

2023 Annual Report (June 2022 – May 2023)
Power and Energy Circuits and Systems Technical Committee (PECAS-TC)
IEEE Circuits and Systems Society

Chair: Zhen (Daniel) Li
Chair-Elect: Giulia Di Capua
Secretary: Xi Chen

1. Technical Committee Meeting(s):

Please state the number of TC meetings in the past year, where held, TC meeting attendance rate, and was a quorum present.

The PECAS TC in the IEEE Circuits and Systems (CAS) Society usually organizes one annual TC meeting, in in-person and at a convenient conference venue. In particular, the annual meeting of the PECAS-TC is normally held in conjunction with the IEEE International Symposium on Circuits and Systems (ISCAS).

The last PECAS-TC annual meeting was held during the IEEE ISCAS 2022, on May 30th 2022, in virtual mode, due to the covid-19 pandemic and conference venue restrictions. A total number of 9 members joined the 2022 meeting (list of attendees available in the minutes of the TC meeting held on May 2022).

The PECAS TC officers plan to have a hybrid meeting during the month of May 2023, in conjunction with IEEE ISCAS 2023 virtual event (21-25 May 2023).

2. Voting Members:

To date, the PECAS-TC counts 62 active members (*voting members*) and 4 corresponding members (*affiliate members, with no right to vote*). Details are provided at the PECAS-TC webpages:

<https://iee-cas.org/technical-committee/PECAS/pecas-full-members>
<https://iee-cas.org/technical-committee/PECAS/pecas-corresponding-members>

In the following, we listed the records of all members who replied to the annual report request (the list order just reflects the time the members provided their response to the report request).

#	First Name	Last Name	Affiliation	Email	IEEE Grade	IEEE Region
1	Yan	Lu	Institute of Microelectronics University of Macau	yanlu@um.edu.mo	Senior	R10
2	Hiroo	Sekiya	Graduate School of Eng., Chiba University	sekiya@faculty.chiba-u.jp	Senior	R10
3	Adrian	Ioiovici	EE Dept, Holon Inst. of Technology	ioiovici@gmail.com	Fellow	R8
4	Chi Tsun (Ben)	Cheng	Dept. of Manufact., Materials and Mechatronics, RMIT University	ctcheng@ieee.org	Senior	R10
5	Xiaozhe	Wang	Dept. of Electrical and Computer Eng., McGill University	xiaozhe.wang2@mcgill.ca	Member	R7
6	Xi	Chen	GEIRI North Americ State Grid Corporation of China	xc@ieee.org	Senior	R6
7	Herbert	Ho-Ching lu	School of Electrical, Electronic & Computer Eng., University of Western Australia	herbert.iu@uwa.edu.au	Senior	R10
8	Giulia	Di Capua	Dept. of Electrical and Information Eng. University of Cassino and Southern Lazio	giulia.dicapua@unicas.it	Senior	R8
9	Chi-Seng	Lam	State Key Lab. of Analog and Mixed-Signal VLSI & Inst. of Microelectronics, University of Macau	cslam@um.edu.mo	Senior	R10
10	Hiroataka	Koizumi	Dept. of Electrical Eng., Tokyo University of Science	littlespring@ieee.org	Member	R10
11	Guido	Torelli	Dept. of Electrical, Computer & Biomedical Eng., University of Pavia	guido.torelli@unipv.it	Senior	R8
12	Zhiyuan	Chen	School of Microelectronics Fudan University	chen_zy@fudan.edu.cn	Member	R10
13	Zhen (Daniel)	Li	School of Automation, Beijing Institute of Technology	zhenli@bit.edu.cn	Senior	R10
14	Anmol	Sharma	Texas Instruments Inc.	anmol@ti.com	Senior	R5
15	Yang (Tim)	Jiang	State Key Laboratory of Analog and Mixed-Signal VLSI & Institute of Microelectronics University of Macau	timjiang@um.edu.mo	Member	R10
16	Wing-Kuen	Ling	Guangdong University of Technology	yongquanling@gdut.edu.cn	Member	R10
17	Lin	Cheng	University of Science and Technology of China	eecheng@ustc.edu.cn	Member	R10
18	Giovanni	Spagnuolo	Dept. of Information Eng., Electrical Eng. & Applied Math. - University of Salerno	gspagnuolo@unisa.it	Fellow	R8

