek Inc.
National Chung-Shan Institute of Science and Technology
National Instruments
- **Chapter Name: Education Society Taipei Chapter (E25)**
This year, the IEEE Education Society Taipei Chapter (E25) work closely with the Ministry of Education, Taiwan, Program the world association, and the Sha Yang Ye Inc. to hold autonomous mobile robot contests and related workshops for local elementary, high school and university students. It is hope that the contests will encourage students from elementary and high schools and universities to learn and explore technical and implementation skills in autonomous mobile robots.
- **Chapter Name: Photonics Society Taipei Chapter (PHO36)**
 1. The officers of the chapter (the chair, Prof. Chien-chung Lin) give an on-line talk in the seminar with Photonics Industry and Technology Development Association (PIDA) in May, 2020.
 2. Optical Design workshop (September, 2020): This event was organized by vice-chair Prof. Tien-Chang Lu, and professionals from optical design software companies (including NEWMAX, Zemax, Cybernet, and DOE etc.) provided their knowledge and

experiences to college and graduate level students in this two-day training workshop. The purpose is to get more young minds understand the beauty of optical design.

➤ **Chapter Name: Power and Energy Society Taipei Chapter (PE31)**

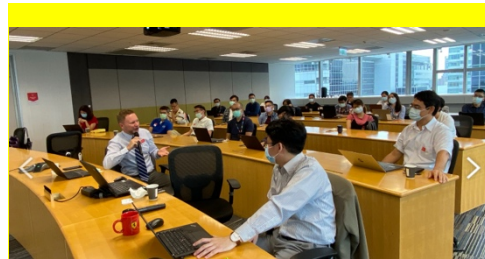
This year, the IEEE Power and Energy Society Taipei Chapter (E25) work closely with Taiwan Power and Energy Association to related workshops for introducing advanced technologies to local engineers and university students.

➤ **Chapter Name: Power Electronics Society Taipei Chapter (PEL35)**

Seminar from Industry Leader: Invited Bill Tsou (鄒明穎), R&D Senior Manager, Test & Measurement at Chroma to give a technical seminar to members and students, on 14 December 2020 at 5:30 PM to 6:30 PM at National Taiwan University, Taipei, Taiwan. He delivered a seminar on "Design Challenges for High Power Precision Instrument in New Energy Era". After the talk a dinner was held with the industry speaker for networking. Seminar attendance: 29 (4 IEEE members, 25 student guests)

➤ **Chapter Name: Product Safety Engineering Society Taipei Chapter (PSE43)**

In 2020, though Covid-19 outbreak globally, PSES Taipei Chapter resumed in July to hold a quarterly basis product safety technical forums via virtual and also face to face with proper measures. We are the unique platform to invite industry wise, certify bodies and academic for technical exchange. By the IEEE international safety symposium and regular basis technical workshop, we have chapter highly promoted and attract more speakers and extended the field to Environmental, 5G NR compliance for a more broad compliance scope.



➤ **Chapter Name: Sensors Council Taipei Chapter (SEN39)**

1. The 2020 MOST Digital Medical Technology × Digital New Technology for academic-industrial consortium was held at MOST Conference Hall, Taipei, 27th of August 2020. The Taipei Chapter of Sensors Council has sponsored the exhibition of the cuffless Blood Pressure sensors in this exhibition. A booth is organized at the exhibition hall as shown below to display the technology the cuddles BP sensor.

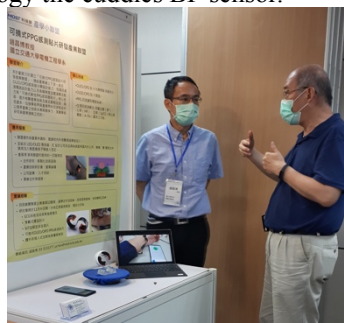


Fig. A booth at the exhibition hall to display the technology the cuddles BP sensor.

2. The 2020 Year-end Performance Exhibition for academic-industrial consortiums was held by MOST at International Conference Hall in National Taiwan Hospital, Taipei, 24th of Nov, 2020. The Taipei Chapter of Sensors Council has sponsored the exhibition of the cuffless BP/BF sensors in this exhibition. A booth is organized at the exhibition hall as shown below to display the technology the cuddles BP/BF sensors.



Fig. A booth at the exhibition hall to display the technology the cuddles BP/BF sensors.

3. The 2020 Workshop on Flexible PPG Sensor Patch Technology Development and Security for IoT Sensors held by IEEE Sensors Council Taipei Chapter at CPT International Conference Hall, National Chiao Tung University, Hsinchu City, Taiwan on 10th of November, 2020. The participants includes academics, industrial, & research areas. Attendees: 41.



Fig. Technical Workshop at NCTU.

4. The 2020 Year-end Performance Exhibition for academic-industrial projects was held by Hsinchu Science Park Bureau, MOST at GIS HSP Convention Center, Hsinchu, 2nd of Dec, 2020. The Taipei Chapter of Sensors Council has sponsored the exhibition of the cuffless BP/BF sensors in this exhibition. A booth is organized at the exhibition hall as shown below to display the technology the cuddles BP/BF sensors.

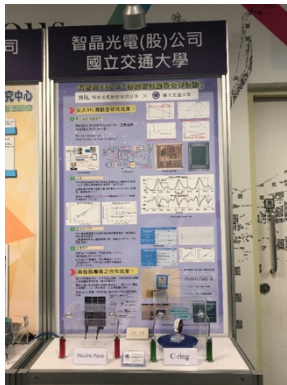


Fig. A booth at the exhibition hall to display the technology the cuddles BP/BF sensors.

➤ **Chapter Name: Communications Society Taipei Chapter (SSC37)**

We held 13 invited talks within 2 press conferences; 15 presentations in the speaker rehearsal program. Many industry members participant in these events and some gave talks to SSCS Taipei Chapter members.

i. 2020 IEEE ISSCC Speaker Rehearsal

Title: Technical Presentation Rehearsal (15 presentations)

Date: Jan. 17, 2020

Place: National Chiao-Tung University, Hsinchu, Taiwan

Attendance: 26

ii. SSCS Taipei Chapter Meeting

Title: SSCS Annual Member Meeting (1 presentation)

Date: Aug. 5, 2020

Place: Taichung, Taiwan

Attendance: 30

iii. 2020 A-SSCC Press conferences (5 presentations)

Date: Oct. 15, 2020

Place: NTU Alumni Center, Taipei, Taiwan

Talks: 5

Attendance: 34

iv. 2021 ISSCC Press conferences (8 presentations)

Date: Nov. 18, 2020

Place: Sheraton Grand Taipei Hotel, Taipei, Taiwan

Talks: 8

Attendance: 48 (including ISSCC FE officers, Taiwan committee members, authors, VIP, press)

➤ **Chapter Name: Council on Electronic Design Automation Chapter (CEDA-44)**

In 2020, Chapter CEDA-44 had 3 activities involving industrial members. These activities are listed as follows:

No	Event	#Attendees	Date	Venue
1	VLSI Design/CAD Symposium Keynotes from ADI, M31	1000+	August 4-7, 2020	Fullon Hotel Lihpao Land, Taichung, Taiwan
2	EDA Summer Camp	80+	August 20-21, 2020	National Taiwan Univ.
3	EDA Workshop Keynote/invited talks from Cadence, Kneron, Synopsys, MediaTek	160+	December 12- 13, 2020	Landis Inn Chuhu, Hsinchu

➤ **Chapter Name: Reliability Society Taipei Chapter (RL07)**

- Topic: Meeting on foresighted management strategy and technology on enterprise security

Time: 08/10/2020

Place: Hsinchu, Taiwan

Speaker: Dr. Shiuhyng Shieh, University Chair Professor, NCTU, Taiwan / IEEE Fellow & Reliability Society Taipei/Tainan Chapter Chair

- Topic: Meeting on technology for enterprise security

Time: 15/10/2020

Place: Hsinchu, Taiwan

Speaker: Dr. Shiuhyng Shieh, University Chair Professor, NCTU, Taiwan / IEEE Fellow & Reliability Society Taipei/Tainan Chapter Chair

➤ **Chapter Name: Microwave Theory and Techniques Society Taipei Chapter (MTT17)**

Asian Wireless Power Transfer week

Date: Dec. 16-18, 2020

Location: Howard International Civil House, Taipei

Attendees: 174 (On-line & on-site)

B.9 Humanitarian Technology Activities

- Humanitarian Technology related activities supported by the Section including collaboration with other OUs.
- SIGHT Activities
- N/A

B.10 Community Activities

- IEEE Social activities (Family day, IEEE day, Engineers Week)
 - Affinity : Women in Engineering (WiE)

Presentation	Speaker	Speaker's Title
Can Wireless Charging Live Up to the Hype?	Sanjay Gupta	President, AirtFuel
The Tipping Point of Adoption of Magnetic Resonant Wireless Power Transfer Based on AirFuel™ Standard	Michael de Rooij	Vice President of Applications Engineering, Efficiency Power
Wireless Charging 2.0 - The Benefits of RF Charging	Neeraj Sahejpal	Senior Vice President of Marketing and Business Development, Energoous
Design of Wireless Charging for E-Bikes	William Hsu	Director of Application Engineering, Voltraware

