

2022 Annual Report (June 2021 – May 2022)
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-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).

Last PECAS-TC annual meeting was held in occasion of the IEEE ISCAS 2021, on 24 May 2021, in virtual mode, due to covid-19 pandemic and conference venue restrictions. A total number of 26 members joined the 2021 meeting (list of attendees available in the minutes of the TC meeting held on May 2021).

Another PECAS-TC meeting was held on 15 March 2022, in virtual mode, to discuss possible EDICs modification in TCAS-1.

The PECAS TC officers plan to have a virtual meeting during the month of May 2022, in conjunction with IEEE ISCAS 2022 virtual event (May 28-June 1, 2022).

2. Members submitted Annual Reports:

To date, the PECAS-TC counts 60 active members (*voting members*) and 7 corresponding members (*affiliate members, with no right to vote*). Details are provided at the PECAS-TC webpages:

<https://iee-cas.org/community/technical-committees/power-and-energy-circuits-and-systems-technical-committee-pecas/full-members>
<https://iee-cas.org/community/technical-committees/power-and-energy-circuits-and-systems-technical-committee-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 such request).

#	First Name	Last Name	Affiliation	Email	IEEE Grade	IEEE Region
1	Guido	Torelli	Dept. of Electrical, Computer and Biomedical Eng., University of Pavia	guido.torelli@unipv.it	Senior	R8
2	Chi Tsun (Ben)	Cheng	Dept. of Manufacturing, Materials and Mechatronics, RMIT University	ctcheng@ieee.org	Senior	R10
3	Zhiyuan	Chen	School of Microelectronics Fudan University	chen_zy@fudan.edu.cn	Member	R10
4	Hiroo	Sekiya	Graduate School of Eng., Chiba University	sekiya@faculty.chiba-u.jp	Senior	R10
5	Daniel	Molzahn	School of Electrical and Computer Eng., Georgia Institute of Technology	molzahn@gatech.edu	Senior	R3
6	Sijun	Du	Dept. of Electrical Eng. and Computer Science, University of California at Berkeley	sijun@berkeley.edu	Senior	R6
7	Yang (Tim)	Jiang	State Key Laboratory of Analog and Mixed-Signal VLSI & Institute of Microelectronics University of Macau	timjiang@um.edu.mo	Member	R10
8	Chi-Seng	Lam	State Key Lab. of Analog and Mixed-Signal VLSI & Inst. of Microelectronics, University of Macau	cslam@um.edu.mo	Senior	R10
9	Zhen (Daniel)	Li	School of Automation, Beijing Institute of Technology	zhenli@bit.edu.cn	Senior	R10
10	Hiroataka	Koizumi	Dept. of Electrical Eng., Tokyo University of Science	littlespring@ieee.org	Member	R10
11	Giulia	Di Capua	Dept. of Electrical and Information Eng. University of Cassino and Southern Lazio	giulia.dicapua@unicas.it	Senior	R8

12	Tadashi	Suetsugu	Department of Electronic Engineering and Computer Science Fukuoka University	suetsugu@fukuoka-u.ac.jp	Senior	R10
13	Junmin	Jiang	Dept. of Electrical and Electronic Eng. Southern University of Science and Technology	jiangjm@sustech.edu.cn	Member	R10
14	Xiaozhe	Wang	Dept. of Electrical and Computer Eng., McGill University	xiaozhe.wang2@mcgill.ca	Member	R7
15	Indumini	Ranmuthu	Texas Instruments Incorporated Power Managment division	indua380@GMAIL.COM	Senior	R5
16	Herbert	Ho-Ching lu	School of Electrical, Electronic and Computer Eng., University of Western Australia	herbert.iu@uwa.edu.au	Senior	R10
17	Anmol	Sharma	Texas Instruments Inc.	anmol@ti.com	Senior	R5
18	Suraj	Prakash	Qualcomm Technologies, Inc.	psuraj@qti.qualcomm.com	Member	R6
19	Ke-Horng	Chen	Dept. of Electrical and Computer Eng. University of National Chiao Tung	khchen@cn.nctu.edu.tw	Senior	R10
20	Xi	Chen	GEIRI North Americ State Grid Corporation of China	xc@ieee.org	Senior	R6