19	Chia-Chi	Chu	Dept. of EE, National Tsing Hua University	ccchu@ee.nthu.edu.tw	Senior	R10
20	Ke-Horng	Chen	Dept. of Electrical and Computer Eng. University of National Chiao Tung	khchen@cn.nctu.edu.tw	Senior	R10
21	Junmin	Jiang	Dept. of Electrical and Electronic Eng. Southern University of Science and Technology	jiangjm@sustech.edu.cn	Member	R10
22	Jianping	Guo	Sun Yat-sen University	guojp3@mail.sysu.edu.cn	Senior	R10

Geographical distribution of PECAS TC members (percentage of total)

	June 2022 – May 2023
Total number of voting members = 62	%
Regions 1 – 6 (U.S.A.)	22.6%
Region 7 (Canada)	3.2%
Region 8 (Europe/Africa, Middle East)	16.1%
Region 9 (Central/South America)	3.2%
Region 10 (Asia/Pacific)	54.8%
Total	100%

Gender distribution of PECAS TC members (percentage of total)

	June 2022 – May 2023
Total number of voting members = 62	%
Male	90.3%
Female	9.7%
Total	100%

Distribution of PECAS TC members by affiliation (percentage of total)

	June 2022 – May 2023
Total number of voting members = 62	%
Academia	91.9%
Industry	6.5%
Government	1.6%
Total	100%

3. Accomplished Technical Activities

3.1. IEEE Conference/Event organizations (2021-2022):

Please highlight conference/events **technically and/or financially co-sponsored by the CAS Society**
Please don't report conference/events that are NOT sponsored by the CAS Society. Thank you!

Your Name	Conference Sponsors	Conference/Event Title	Your Role
Yan Lu	IEEE CAS	ISCAS 2023 21-25 May 2023 Monterey, California, USA	<ul style="list-style-type: none"> Review Committee Member
Hiroo Sekiya	IEEE CAS	ISCAS 2023 21-25 May 2023 Monterey, California, USA	<ul style="list-style-type: none"> Review Committee Member Session chair
Hiroo Sekiya	IEEE CAS	ISOCC 2022 19-22 Oct. 2023 Gangneung-si, Gangwon-do, Korea,	<ul style="list-style-type: none"> Special Session chair Session chair
Adrian Ioinovici	IEEE CAS	ISCAS 2023 21-25 May 2023 Monterey, California, USA	<ul style="list-style-type: none"> Review Committee Member
Giulia Di Capua	IEEE CAS	ISCAS 2023 21-25 May 2023 Monterey, California, USA	<ul style="list-style-type: none"> WiCAS chair Session chair
Giulia Di Capua	IEEE CAS	PRIME-SMACD 2022 12-15 June 2022 Villasimius, Italy	<ul style="list-style-type: none"> YP and WiCAS chair Local Arrangements chair
Giulia Di Capua	IEEE CAS	ICECS 2022 24-26 October 2022 Glasgow, UK	<ul style="list-style-type: none"> YP and WiCAS chair
Chi-Seng Lam	IEEE CAS	ISCAS 2023 21 -25 May 2023 Monterey, California, USA	<ul style="list-style-type: none"> Track Chairs
Chi-Seng Lam	IEEE CAS	ISICAS 2022 20-21 October 2022 Bordeaux, France	<ul style="list-style-type: none"> Session Chair
HirotaKa Koizumi	IEEE CAS	ISCAS 2023 21-25 May 2023 Monterey, California, USA	<ul style="list-style-type: none"> Review Committee Member
Zhiyuan Chen	IEEE CAS	ISCAS 2023 21-25 May 2023 Monterey, California, USA	<ul style="list-style-type: none"> Review Committee Member