- IEEE Taipei chapter, 「2020 WiO and WiE @ Taiwan」
- Time: 05/12/2020
- Place: National Taipei University of Technology

➤ **Chapter Name: Magnetics Society Taipei Chapter (MAG33)**

- IEEE Magnetics Society Taipei-Tainan joint Chapter member day event
- Time: 2020/12/19
- Place: National Cheng Kung University, Tainan

➤ **Chapter Name: Reliability Society Taipei Chapter (RL07)**

- IEEE Taiwan chapter Dinner
- Time: 30/10/2019
- Place: National Chiao Tung University, Hsinchu

➤ **Chapter Name: Council on Electronic Design Automation Chapter (CEDA-44)**

IEEE CEDA Taipei chapter member meetings

No	Date	Venue
1	August 5, 2020	Colocated with VLSI Design/CAD Symposium Fullon Hotels & Resorts, Taichung
2	December 12, 2020	Colocated with Taiwan EDA Workshop Landis Inn Chuhu, Hsinchu

➤ **Chapter Name: Microwave Theory and Techniques Society Taipei Chapter (MTT17)**

Asian Wireless Power Transfer week
 Date: Dec. 16, 2020
 Location: Howard International Civil House, Taipei
 Banquet : AWPT

➤ **Chapter Name: Power and Energy Society Taipei Chapter (PE31)**

- IEEE Taiwan Chapter Annual Meeting
- Time: 9/3/2020
- Place: National Taiwan University, Taipei, Taiwan

PART C - OTHERS

C.1 Special Events

- Taipei Section issued the E-NEWS: Issue first issue electronic newspaper since May 26 of 2009, and we keep taking place publication.
- Handles to members and recruits the meeting of proving: Run members to recruit to the academic meeting, research unit, participate. The materials recruiting members and offering the affiliation to handle live are filled in, offer and help outside simply and conveniently, also offer member's consultation service live.
- Prof. Vincenzo Piuri, FIEEE, Department of computer Science, Università degli Studi di Milano, Italy, visit NCTU on 21 May 2018.

C.2 Relationship with National and International Societies and Non-Government Organizations (NGO)

➤ Sister Society: TAMT (Taiwan Association of Magnetic Technology)

- We held a member exchange meeting at National Cheng Kung University on December 19, 2020. The purpose of the meeting is to let TAMT members and IEEE members understand the major research areas of each other. Let IEEE members understand the distribution of resources in Taiwan's magnetic field. The participating scholars introduced their own employers, researches, resources, and external services through exchanges. The chairman of TAMT led a tour of several laboratories in the Department of Physics of National Cheng Kung University. A total of 7 IEEE members and 16 non-members attended this exchange meeting.

C.3 Collaboration with other IEEE Sections

- Support extended to neighboring Sections
- Joint activities with any other Section
- N/A

C.4 Support extended to Sub-sections & Society Chapters within the Section

- Support extended for organising technical, educational and professional activities
- Joint activities for membership development
- Support extended for the formation of a Sub-section or transition of a Sub-section into a full Section
- N/A

C.5 Best Practices of Your Section (which you would like share with other sections for the benefits of members)

- Section support can promote joint activities of education and other summer camps. For academic conferences, setting up a booth for membership services and providing membership promotion in academic conferences are good ways to attract new members. In Taiwan, university professors are allowed to pay membership fees for M.S. and Ph.D. students using their research funding from the Ministry of Science and Technology. This shows positive effects for recruiting student members.

C.6 Problems anticipated and suggestions for solutions, if any

- Because of economic crisis, most industry members have no budget that supported from company to join industry activity. It introduces risk in membership development and billable activity.
- Due to the decline in the number of PhD students, the size of our membership decreases.

PART D - GOALS AND PLANS

D.1 Continuation of Project/Activity in Progress and Their Implementation

Plans

➤ **Taipei Section**

▪ **Rendering Awards**

We present best Outstanding Chapter Award and Outstanding Student Branch/Chapter Award for stimulating chapter student members' effort on their annual reports. We group a selection committee to choose the superior from the reports submitted by all the chapters and student branches. The winners can get rewards and be praised on Taipei Section's website.

▪ **Membership Development**

We will plan out Membership Promotion Award for encouraging Chapter which has devoted most effort in increasing their membership.

1. Academic membership development:
 - i. Recruit new members in the related fields of researchers and professors through nation-wide conferences or workshop;
 - ii. Promote senior members from the qualified IEEE members through the major universities in Taiwan.
2. Industrial membership development:

Recruit new members in the related fields of engineers in industry through nation-wide conferences or workshop.
3. Student membership development:
 - i. Recruit new members in the related fields of Ph.D./master students through the IEEE Student Branches in Taiwan.
 - ii. Try to enhance the add-on value of IEEE student membership for membership development.

➤ **YP**

- We will be continuously conducting activities for the young professionals to highlight the benefits of joining the IEEE and its societies. The YP affinity group of IEEE Taipei Session will support students and recent graduates and women to become members by participating at 2021 IEEE International Conference on Consumer Electronics- Taiwan, meaning CE Chapter of the Taipei Session will cover the member fee for the participants. Another, we will be organizing the 2021 AI Computer Vision Camp. One of the goals of the IEEE Taipei Section YP Group for 2021 will be to retain her existing members and increase membership by recruiting new members. In addition, we will continuously investigate ways to enhance the participation of members in all IEEE activities by organizing fun gatherings. Among these, the Young Professionals Event will be held in conjunction to the reception of 2021 IEEE International Conference on Consumer Electronics-Taiwan and 2021 AI Computer Vision Camp.

➤ **Affinity Name: IEEE Women in Engineering (WiE)**

We have launched a LINE group (social media group) to tightly link the female engineers together. After the successful activity on 12/05, we continue to invite more members into the group and soon will have a gathering on 02/01/2021 in NTHU. We aim to held quarterly gathering (5-10 persons per time) and also large scaled activity (more than 50 persons) 1-2 times in 2021. With both the small and large scaled activities, we hope to strengthen the interaction. Then gradually bringing in more topics such as "how to actively join IEEE societies", "how to evaluate research topic in early stage", "how to work with industries", etc. We now invited more and more industrial members into the group to link with academic professor. In 2021, we will further promote the interaction between "industrial and academic female engineers". Also, we will design activity to include "female students" into the link to let them contacted with this friendly and helpful groups in their early stage. To help held above activities, we will also start to request funding not only from IEEE WiE, but also from Taiwan Ministry of Science and Technology. We like to highlight that we formed a temporary "working group" with 10 professors from more than 5 different universities to work together for the large scaled activity in 2020. All members in the working group interacted smoothly and built up team spirit. We will promote this kind of working style in our future activities.

➤ **Chapter Name: Antennas and Propagation Society Taipei Chapter (AP03)**

- Continue to recruit members and student members from academia and industries through technical and educational activities (symposiums, seminars, short courses) and via some social networks, such as setting up a club on Facebook or similar. Due to the COVID-19 pandemic, the recruiting process has been stalled in the past months. The number of active members in AP03 is currently standing at 100, and we hope to improve the number to about 110 by the end of 2021.
 - For the year 2021, we have planned two invited talks (including 1 distinguished lecturer talk), support at least two local conferences and technical meetings, and support 2 international symposiums held in Taiwan.
- **Chapter Name: Broadcast Technology Society Taipei Chapter (BT02)**
 - Continue to recruit members and student members from academia and industries through technical and educational activities (symposiums, seminars, short courses).
 - Continue to cooperate with China Radio Association (CRA) through joint activities. CRA's two thousand members consist of practical engineers in radio stations and television companies in Taiwan.
- **Chapter Name: Computer Society (C16)**
 - Sponsored several technical meetings
 - IEEE SOCA, VLSI Design/CAD Symposium will be held to encourage the scholar's members.
- **Chapter Name: Circuits and Systems Society Taipei Chapter (CAS04)**
 - Distinguished Lecturer: Plan to invite a researcher to give a technical talk for group members.
 - Cosponsor several technical and educational activities.
 1. 2021 TICD Winter Forum (Taiwan IC Design Society)
 2. 2021 hardware security seminar. The topics may include Lattice-based algorithms & Side Channel Attacks and Fault Injections
 3. 2021 VLSI/CAD Symposium and Annual CASS Taiwan member meeting.
- **Chapter Name: Council on Electronic Design Automation Chapter (CEDA-44)**
 - Continue to invite CEDA Distinguished lecturer(s) every year.
 - Continue to Sponsor technical and educational activities.
 1. 2021 EDA summer camp.
 2. 2021 EDA workshop.
- **Chapter Name: Communications Society Taipei Chapter (COM19)**
 - Workshops on Information Theory and Communications (a workshop with invited academic and industry speakers) will be held biannually, one in spring and the other in fall.
 - National Symposium on Telecommunications (a local symposium accepting paper submissions) will be held every year to benefit both of academic and industrial members.
 - Summer school on Information Theory, Communication Theory and Technologies will be held every August to benefit student members, especially the newly admitted master students.
 - Graduate Student Seminar on Information Theory and Communications will be held every year to benefit Ph.D. student members.
 - Information Theory Society Taipei Chapter and Communications Society Taipei/Tainan Chapter Young Research Best Paper Award will be held every two years.
- **Chapter Name: Components, Packaging and Manufacturing Technology Society Taipei Chapter (CPMT21)**

CPMT Taipei Chapter will co-organize the following conference:

 - International Microsystems, Packaging, Assembly and Circuits Technology Conference (IMPACT) 2021 at Taipei Nangang Exhibition Hall during Oct. 20 to 22, 2021.
- **Chapter Name: Control Systems Society Taipei Chapter (CS23)**

CS Taipei Chapter helps host the following conferences:

 - National Symposium on System Science and Engineering (NSSSE 2020), Taichung, Taiwan, June 19-20, 2020.

- 2020 International Automatic Control Conference (CACCS 2020), Hsinchu, Taiwan, Nov. 4-7, 2020
- 2020 International Conference on System Science and Engineering (ICSSE 2020), Taipei, Taiwan, August 31- September 3, 2020.

➤ **Chapter Name: Computational Intelligence Society (CIS11)**

- CIS Taipei Chapter hosted two invited talks delivered by Professor Gary G.Yen and Professor Tzzy-Ping Jung.
- CIS Taipei Chapter hosted two invited plenary speeches delivered by Prof. Nikhil R. Pal and Prof. Chin-Teng Lin.
- CIS Taipei Chapter technically sponsored two international conferences, iFUZZY 2020 and CACS 2020.
- CIS Taipei Chapter plans to invite the past president of CIS, Gary Yan, to visit Taiwan in 2021.
- CIS will invite Tzzy-Ping Jung from University of California San Diego to give an invited lecture in 2021.
- CIS will invite Prof. Yo-Ping Huang from National Taipei University Technology to give an invited lecture on 2/23,2021.
- CIS will organize IEEE CIS Distinguish Lecture Program in 2021 and keep organizing special sessions in several IEEE CIS conferences in 2021.

➤ **Chapter Name: Education Society Taipei Chapter (E25)**

To recruit new members for the education society

- We will first approach those local Taiwan authors whose papers are published in the IEEE Transactions on Education, or the International Journal of Engineering Education. We will also try to increase the student members for Education Society, because they are now financially supported by the project from the National Science.

➤ **Chapter Name: Electron Devices Society Taipei Chapter (ED15)**

The ED Taipei chapter is in the promotion of helping the ED student branch chapters to recruit more new student members. Also, several members were promoted to senior members in 2020. Several members have been promoted to the senior member through the assistance of the chapter chair.

- In 2021, the chapter members will continue to assist the NCTU EDS student branch in recruiting new student members.
- Need to work more on the promotion of IEEE senior members.
- Several DL talks will be arranged for 2021 with virtual format.

The chapter will continue to promote the post-SNW/VLSI workshop and post-IEDM workshop for those who will not be able to participate virtual meeting in Kyoto and San Francisco, respectively. These are also events to promote IEEE EDS activities to a majority of non-members, which is helpful in promoting memberships.

➤ **Chapter Name: Engineering in Medicine and Biology Society Taipei Chapter (EMB18)**

- Biomedical Electronics and Bioinformatics Camp will be continued every year to promote biomedical engineering to engineers.
- MEG Educational Training Course and MRI Educational Training Course will also be held each year to introduce new technologies to medical practitioners and students in medical campus.

➤ **Chapter Name: Electromagnetic Compatibility Society Taipei Chapter (EMC27)**

- To hold more than two EMC technical activities this year.
- To invite international scholars, experts and IEEE Distinguish Lectures to share their expertise with the community.
- To promote and recruit members from academia and industries.

- **Chapter Name: Geoscience and Remote Sensing Society Taipei Chapter (GRS29)**
 - To hold the Activity in Progress and Implementation Plans: Initiating the IEEE GRSS Regional DLP: Taipei Chapter cooperated with Japan and Malaysia GRSS Chapters across the Asia region.
 - To hold joint IEEE chapter meetings and seminars and talks from international IEEE DLP experts, as it gives members from different technical interests to inspire and gain motivation from these DLP speakers.
 - Membership Development: 2020 IEEE GRSS Taipei Chapter Membership includes 2 Life Fellows, 1 Life Senior, 1 Life Member, 6 Senior Member, 23 Members, 1 Associate Member, and 2 Affiliates. We have action plans to promote our Members to Senior Members and Senior Members to Fellows elevations recently.

- **Chapter Name: Industry Applications Society Taipei Chapter (IA34)**
 - Continue to hold seminars and talks, particularly from senior international IEEE members, as student members that attend the talks become inspired and gain motivation from these speakers
 - Continue to hold joint IEEE chapter meetings, as it gives student members from different technical interests an opportunity to present their work and learn from other students.

- **Chapter Name: Industrial Electronics Society Taipei Chapter (IE13)**
 - Sponsor and hold several technical meetings
 - Continue to hold joint IEEE chapter meetings

- **Chapter Name: Instrumentation and Measurement Society Taipei Chapter (IM09)**

To carry out these goals, the chapter has set up the following plans for year 2021.

 - To hold at least 5 seminars, talks, or short courses.
 - To provide technical sponsorship to at least 2 international activities.
 - To strengthen cross-chapter activities by joint visits or activities.
 - To promote and attract as many local and international attention as possible to participate in 2021 International Instrumentation and Measurement Technology Conference (I²MTC) either physically or virtually.

- **Chapter Name: Information Theory Society Taipei Chapter (IT12)**

Forthcoming events in 2021 include:

 - The 2021 Taiwan Workshop on Information Theory and Communications will be held at Taipei, from Jan. 21 to Jan. 22.

- **Chapter Name: Magnetics Society Taipei Chapter (MAG33)**
 - 2020 IEEE Distinguished Lecturer Progress. This year there are totally four distinguished lecturers:
 - (1) Prof. Bert Koopmans, Eindhoven University of Technology, The Netherlands (Femto-magnetism meets spintronics: Towards integrated magneto-photonics)
 - (2) Prof. Mathias Klaui, Johannes Gutenberg-University Mainz, Germany, (Antiferromagnetic Insulatronics: Spintronics without magnetic fields and moving electrons)
 - (3) Prof. Tim Mewes, University of Alabama, USA (Magnetization Dynamics and Damping)
 - (1) Prof. Masashi Shiraishi, Kyoto University, Japan (Spins in Low-dimensional Materials Systems: Transport, Gate-control and Conversion)

Prof. Tim Mewes already gave a DL talk via ZOOM on 12/15/2020. We will invite the other three DLs to give the speech in 2021, likely joint together with Hong Kong Chapter.

- **Chapter Name: Microwave Theory and Techniques Society Taipei Chapter (MTT17)**
 - Promoting interactions between members by regular meetings or side meetings held with the other events such as national conferences or activities of Taiwan Electromagnetic Industry-Academia Consortium.
 - Recruiting more MTT17 members by various promotions and working on better member services in conferences and events.

- Continuing to invite Microwave Distinguished Lectures to Taiwan and organizing workshops and seminars.
- **Chapter Name: Power Electronics Society Taipei Chapter (PEL35)**
 - Continue to promote technical seminars in power electronics aimed at engaging students and allowing them to learn about new research, practice their technical presentation skills, receive feedback on their work. From this experience, we hope to inspire students to chose careers in power electronics and continue to be active IEEE and PELS members.
- **Chapter Name: Photonics Society Taipei Chapter (PHOT36)**
 - Continuation of technical sponsor of Optics and Photonics Taiwan 2020 (OPTIC 2020), to support the best student papers award. The OPTIC conference is the largest annual photonics conference in Taiwan. This is a good opportunity to promote IEEE Photonics Society via participating and supporting this event. Also we will use every opportunity to recruit more student members to join the IEEE Photonics Society (like the Optical design workshop this year, we had an IEEE Photonics society desk to introduce IEEE and distribute giveaways to students).
 - Support of Taiwan local photonic activities. This will be a long-term aim of the chapter to increase the photonic discussion and interaction between the research labs and other communities. Both chair and vice-chair of our chapter are the current board committee of Taiwan Photonic Society which can link us more to the local photonic community and industries.
- **Chapter Name: Robotics and Automation Society Taipei Chapter (RA24)**
 - Robotics and Automation Society at IEEE Taipei Section has completed several seminar activities planned in the year 2019, which includes organizing several workshops.
- **Chapter Name: Reliability Society Taipei Chapter (RL07)**
 - IEEE Taipei Section (RL07) in 2020 has committed itself to promote IEEE Reliability Society in Taiwan. We continuously invite experts, researchers and scholars to deliver keynote speeches sharing the cutting-edge technology and their innovative research results not only with the members of RL07 but also with the non-members in Taiwan. Furthermore, we encourage student members to have in-depth discussions with the invited speakers and exchange opinions with them in the field of reliability science and engineering.
- **Chapter Name: Sensors Council Taipei Chapter (SEN39)**

In sensor council, the promotion strategy is to use “real demonstration” to attract students’ interest and company’s interest on sensor IC researches/applications. Therefore, we actively attend several forums (including sensor IC tutorial and forum) to do the promotion.