Anmol Sharma	IEEE CAS	ISCAS 2023 21-25 May 2023 Monterey, California, USA	<ul style="list-style-type: none"> Review Committee Member
Yang (Tim) Jiang	IEEE CAS	ISCAS 2023 21-25 May 2023 Monterey, California, USA	<ul style="list-style-type: none"> Review Committee Member
Yang (Tim) Jiang	IEEE CAS	APCCAS 2022 11-13 November 2022 Shenzhen, China	<ul style="list-style-type: none"> TPC Member Session Chair
Junmin Jiang	IEEE CAS	ISCAS 2023 21-25 May 2023 Monterey, California, USA	<ul style="list-style-type: none"> Review Committee Member
Junmin Jiang	IEEE CAS	ISICAS 2022 20-21 October 2022 Bordeaux, France	<ul style="list-style-type: none"> Guest Editor
Jianping Guo	IEEE CAS Xi'an Chapter	ICTA 2022 28-30 October 2022 Xi'an, China	<ul style="list-style-type: none"> TPC Member Session Chair

3.2. IEEE Journal Editorships:

Please highlight journals that are **(co-)sponsored by the CAS Society**, cf., <https://ieee-cas.org/publications>

Please don't report journals that are NOT sponsored by the CAS Society. Thank you!

Your Name	Journal Sponsors	Journal Title	Your Role
Chi-Tsun (Ben) Cheng	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Associate Editor
Chi-Tsun (Ben) Cheng	IEEE CAS	IEEE Circuits and Systems Society Newsletter	Associate Editor
Chi-Tsun (Ben) Cheng	IEEE CAS	IEEE Open Journal of Circuits and Systems (OJCAS)	Associate Editor
Chi-Tsun (Ben) Cheng	IEEE CAS	IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS)	Guest Editor for Special Issue: Circuits and Systems for Industry X.0 Applications
Xi Chen	IEEE CAS	IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS)	Guest Editor for Special Issue: Circuits and Systems for Industry X.0 Applications
Herbert Ho-Ching Iu	IEEE CAS	IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS)	Editor-in-Chief
Herbert Ho-Ching Iu	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Associate Editor
Giulia Di Capua	IEEE CAS	IEEE Trans. On Circuits and Systems I: Regular Papers	Associate Editor
Chi-Seng Lam	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Guest Editor for ISICAS 2022
Zhen (Daniel) Li	IEEE CAS	IEEE Trans. On Circuits and Systems I: Regular Papers	Associate Editor
Junmin Jiang	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Associate Editor
Junmin Jiang	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Guest Editor for ISCAS 2023
Junmin Jiang	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Guest Editor for ISICAS 2022

3.3. Awards, Honors, and Recognition

2021-22 Fellow elevation, Distinguished Lecturer currently in service, Outstanding Service, CAS conferences/journals Best Paper Awards, etc., **assigned by the CAS Society**

Your Name	Awards / Honors / Recognition	Period
Yan Lu	TCAS-I Highlight for paper entitled "A Hybrid Single-Inductor Bipolar Triple-Output DC-DC Converter With High-Quality Positive Outputs for AMOLED Displays"	January 2023
Herbert Ho-Ching Iu	2023-2024 IEEE CASS Distinguished Lecturer	January 2023
Herbert Ho-Ching Iu	2023 IEEE Transactions on Circuits and Systems Guillemín-Cauer Best Paper Award for paper entitled "Neuromorphic Dynamics of Chua Corsage Memristor"	2023

3.4. Keynote Speeches/Invited Talks:

Please highlight speeches and/or talks held in **(co-)sponsored CAS events**, or promoted by **CAS chapters/sections**.

Your Name	Invited by	Event/Conference Title	Talk Title	Date
Yang (Tim) Jiang	Conference organizers	IEEE MWSCAS 2022	"Design Challenges And Considerations Of Non-Isolated Gate Driver Circuit For Advanced Power Devices"	August 2022

3.5. Other distinguished IEEE services

For example, CAS BoG, region/chapter leadership, TC chairs/secretary, in the frame of **CAS society**.