 - We will sponsor student member to International competition.
 - We will sponsor student member to 2021 IEEE sensor conference in Oct 31~Nov 3 in ICC Sydney, Sydney, Australia.
 - Plan to invite a researcher to give a technical talk for group members.
- **Chapter Name: Systems, Man, and Cybernetics Society Taichung Chapter (SMC28-TC)**
 - IEEE SMC Taichung Chapter helped organize a special session for 2020 IEEE Int. Conf. on Systems, Man, and Cybernetics (IEEE SMC2020), Toronto, Canada, Oct.11-14, 2020. Prof. Tsai, Taichung Chapter Chair (SMC 28), served as a special session chair, a submission chair and two session chairs in SMC 2020.
 - IEEE SMC Taichung Chapter technically sponsored the 2020 international conference on Advanced Robotics and Intelligent Systems (ARIS 2020), Taipei Nangang Exhibition Center, in August, 2020. Prof. C. C. Tsai, Taichung Chapter Chair (SMC 28), served as an international advisory and a session chair.
 - IEEE SMC Taichung Chapter technically sponsored the 2020 National conference on Advanced Robotics (Chinese), Taipei Nangang Exhibition Center, in August 2020. Prof. C. C. Tsai, Taichung Chapter Chair (SMC 28), served as a national advisory.
 - IEEE SMC Taichung Chapter technically sponsored the 2020 National Conference on System Science and Engineering (NSSSE 2020), National Chung Hsing University, Taichung, Taiwan, over June 19-20, 2020. Prof. C. C. Tsai, Taichung Chapter Chair (SMC 28), served as the General Chair.

- IEEE SMC Taichung Chapter technically sponsored the 2020 International Conference on System Science and Engineering (ICSSE 2020), National Chung Hsing University, Taichung, Taiwan, over 8/31-9/3, 2020. Prof. C. C. Tsai, Taichung Chapter Chair (SMC 28), served as the Tutorial Chair and session chairs.
 - IEEE SMC Taichung Chapter technically sponsored the CACS 2020 International Automatic Control (CACS 2020), Hsingchu, Taiwan, over 4-7 November, 2020. Prof. C. C. Tsai, Taichung Chapter Chair (SMC 28), served as the General Co-Chair and session chairs.
 - IEEE SMC Taichung Chapter technically sponsored the 2020 International Conference on Fuzzy Theory and Its Applications Automatic Control (iFuzzy 2020), Hsingchu, Taiwan, over 4-7 November, 2020. Prof. C. C. Tsai, Taichung Chapter Chair (SMC 28), served as an international advisory and session chairs.
- **Chapter Name: Solid-State Circuits Society Taipei Chapter (SSC37)**
- Cosponsor 2021 VLSI/CAD Symposium and Annual SSCS Taiwan member meeting.
 - Cosponsor 2021 IC Design Contest under Taiwan Ministry of Education (MOE) --- The student winners would get free IEEE SSCS student membership for one year.
 - Sponsor student travel fund for 2021 A-SSCC accepted authors, if situation permitted.
 - Create Forums/seminars to promote IC design researches toward undergraduate students.
 - ISSCC training course to help Taiwan speakers to make good presentation at ISSCC.
- **Chapter Name: Vehicular Technology Society Taipei Chapter (VT06)**
- We will continue hosting technical talks, summer school, and workshop given by local or international experts.
 - If the Coronavirus pandemic situation will be under control, we hope that at least one such IEEE VTS Distinguished Lectures will be held in 2021
- **Chapter Name: Microwave Theory and Technique Society Taipei Chapter (MTT17)**
- We will continue hosting technical talks given by local or international experts.
 - It is expected that at least two such IEEE VTS Distinguished Lectures will be held in 2019.
 - We will continue to provide technical sponsorship to the major telecom conferences in Taiwan, including National Symposium on Telecommunications (NST 2019), and Information Theory and Communications Workshops (ITCOM 2019 Spring and Fall).
- **Student Branch Name: IEEE Chung Yuan University Student Branch**
We will organize some lecture for student members. We will also plan to hold some seminars and keep inviting students to join IEEE. Our goal is letting more students know IEEE.
- **Student Branch Name: IEEE National Central University Student Branch**
We will continue to organize events for our student members: lectures, laboratory visit, sharing sessions, institution visit, etc. And let more students know more about IEEE and join IEEE. This year we also wish to hold some courses which can broaden horizons for our student members in their spare time. Like introducing some program language and its application.
In 2020, IEEE NCU student branch won the High Distinction Award of club evaluation in NCU.
- **Student Branch Name: IEEE National Chiao Tung University Student Branch**
We will keep working on the study abroad association and also continue collecting alumni's contact information, which we already collected over 70 outstanding alumni's contact information in our directory now. Due to the COVID-19, we are going to held more virtual events through online platforms, such as Facebook Live and Google Meets.
- **Student Branch Name: IEEE National Kaohsiung University of Science and Technology Student Branch**
The NKUST Student Branch will keep inviting more lecturers from domestic and foreign academia and industry to give talks in NKUST with broad range of topics and enlarge the field of view of the members and advertise our members to the great scholars.
- **Student Branch Name: IEEE National Taipei University of Technology Student Branch**

- To facilitate optical fiber communication through intensive and extensive collaborations between research institutes, universities, and industries.
 - To have international visibility through hosting conferences and international collaborations
 - NTUT student branch will invite Speakers with academic achievement and advanced technology in the industry
- **Student Branch Name: IEEE National Taiwan University Student Branch**
- We plan on continuing to maintain our Facebook fanpage to share the recent progress with NTU students
 - We will continue to hold more lectures and workshops for students
 - We will continue recruiting more students to join the branch as well as take part in our branch committees
 - We will meet with the chairman of NTUEE Prof. Chung-Chih Wu to discuss the upcoming schedule and funding before mid-March.
- **Student Branch Name: IEEE National Tsing Hua University Student Branch**
- The Student Branch Chapter of NTHU have following activities in 2020:
- NTHU Student Chapter has recruited more student members.
 - Invite academic speakers from domestic and foreign to facilitate the technical information exchange.
 - Invite speakers to understand the needs for the industry.
 - Professional related courses provided for the student members.
- **Student Branch Name: IEEE National Tsing Hua University IA Society (IAS)**
- The IAS Student Branch Chapter of NTHU will have following activities in 2020:
- 10+ seminars and workshops on campus.
 - 2-3 industry tours.
- **Student Branch Name: IEEE National Tsing Hua University PEL Society (PELS)**
- The PEELS student branch chapter of NTHU will recruit the more members in 2020. Besides, the more seminars and workshops in campus will be held in order to enhance the professional knowledge in power electronics.
- **Student Branch Name: IEEE Yuan Ze University Student Branch**
- In the past months, we've held and co-organized 2 industry-academic seminar/exhibition, including 1 on-line exhibition due to the COVID-19 pandemic, however we'll continue to have such industry-academic seminars/exhibitions in this year. And we'll also promote the IEEE YZU SB in the college to make more students know about us and join us.
- **Student Branch Name: IEEE National Tsing Hua University ED Society (EDS)**
- Technical talks and workshops will be organized in the next year to attract more IEEE members and students.
 - We will try to distribute information through our technical talks and events and let more people know about the benefits of participating IEEE EDS and join our student branch.
- **Student Branch Name: IEEE National Chiao Tung University ED Society (EDS)**
- We will organize with ED Taipei chapter to plan technical talks given by local or international experts in semiconductor fields.
 - Recruiting new student members between 10-20 will be targeted for.
 - We will look for opportunities of company visit which would definitely help members understand more about the working environment in IC companies.
- **Student Branch Name: IEEE ED National Taiwan University Student Branch Chapter**
- Promote the interest of non-members to join the ED NTU Student Branch by holding technical seminars or side meetings through the webinar/locals. And we are continuously looking for opportunities to visit the R&D department in technical companies, which would help members have more understanding of the semiconductor industry's needs.

D.2 Goals and Future Plans

- **YP**

- Plan to double the number of affinity group members.
 - Invite more people from academic and industry to share experiences to share their experiences to young professionals. Meanwhile, we hope to promote such activities to more young professionals who are in the IT fields and located in Taipei.
 - Plan to have more communication with YP AGs from different IEEE Sections and even other IET societies.
- **Affinity Name: IEEE Women in Engineering (WiE)**
- Form a useful and attractive platform for female engineers in Taiwan.
 - Recruit more WiE members.
- **Chapter Name: Antennas and Propagation Society Taipei Chapter (AP03)**
- One of our major objectives is to increase the number of AP-S membership by visiting a few universities in Taiwan that have active AP research team/group.
 - We will refresh the AP-S Taipei Chapter website that has been developed by several years ago.
 - Me and my AP-S officers will separately be attending some of the major AP related conferences, which will be held virtually online. This includes APS-URSI 2021, RFIT 2021, EuCAP 2021. It is also a good way to meet up with most of the AP-S members from Taipei Chapter and their current or former graduate students.
 - ISAP 2021, a major AP related conference in region 10, will be held by us in Taipei from Oct. 19 to Oct. 22, 2021, which will be a hybrid conference (on site and virtual). We are aiming at providing a perfect forum for AP-S members from Taipei Chapter to interact with members from other chapters. Also, it is a good opportunity to recruit new members.
- **Chapter Name: Broadcast Technology Society Taipei Chapter (BT02)**
- Cooperate with the “IEEE International Elite School” through joint activities. Funded by the Taipei Tech, ministry of science and technology and ministry of education, the center promotes digital convergence curriculum and course materials development. Participants are mostly faculty members in the academic and industrial communities.
- **Chapter Name: Computer Society (C16)**
- New member recruitment
 - Collaboration with local societies or affiliations, such as CISA, Academia Sinica, NTU, etc.
- **Chapter Name: Circuits and Systems Society Taipei Chapter (CAS04)**
- We would like to invite a Hardware Security speaker to give lectures at the NCTU in 2021. This aims to improve interaction with international scholars and boarder views of chapter members and guest attendees. This kind of lectures further helps the chapter working together with the IEEE CAS as well. The topics may include challenges and opportunities of circuits and systems on Internet of Things, Lattice-based algorithms & Side Channel Attacks and Fault Injections” of Things, and so on.
 - We plan to organize workshops for high school and university students, for example, High School Students Meeting with Experts, Summer School on IC Design, Workshop on Circuits, Systems and Signal Processing, and so on. These workshops aim to encourage more students to know more about engraining and IC Design, especially those in high school. For university and graduate students, we expect to promote their academic abilities through offering them opportunities to meet with experts and distinguished researchers from different universities and institutions all over the world.
 - We hope to apply for finical support from the IEEE CAS and the Taipei Section to invite speakers and facilitate these lectures and workshops successfully.
- **Chapter Name: Consumer Electronics Society Taipei Chapter (CE08)**
- We plan to do the following few events
- Expand the student chapters’ universities.
- **Chapter Name: Council on Electronic Design Automation Taipei Chapter (CEDA44)**
- The goals of IEEE CEDA Taipei Chapter include the continuation of serving EDA faculty, students, and professionals in Taiwan for more effective discussions and explorations of new ideas. Tentative activities include 6 seminars, 3 workshops/short

course/summer camp and 2 member meetings. The targeted talent incubation activity will include Taiwan EDA summer camp 2021. In 2021, we will also try to collaborate with Chapters in Region 10 to promote EDA together.

➤ **Chapter Name: Computational Intelligence Society (CIS11)**

- To support the advancement of the professional standing of its members and their continuing education and encourage compliance with the standards of ethical and professional conduct as set forth by the IEEE.
- To promote close cooperation and exchange of technical information among its members and with other professional societies and individuals who share common interests in its field of interest from all over the world, by means of technical committees, public meetings, publications, educational activities, standards, and any other activities which are necessary, suitable, and proper for the fulfillment of these objectives. As such, in 2021, we will continue to help host the conferences technically sponsored by CIS.
- CIS Taipei Chapter is planning to invite the past president of IEEE CIS, Gary Yan, to visit Taiwan in 2021.
- CIS Taipei Chapter will also co-organize several academic activities such as competition, tutorial, workshop, and lecture and so on for both international and local students in Taiwan to involve in CIS field.
- To identify strategic directions for the development of the CIS.
 - Recruit more excellent members to join us.
 - Help our members to upgrade their membership levels.
 - At least four chapter activities during one year.
 - To cooperate with other Organizational Units of the IEEE or other organizations.

➤ **Chapter Name: Communications Society Taipei Chapter (COM19)**

- 2021-Fall IEEE Workshop on Information Theory and Communications will be in National Taipei University in Fall 2021.
- 2021 Summer School on Information/Communications Theory and Technologies will be in National Chiao Tung University in Hsinchu, Taiwan in August 2021.

➤ **Chapter Name: Components, Packaging, and Manufacturing Technology Society Taipei Chapter (CPMT21)**

- To boost up the membership of CPMT Taipei Chapter.
- To keep on collaborating with TPCA and ITRI to organize the conferences in the field of IC packaging, assembly and PCB.

➤ **Chapter Name: Council of RFID Taipei Chapter (CRFID741)**

Our main goal in year 2019 is to promote and recruit more faculty and students to join the CRFID741. Several events will be hosted, such as RFID industrial tour, meetings and lectures based on RFID related topics (such as transponder and tag design). We will also seek further opportunity to host or join local conferences or events that may promote our visibility to the public, as well as the industry in Taiwan.

➤ **Chapter Name: Control Systems Society Taipei Chapter (CS23)**

Our goal is to promote the society visibility and recruit more faculty and students to join CS23. To this end, we will continue to help host several control-oriented international conferences and invite distinguished scholars to have a talk in Taiwan.

➤ **Chapter Name: Education Society Taipei Chapter (E25)**

To promote local practice oriented courseware design and teaching:

- The chapter chair will join the board of directors of the Taiwan Embedded Microcontroller Development Institute. The society will try to cooperate with the Institute to hold several technical meetings for technical and vocational students and teachers in Taiwan.

To promote local colleagues to submit papers to engineering education oriented international conference and journals:

- The chapter chair was promoted as a Professor by using representative papers published in engineering education oriented international journals. We hope to encourage local colleagues who are not working in research oriented universities to do research works for engineer education, and to benefit those not so smart students in Taiwan.

- **Chapter Name: Electron Devices Society Taipei Chapter (ED15)**
The ED Taipei chapter has been very active in its activities. In the year 2021, several major tasks have been planned as below.
 - The chapter chair and other members will be actively participated in various IEEE conferences as organizers or TPC members. For example, the chapter chair will serve as General Chair of VLSI-TSA, and several members will participate as TPC members, such as the participation of SISC, SNW, VLSI, IRPS etc. as TPC members.
 - In the recent 10 years, an international symposium, eMDC, via the help of the chapter has acquired the EDS technical co-sponsorship. Special assistance will be provided in 2021.
 - The chapter will regularly invite at least 6-8 invited speakers or DL speakers in stimulating the academic research, encouraging DL from overseas to give virtual talks. These talks are open to university professors, students and engineers in northern Taiwan.
 - Promoting senior members – a target of 5-10 senior members will be targeted for.

- **Chapter Name: Engineering in Medicine and Biology Society Taipei Chapter (EMB18)**
 - To promote biomedical engineering education to students, engineers, and medical practitioners through workshops and conferences.
 - To facilitate biomedical industry through intensive and extensive collaborations between research institutes, universities, and industries.
 - To have international visibility through hosting conferences and international collaborations.

- **Chapter Name: Electromagnetic Compatibility Society Taipei Chapter (EMC27)**
 - The goals of EMC-S Taipei Chapter are to advance the Taiwan EMC industry technology, enrich information exchange in the Taiwan EMC society, and foster the links between the society and the world. For these goals, the Executive Committee was founded and is running well. The Committee members will aggressively participate in accomplishing the activities stated in D.1 to achieve the Chapter goals.

- **Chapter Name: Geoscience and Remote Sensing Society Taipei Chapter (GRS29)**
 - Taipei Chapter of GRS29 plans to host 2020 IEEE GRSS Taipei Chapter Best Thesis Award. The goal of hosting 2021 IEEE GRSS Taipei Chapter Best Thesis Award is to increase the number of IEEE GRSS memberships, develop the professional and educational activities, and enhance the engagement and commitment of the local scientific and commercial communities in Taiwan. The target membership includes all of the regional IEEE members in Taiwan.

- **Chapter Name: Industry Applications Society Taipei Chapter (IA34)**
 - Increase student and young professional involvement in both activities and the planning of new activities for future events.

- **Chapter Name: Industrial Electronics Society Taipei Chapter (IE13)**
The goal of IE13 society is to promote the society visibility and recruit more faculty and students to join IE13. IE13 will continue to sponsor several industrial electronics-oriented international conferences, seminars and forums, and invite distinguished lectures to give a talk in Taiwan.

- **Chapter Name: Instrumentation and Measurement Society Taipei Chapter (IM09)**
I&M Society Taipei Section Chapter has continuously followed the steps and reached the goals that we set up. In 2020, we reinforced the bridging between the academia and the industries, assisting to create more collaborative opportunities between the two. Marching to our 11th year of establishment, we are not satisfied with what we have made, but need to be much stronger and have made the following goals and plans,
 - To continue adding value to existing members and explore the growth of new members.
 - To continuously provide local academia and research circles the access to the world's largest research community, and vice versa help to disseminate the research results to the world.
 - To enhance the influence of the chapter in relevant research community.
 - To participate in relevant international and domestic activities such as conferences and exhibitions to absorb the latest research development, to build up chapter publicity, and to recruit more members joining the chapter.