Your Name	Organization	Position/Activities	Period
Hiroo Sekiya	IEEE CAS	CAS BoG	2020-2022
Zhen (Daniel) Li	IEEE CAS	PECAS-TC chair	2021-2023
Giulia Di Capua	IEEE CAS	PECAS-TC chair-elect	2021-2023
Giulia Di Capua	IEEE/IEEE CAS	WiE Committee Member – CASS coordinator	2021-2022
Giulia Di Capua	IEEE CAS	CASS DEI committee co-chair	2023-2024
Xiaozhe Wang	IEEE CAS	Women in Circuits and Systems (WiCAS) co-Chair	2023-2024
Xiaozhe Wang	IEEE CAS	CASS DEI committee member	2023-2024

Xi Chen	IEEE CAS	PECAS-TC Secretary	2021-2023
Xi Chen	IEEE CAS Santa Clara Valley Chapter	Vice-Chair of Santa Clara Valley Chapter	2022-2023
Chi-Seng Lam	IEEE CAS	Young Professionals in CAS (YPCAS) Chair	2023-2024
Chi-Seng Lam	IEEE CAS	CASS DEI committee member	2023-2024
Yang (Tim) Jiang	IEEE CAS	Young Professionals in CAS (YPCAS) co-Chair	2023-2024
Yang (Tim) Jiang	IEEE CAS	CASS DEI committee member	2023-2024

4. TC Significant Technical Leadership and Innovations

Please list 5 (or less) most significant TC activities in the past year, for example, but not limited to

- (1) Established/organized new CASS journals/conferences/workshops. Please include title, scope, status (e.g., submissions, published papers)
 - none
- (2) Organized special issues in CASS journal, special sessions/tutorials in CASS conferences, CASS seasonal schools, CASS industrial forums, or CASS competitions. Please include title, the guest editors/organizers, the year, and the month, the number of submissions, the number of papers published, and the impacts (e.g., the total number of citations/full text views so far or the total number of attendees)
 - Special Session on “Analysis and Design of Power and Energy Circuits and Systems”, ISOC 2022, Hiroo Sekiya (organizer and session chair)
 - Special Issue on Circuits and Systems for Industry X.0 Applications, published on IEEE Journal on Emerging and Selected Topics in Circuits and Systems, Xi Chen (organizer and guest editor)
- (3) Organized new CASS initiatives
 - “Hybrid YP/Industry Meeting for Encouraging Students & Young Researchers to Survive COVID-19”, IEEE Japan Joint Chapter, Hiroo Sekiya (organizer)
- (4) Established cross-TCs/SIGs collaborations (none)
 - none
- (5) Awards received by the TC or the TC members
 - Best paper award for the paper entitled “Exploiting Saturable Inductors in SEPIC Regulators”, SMACD 2022, June 2022, Giulia Di Capua (award recipient).
 - Best paper award for the paper entitled “Adaptive Line-Transient Enhancement Techniques for Dual-Path Hybrid Converter Achieving Ultra-Low Output Overshoot/Undershoot”, IEEE APPCAS 2022, November 2022, Yang (Tim) Jiang (award recipient).
 - Patent n. 11507128, “Low on-time control for switching power supply”, November 22, 2022, TEXAS INSTRUMENTS INCORPORATED, Anmol Sharma (inventor).
 - Best paper award for the paper entitled “A 250Mbps 100kV/ μ s Cmti On-Chip Double-Isolated Transformer-Based Digital Isolator”, IEEE ICTA 2022, October 2022, Lin Cheng (award recipient).
 - Nomination, “Updated science-wide author databases of standardized citation indicators”, Elsevier Data Repository, Mendeley Data, V4 (DOI: 10.17632/btchxktzyw.4), Giovanni Spagnuolo (recipient).
 - Nagamori Award, Nagamori Foundation, Japan, April 2023, Ke-Horng Chen (recipient).
 - National Invention and Creation Award, Ministry of Economic Affairs, Taiwan, March 2023, Ke-Horng Chen (recipient).
 - 2022 Macronix Golden Silicon Awards for Outstanding Advisor, Micronix Education Foundation, Macronix International Co., Ltd., July 2022, Ke-Horng Chen (recipient).

5. New plans for the next year

Are there any new initiatives, workshops, journal special issues, conference special sessions, etc., that your TC or TC members are planning for the next year?

- None at this moment: to be discussed during next TC meeting.