- To serve the research communities related to instrument technology by introducing the latest frontier research progress through organizing seminars, talks, and courses.
- **Chapter Name: Information Theory Society Taipei Chapter (IT12)**
 - Promote international visibility by hosting international summer or winter schools.
 - Promote workshop participation by accepting poster submissions from outside of Taiwan in future workshops.
 - Promote student networking by adding a student session held in parallel with the panel discussion session in future workshops.
- **Chapter Name: Magnetics Society Taipei Chapter (MAG33)**
 - Promotion of interactions between members via regular meetings:
 - Plan to hold more meetings in Northern and Southern Taiwan to promote interactions between members.
 - Recruiting more MAG33 members:
 - By promotions in any activities.
 - Working out an approach to support the registrations of new members.
 - Other Workshops are being planned:
 - More likely to hold some workshops.
- **Chapter Name: Microwave Theory and Techniques Society Taipei Chapter (MTT17)**
 - MTT-S Taipei Chapter will invite and host Distinguished Microwave Lecturers to Taipei to give lectures on the latest technology.
 - The MTT-S Taipei Chapter members will help organize the session of IEEE RFIT 2021 and Wireless Transceiver for 2021 VLSI/CAD symposium. The conference is the premium national technical meeting in the area of integrated-circuit design, testing, computer-aided-design. The technical session includes oral presentation and invited paper presentation.
 -
- **Chapter Name: Power and Energy Society Taipei Chapter (PE31)**
 - Organize workshops or tutorials aimed at educating power engineers and graduated students on the fundamental concepts of power systems under highly penetrated renewable energy.
- **Chapter Name: Power Electronics Society Taipei Chapter (PEL35)**
 - Organize workshop aimed at educating young students on the fundamental concepts of renewable energy and power electronic systems. This may include outreach to high school or grade school students in the community.
- **Chapter Name: Photonics Society Taipei Chapter (PHOT36)**
 - Goals for 2021, we should promote more conference and activity information among our members of the IPS Taipei Chapter, especially for those held in Taiwan. The participation of the members in these conferences or workshops is very important.
 - Local technical seminars can also provide a very good interaction between academia and industrial professionals. One seminar for semiconductor lasers has been held in January 2021 and have great attendance across different fields of engineers and professionals. We could have more activities like this in the years to come.
 - 2021 Optics and Photonics will be held in December of 2021. IPS Taipei Chapter will again technically sponsor OPTIC 2021 and a chapter meeting will also be held then. The best student awards will also be given during the conference.
 - Adaptation to the pandemic condition around the world and promote the on-line participation among our members can be addressed in this year.
- **Chapter Name: Robotics and Automation Society Taipei Chapter (RA24)**
 - It is found that some of our RA student members have moved to US, Europe and other counties to pursue PhD or master degrees due to the recent boom of robotics industry such as drone, self-driving cars and automated driving. Our student member number decreases accordingly. We have promoted our society by holding more invited lectures, keynote speeches, and seminars and encourage industry partners to join RA24.
- **Chapter Name: Reliability Society Taipei Chapter (RL07)**

- In order to promote IEEE Reliability Society in Taiwan, IEEE Taipei Section (RL07) will continue to serve its members next year by holding invited lectures, keynote speeches, and seminars.
- **Chapter Name: Sensors Council Taipei Chapter (SEN39)**
 - Goal of SEN39 is to promote and to enhance cross-disciplinary collaboration on sensor-related technologies and sponsor activities on new sensor research. In the future, we will DLs to give talks for undergraduate and graduate students to really sensor IC design and to measure read-out sensor signals by using EDA tool such as HSPICE. We hope to stimulate students' motivation by the “experimental project”.
- **Chapter Name: Systems, Man, and Cybernetics Society Taipei Chapter (SMC28)**
 - SMC Taipei Chapter will continue to help sponsor IEEE Int. Conf. on System Science and Engineering (ICSSE 2021), 2021.
 - SMC Taipei Chapter will continue to help sponsor National Symp. on System Science and Engineering (NSSSE 2021), 2021.
 - SMC Taipei Chapter will contribute to the organization of The 2021 International Automatic Control Conference (CACs 2021), 2021.
- **Chapter Name: Systems, Man, and Cybernetics Society Taipei Chapter (SMC28-TC)**
 - Goal:
 - Continue to promote IEEE SMC visibility.
 - Recruit more faculty and students to join IEEE SMC Society.
 - Future Plans:
 - Continue to expand faculty and students membership in IEEE SMC Society.
 - Host more activities to make faculty and students understand the advantages of becoming members of the SMC society.
 - Organize and host Distinguished Lectures workshops in Taichung, Taiwan.
 - Organize workshops to promote and recruit new members to join IEEE SMCS
- **Chapter Name: Solid-State Circuits Society Taipei Chapter (SSC37)**
 - Membership promotion: Increase the member of IEEE SSCS.
 - Invited speakers for both DL and non-DL: To increase the visibility of IEEE SSCS in Taiwan academic and industry.
 - we plan to have at least 1 training program, 2 workshops, 2 press conferences (ISSCC and A-SSCC), multiple invited talks (SSCS DL and other invited talks) in 2021. We hope to attract 500 attendees to attend physical SSCS activities if situation allowed; and over 300 on-line participants for the virtual events. We will continue to promote SSCS memberships.
- **Chapter Name: Vehicular Technology Society Taipei Chapter (VT06)**
 - We plan to work on membership promotion and encourage more potential researchers to be VTS members in 2021.
 - We plan to sponsor experts worldwide to give technical talks in Taiwan in order to promote technical interactions between IEEE VTS Taipei members and experts.
 - If the Coronavirus pandemic situation will be under control, we hope to invite IEEE Distinguished Lecturers/Scholars to Taiwan for research interactions and/or possible research collaborations.
- **Student Branch Name: IEEE Chung Yuan Christian University Student Branch**
 - We will encourage more students to join IEEE.
 - Nontechnical meeting in April 2021.
 - Technical discussion meeting in July 2021.
- **Student Branch Name: IEEE National Central University Student Branch**
The table below shows our future plans.

Date	Event	Content
2021/2/25	Orientation Party	Introduce future plan to members
2021/3~2021/4	Raspberry Pi Courses	Give a brief introduction to Python and Raspberry Pi by 3-week courses
2021/3/23	Student Presentation 1	Discussing
2021/4/13	Student Presentation 2	Discussing

2021/5/18	Student Presentation 3	Discussing
2021/5/25	Institution Visit	Discussing
2021/6/8	Final Party	Giving award to well-performed students
2021/9/16	Orientation Party	Introduction of IEEE Student Branch in NCU
2021/9/29	Career Speech 1	Discussing
2021/10/13	Career Speech 2	Discussing
2021/10/27	Career Speech 3	Discussing
2021/11/23	Laboratory Visit	Visit laboratories of NCU electronic engineering
2021/12/15	Student Presentation	Discussing
2021/12/29	Final Party	1. Semester Activities Review 2. Financial Reports

- Encourage more students to join IEEE NCU Student Branch.
- Encourage members to comprehend more knowledge in electronic, computer science, etc. through discussion and participate in all kinds of student activities.
- Encourage more local members to join IEEE student membership.
- Receiving feedback from our members to improve our activities.

➤ **Student Branch Name: IEEE National Chiao Tung University Student Branch**

Up coming events:

- Online event about how to get an intern position in Taiwan or in the USA in mid of March.
- Online event about general application problems in April.

Others:

- Encourage student members to attend ICMR, Taipei, Taiwan, July 12-15, 2021.
- Keep updating our contact directory which records the contact information of alumni studying abroad.
- Recruit more student from other departments and collecting information about not only EECS students but also other areas.

➤ **Student Branch Name: IEEE National Chung Hsing University SMC Society (SMCS)**

- More student members are encouraged to attend 2019 International conference on systems science and engineering held in July 2019.
- More student members are encouraged to attend 2019 International conference on Advanced Robotics and Intelligent Systems held at Taipei Nangang Exhibition Center, Taipei, Taiwan, in August 2019.

➤ **Student Branch Name: IEEE National Kaohsiung University of Science and Technology Student Branch**

We will encourage more students to join IEEE in 2021. To achieve this, we will enhance in promoting IEEE and explaining for the benefits of joining IEEE. We also encourage and arrange more student members to be as exchange students with different universities worldwide and to visit the student branches in the university this year.

➤ **Student Branch Name: IEEE National Taipei University of Technology Student Branch**

- Continue to promote IEEE Photonics Society visibility.
- Recruit more faculty and students to join IEEE Photonics Society.
- Host more activities to make faculty and students understand the advantages of becoming members of the Photonics Society.

➤ **Student Branch Name: IEEE National Taiwan University Student Branch**

- Goals:
 - Be more active on our Facebook fanpage to increase student branch exposure and interaction with the students at NTU
 - Increase correspondence and cooperation with other branches

- Increase the number of student branch members
- Provide branch members with resources to further their networking, studies, research, and career, and have while doing it
- Future Plans:

Date	Event	Topic
2021/01/28	Recruitment Orientation	Introduction of IEEE Student Branch at NTU
2021/02/05	Welcome Party	Welcome New IEEE members and Students
2021/03/02	Company Visit	[To Be Determined]
2021/04/26	Lecture #1	Academic Writing
2021/09	Lecture #2	[To Be Determined]
2021/10	Workshop	[To Be Determined]
2021/12	Year-End Party	Celebrate the past year of our branch

➤ **Student Branch Name: IEEE National Taiwan University of Science and Technology Student Branch**

Five talks of the IEEE SMC Student Branch Chapter at NTUST will be held in 2021.

➤ **Student Branch Name: IEEE National Tsing Hua University Student Branch**

More nontechnical and professional lectures and meetings will be held in 2021.
More professional related courses provided for the student members.

➤ **Student Branch Name: IEEE Yuan Ze University Student Branch**

- Invite members to give talks to enable interdisciplinary learning.
- Organize/co-organize seminars and conferences to let members know the implementation of science on industry.
- Encourage members to publish papers.
- Encourage members to attend academic competition and exhibition.

➤ **Student Branch Name: IEEE National Tsing Hua University ED Society (EDS)**

- Invite more speakers to have experience sharing.
- Recruit more EDS members.

➤ **Student Branch Name: IEEE National Chiao Tung University ED Society (EDS)**

- Recruit 10-20 EDS members.
- Facebook group: NCTU Studying Abroad Association X NCTU IEEE Student Branch.
 - Provide basic Q&A about studying abroad.
 - Share the latest information about studying abroad, for example, the latest exchange program
 - Provide the information for members to enhance their knowledge of using IEEE resources

➤ **Student Branch Name: IEEE ED National Taiwan University Student Branch Chapter**

We plan to hold 1~2 technical talk/IEEE Distinguished Lecturers, a visitation of R&D department in technical company, or some small seminars. We expect each activity will promote students' interesting to join our society.

D.3 **Any innovative ideas to make IEEE more creative and value added for sustaining the membership retention and recruitment goals.**

➤ **Taipei Section**

Develop an incentive program for corporations to join IEEE as "Corporate Member" for IEEE Sections Congress.

➤ **Chapter Name: Communications Society Taipei Chapter (COM19)**

- Hold IEEE initiated training courses for industry members to increase membership from the industry.
 - Local IEEE helps match the interests of industry and academia, and initiate industry research projects.
- **Chapter Name: Council of RFID Taipei Chapter (CRFID741)**
The IEEE should have think of developing group industrial memberships. Any industry that joint this membership will be allowed to have all or a certain number of their employees to become the IEEE members.
- **Chapter Name: Solid-State Circuits Society Taipei Chapter (SSC37)**
- Due to the outbreak of COVID-19 starting in 2020, most international conferences have gone virtual. As a result, many cannot attend conferences in person, and the incentive of joining IEEE membership to reduce the registration cost is no longer attractive. To sustain the number of IEEE members, the membership fee should be reduced.
- **YP**
- Any community fan page is established to share some latest news in CE.
 - Promoting of new members through workshops/seminars.
- **WiE**
- Using social software may help link the members tightly. Build the groups in the social software, make an updated list of all participants (name, affiliation), share timely news, and provide attractive discussion topics.
- **Student Branch Name: IEEE National Taiwan University Student Branch**
- Increase communication and joint events between student branches to provide more networking opportunities and resources to more student members

D.4. Business Plan for Sustainable Growth and Financial Stability.

- N/A

IEEE
IEEE : Region 10 : Region 10 TWD
Balance Sheet Detail
From Jan 2020 to Adjust 2020

FINANCIAL ROW	TYPE	DATE	DOCUMENT NUMBER	NAME	AMOUNT	BALANCE
Current Assets					NT\$0.00	NT\$0.00
Bank					NT\$0.00	NT\$0.00
74725 - Mega Int'l Commercial Bank - Taipei					NT\$0.00	NT\$8,921,565.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	-NT\$887,599.00	NT\$8,033,966.00
	Transfer	12/31/2020	4482		NT\$80,000.00	NT\$8,113,966.00
	Transfer	12/31/2020	4485		-NT\$376,294.00	NT\$7,737,672.00
	Transfer	12/31/2020	4486		-NT\$45,519.00	NT\$7,692,153.00
	Transfer	12/31/2020	4487		-NT\$35,092.00	NT\$7,657,061.00
	Deposit	12/31/2020	87875		NT\$2,009,478.00	NT\$9,666,539.00
Total - 74725 - Mega Int'l Commercial Bank - Taipei					NT\$744,974.00	NT\$9,666,539.00
74726 - E.SUN Commercial Bank Taipei					NT\$0.00	NT\$1,653,774.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	-NT\$472,377.00	NT\$1,181,397.00
	Transfer	12/31/2020	4482		-NT\$80,000.00	NT\$1,101,397.00
	Transfer	12/31/2020	4483		-NT\$100,000.00	NT\$1,001,397.00
	Transfer	12/31/2020	4485		NT\$376,294.00	NT\$1,377,691.00
	Transfer	12/31/2020	4486		NT\$45,519.00	NT\$1,423,210.00
	Transfer	12/31/2020	4487		NT\$35,092.00	NT\$1,458,302.00
	Deposit	12/31/2020	87873		NT\$9,521.00	NT\$1,467,823.00
Total - 74726 - E.SUN Commercial Bank Taipei					-NT\$185,951.00	NT\$1,467,823.00
74842 - Mega Int'l Commercial Bank (Legal Reserve) Taipei					NT\$0.00	NT\$3,716,140.00
	Transfer	12/31/2020	4483		NT\$100,000.00	NT\$3,816,140.00
	Deposit	12/31/2020	87874		NT\$12,286.00	NT\$3,828,426.00
Total - 74842 - Mega Int'l Commercial Bank (Legal Reserve) Taipei					NT\$112,286.00	NT\$3,828,426.00
Total Bank					NT\$671,309.00	NT\$14,962,788.00
Total Current Assets					NT\$671,309.00	NT\$14,962,788.00
Current Assets Less Current Liabilities					NT\$671,309.00	NT\$14,962,788.00
Total Assets Less Current Liabilities					NT\$671,309.00	NT\$14,962,788.00
Total Assets Less Total Liabilities					NT\$671,309.00	NT\$14,962,788.00
Capital and Reserves					NT\$0.00	NT\$0.00
Retained Earnings					NT\$8,666,359.00	NT\$14,291,479.00
Net Income					NT\$671,309.00	NT\$671,309.00
Total Capital and Reserves					NT\$9,337,668.00	NT\$14,962,788.00

IEEE
IEEE : Region 10 : Region 10 TWD
General Ledger
From Jan 2020 to Adjust 2020

ACCOUNT	TYPE	DATE	DOCUMENT NUMBER	NAME	DEBIT	CREDIT	BALANCE
74725 - Mega Int'l Commercial Bank - Taipei							NT\$8,921,565.00
	Deposit	12/31/2020	87875		NT\$2,009,478.00		NT\$10,931,043.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD		NT\$887,599.00	NT\$10,043,444.00
	Transfer	12/31/2020	4486			NT\$45,519.00	NT\$9,997,925.00
	Transfer	12/31/2020	4485			NT\$376,294.00	NT\$9,621,631.00
	Transfer	12/31/2020	4487			NT\$35,092.00	NT\$9,586,539.00
	Transfer	12/31/2020	4482		NT\$80,000.00		NT\$9,666,539.00
Total - 74725 - Mega Int'l Commercial Bank - Taipei					NT\$2,089,478.00	NT\$1,344,504.00	NT\$9,666,539.00
74726 - E.SUN Commercial Bank Taipei							NT\$1,653,774.00
	Transfer	12/31/2020	4485		NT\$376,294.00		NT\$2,030,068.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD		NT\$472,377.00	NT\$1,557,691.00
	Transfer	12/31/2020	4486		NT\$45,519.00		NT\$1,603,210.00
	Transfer	12/31/2020	4487		NT\$35,092.00		NT\$1,638,302.00
	Transfer	12/31/2020	4483			NT\$100,000.00	NT\$1,538,302.00
	Deposit	12/31/2020	87873		NT\$9,521.00		NT\$1,547,823.00
	Transfer	12/31/2020	4482			NT\$80,000.00	NT\$1,467,823.00
Total - 74726 - E.SUN Commercial Bank Taipei					NT\$466,426.00	NT\$652,377.00	NT\$1,467,823.00
74842 - Mega Int'l Commercial Bank (Legal Reserve) Taipei							NT\$3,716,140.00
	Deposit	12/31/2020	87874		NT\$12,286.00		NT\$3,728,426.00
	Transfer	12/31/2020	4483		NT\$100,000.00		NT\$3,828,426.00
Total - 74842 - Mega Int'l Commercial Bank (Legal Reserve) Taipei					NT\$112,286.00	NT\$0.00	NT\$3,828,426.00
29999 - Retained Earnings							-NT\$5,625,120.00
Total - 29999 - Retained Earnings					NT\$0.00	NT\$0.00	-NT\$5,625,120.00
1.20 - Received from Corporations							-NT\$44,970.00
Total - 1.20 - Received from Corporations					NT\$0.00	NT\$0.00	-NT\$44,970.00
1.30 - Received from Foundations							-NT\$59,129.00
	Deposit	12/31/2020	87875			NT\$20,000.00	-NT\$79,129.00
Total - 1.30 - Received from Foundations					NT\$0.00	NT\$20,000.00	-NT\$79,129.00

ACCOUNT	TYPE	DATE	DOCUMENT NUMBER	NAME	DEBIT	CREDIT	BALANCE
1.10 - Received from Individuals							-NT\$2,558,442.00
Total - 1.10 - Received from Individuals					NT\$0.00	NT\$0.00	-NT\$2,558,442.00
2.10 - Meetings & Social Events							-
							NT\$28,302,044.00
Total - 2.10 - Meetings & Social Events					NT\$0.00	NT\$0.00	-
							NT\$28,302,044.00
2.50 - Conference Revenue							-
							NT\$10,789,913.00
Total - 2.50 - Conference Revenue					NT\$0.00	NT\$0.00	-
							NT\$10,789,913.00
3.34 - IEEE HQ & Societies							-NT\$8,180,898.00
	Deposit	12/31/2020	87875			NT\$963,152.00	-NT\$9,144,050.00
Total - 3.34 - IEEE HQ & Societies					NT\$0.00	NT\$963,152.00	-NT\$9,144,050.00
3.45 - Non-IEEE CB Account Interest							-NT\$274,946.00
	Deposit	12/31/2020	87873			NT\$9,521.00	-NT\$284,467.00
	Deposit	12/31/2020	87875			NT\$45,519.00	-NT\$329,986.00
	Deposit	12/31/2020	87874			NT\$12,286.00	-NT\$342,272.00
Total - 3.45 - Non-IEEE CB Account Interest					NT\$0.00	NT\$67,326.00	-NT\$342,272.00
3.10 - Rebate from IEEE HQ							-NT\$5,696,506.00
	Deposit	12/31/2020	87875			NT\$562,154.00	-NT\$6,258,660.00
Total - 3.10 - Rebate from IEEE HQ					NT\$0.00	NT\$562,154.00	-NT\$6,258,660.00
3.30 - Sections or Councils							-NT\$260,823.00
Total - 3.30 - Sections or Councils					NT\$0.00	NT\$0.00	-NT\$260,823.00
3.70 - Other Receipts							NT\$0.00
	Journal	12/21/2020	390685			NT\$15.00	-NT\$15.00
	Journal	12/31/2020	390684		NT\$15.00		NT\$0.00
	Deposit	12/31/2020	87875			NT\$418,653.00	-NT\$418,653.00
Total - 3.70 - Other Receipts					NT\$15.00	NT\$418,668.00	-NT\$418,653.00
3.90 - Reserve Allocation Income							-NT\$1,720,413.94
Total - 3.90 - Reserve Allocation Income					NT\$0.00	NT\$0.00	-NT\$1,720,413.94
4.10 - Meetings & Social Events Expense							NT\$28,004,036.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	NT\$568,322.00		NT\$28,572,358.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	NT\$188,186.00		NT\$28,760,544.00

ACCOUNT	TYPE	DATE	DOCUMENT NUMBER	NAME	DEBIT	CREDIT	BALANCE
Total - 4.10 - Meetings & Social Events Expense					NT\$756,508.00	NT\$0.00	NT\$28,760,544.00
4.50 - Conference Expenses							NT\$2,250,212.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	NT\$164,640.00		NT\$2,414,852.00
Total - 4.50 - Conference Expenses					NT\$164,640.00	NT\$0.00	NT\$2,414,852.00
4.85 - Grants and Awards Expense							NT\$187,420.00
Total - 4.85 - Grants and Awards Expense					NT\$0.00	NT\$0.00	NT\$187,420.00
4.90 - Other Program Expenses							NT\$8,799,880.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	NT\$60,000.00		NT\$8,859,880.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	NT\$276,000.00		NT\$9,135,880.00
Total - 4.90 - Other Program Expenses					NT\$336,000.00	NT\$0.00	NT\$9,135,880.00
4.70 - Professional Activities Expense							NT\$2,305,589.00
Total - 4.70 - Professional Activities Expense					NT\$0.00	NT\$0.00	NT\$2,305,589.00
5.30 - Salaries Expense							NT\$182,000.00
Total - 5.30 - Salaries Expense					NT\$0.00	NT\$0.00	NT\$182,000.00
4.80 - Student Activities Expense							NT\$630,822.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	NT\$89,259.00		NT\$720,081.00
Total - 4.80 - Student Activities Expense					NT\$89,259.00	NT\$0.00	NT\$720,081.00
5.20 - Travel Expense							NT\$4,636,430.00
Total - 5.20 - Travel Expense					NT\$0.00	NT\$0.00	NT\$4,636,430.00
6.10 - Postage & Supplies							NT\$469,823.00
	Journal	12/21/2020	390685		NT\$15.00		NT\$469,838.00
	Journal	12/31/2020	390684			NT\$15.00	NT\$469,823.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	NT\$8,191.00		NT\$478,014.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	NT\$5,378.00		NT\$483,392.00

ACCOUNT	TYPE	DATE	DOCUMENT NUMBER	NAME	DEBIT	CREDIT	BALANCE
Total - 6.10 - Postage & Supplies					NT\$13,584.00	NT\$15.00	NT\$483,392.00
5.50 - Support to Sections/Chapters Expense							NT\$35,100.00
Total - 5.50 - Support to Sections/Chapters Expense					NT\$0.00	NT\$0.00	NT\$35,100.00
7.00 - Reserve Allocation Expense							NT\$1,720,413.94
Total - 7.00 - Reserve Allocation Expense					NT\$0.00	NT\$0.00	NT\$1,720,413.94

IEEE
IEEE : Region 10 : Region 10 TWD
Profit and Loss Detail
From Jan 2020 to Adjust 2020

FINANCIAL ROW	TYPE	DATE	DOCUMENT NUMBER	NAME	CLR	SPLIT	AMOUNT
Sales							
1.30 - Received from Foundations							
	Deposit	12/31/2020	87875		F	74725 - Mega Int'l Commercial Bank - Taipei	NT\$20,000.00
Total - 1.30 - Received from Foundations							NT\$20,000.00
3.10 - Rebate from IEEE HQ							
	Deposit	12/31/2020	87875		F	74725 - Mega Int'l Commercial Bank - Taipei	NT\$562,154.00
Total - 3.10 - Rebate from IEEE HQ							NT\$562,154.00
3.34 - IEEE HQ & Societies							
	Deposit	12/31/2020	87875		F	74725 - Mega Int'l Commercial Bank - Taipei	NT\$963,152.00
Total - 3.34 - IEEE HQ & Societies							NT\$963,152.00
3.45 - Non-IEEE CB Account Interest							
	Deposit	12/31/2020	87873		F	74726 - E.SUN Commercial Bank Taipei	NT\$9,521.00
	Deposit	12/31/2020	87874		F	74842 - Mega Int'l Commercial Bank (Legal Reserve) Taipei	NT\$12,286.00
	Deposit	12/31/2020	87875		F	74725 - Mega Int'l Commercial Bank - Taipei	NT\$45,519.00
Total - 3.45 - Non-IEEE CB Account Interest							NT\$67,326.00
3.70 - Other Receipts							
	Journal	12/21/2020	390685		F	6.10 - Postage & Supplies	NT\$15.00
	Deposit	12/31/2020	87875		F	74725 - Mega Int'l Commercial Bank - Taipei	NT\$418,653.00
	Journal	12/31/2020	390684		F	6.10 - Postage & Supplies	-NT\$15.00
Total - 3.70 - Other Receipts							NT\$418,653.00
Total - Sales							NT\$2,031,285.00
Gross Profit							NT\$2,031,285.00
Overheads							
4.10 - Meetings & Social Events Expense							
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	F	74725 - Mega Int'l Commercial Bank - Taipei	NT\$568,322.00

FINANCIAL ROW	TYPE	DATE	DOCUMENT NUMBER	NAME	CLR	SPLIT	AMOUNT
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	F	74726 - E.SUN Commercial Bank Taipei	NT\$188,186.00
Total - 4.10 - Meetings & Social Events Expense							NT\$756,508.00
4.50 - Conference Expenses	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	F	74725 - Mega Int'l Commercial Bank - Taipei	NT\$164,640.00
Total - 4.50 - Conference Expenses							NT\$164,640.00
4.80 - Student Activities Expense	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	F	74725 - Mega Int'l Commercial Bank - Taipei	NT\$89,259.00
Total - 4.80 - Student Activities Expense							NT\$89,259.00
4.90 - Other Program Expenses	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	F	74725 - Mega Int'l Commercial Bank - Taipei	NT\$60,000.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	F	74726 - E.SUN Commercial Bank Taipei	NT\$276,000.00
Total - 4.90 - Other Program Expenses							NT\$336,000.00
6.10 - Postage & Supplies	Journal	12/21/2020	390685		F	3.70 - Other Receipts	NT\$15.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	F	74726 - E.SUN Commercial Bank Taipei	NT\$8,191.00
	Cheque	12/31/2020	6	Anonymous Customer Region 10 TWD	F	74725 - Mega Int'l Commercial Bank - Taipei	NT\$5,378.00
	Journal	12/31/2020	390684		F	3.70 - Other Receipts	-NT\$15.00
Total - 6.10 - Postage & Supplies							NT\$13,569.00
Total - Overheads							NT\$1,359,976.00
Operating Profit							NT\$671,309.00
Net Profit/(Loss)							NT\$671,309.00