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**

Your Name	Conference Sponsors	Conference/Event Title	Your Role
Yang (Tim) Jiang	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Review Committee Member
Chi-Seng Lam	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Review Committee Member
Zhiyuan Chen	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Review Committee Member
Sijun Du	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Review Committee Member • Session Chair
Hiroataka Koizumi	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Review Committee Member
Zhen (Daniel) Li	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Track co-chair • Review Committee Member
Giulia Di Capua	IEEE CAS	SMACD 2021 International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design 19-22 July 2021 Erfurt, Germany (virtual)	• TPC member • Session chair
Giulia Di Capua	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Track co-chair • Review Committee Member
Junmin Jiang	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Review Committee Member • Session Chair
Anmol Sharma	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Review Committee Member
Suraj Prakash	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Review Committee Member
Ke-Horng Chen	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Review Committee Member
Xi Chen	IEEE CAS	ISCAS 2022 IEEE Int. Symposium on Circuits and Systems 28 May – 1 June 2022 Austin, Texas, USA (on site and virtual)	• Review Committee Member

3.2. IEEE Journal Editorships (2021-2022):

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

Your Name	Journal Sponsors	Journal Title	Your Role
Chi-Tsun (Ben) Cheng	IEEE CAS	IEEE Transactions on Circuits and Systems II	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-Seng Lam	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Guest Editor for ISICAS 2022
Chi-Seng Lam	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Guest Editor for ISICAS 2021
Zhen (Daniel) Li	IEEE CAS	IEEE Trans. On Circuits and Systems I: Regular Papers	Associate Editor
Zhen (Daniel) Li	IEEE CAS	IEEE Jour. On Em. And Selected Topics in Circuits and Systems, Special Issue "Towards Reliability Enhancement and Smarter Sensing for Emerging Interacting Dynamics in High Renewable Power System"	Leading Guest Editor
Giulia Di Capua	IEEE CAS	IEEE Trans. On Circuits and Systems I: Regular Papers	Associate Editor
Tadashi Suetsugu	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Associate Editor
Junmin Jiang	IEEE CAS	IEEE Transactions on Circuits and Systems II	Associate Editor
Junmin Jiang	IEEE CAS	IEEE Transactions on Circuits and Systems II	Guest Editor for ISICAS 2022

Junmin Jiang	IEEE CAS	IEEE Transactions on Circuits and Systems II	Guest Editor for ISICAS 2022
Xiaozhe Wang	IEEE CAS	IEEE Transactions on Circuits and Systems II	Associate Editor
Xiaozhe Wang	IEEE CAS	IEEE Jour. On Em. And Selected Topics in Circuits and Systems, Special Issue "Towards Reliability Enhancement and Smarter Sensing for Emerging Interacting Dynamics in High Renewable Power System"	Guest Associate Editor
Herbert Ho-Ching lu	IEEE CAS	IEEE Journal on Emerging and Selected Topics in Circuits and Systems	Editor-in-Chief
Herbert Ho-Ching lu	IEEE CAS	IEEE Transactions on Circuits and Systems II	Associate Editor

3.3. Awards, Honors, and Recognition (2021-2022)

2020-21 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
Giulia Di Capua	Best paper awards for paper entitled "Performance Analysis of IPT Systems for Electric Vehicles Dynamic Battery Charging", International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD 2021), Erfurt, Germany, 19-22 July 2021 <i>conference technically sponsored by CASS</i>	July 2021
Anmol Sharma	IEEE Industry Distinguished Lecturer IEEE CAS, Santa Clara Valley Chapter	June 2021

3.4. Keynote Speeches/Invited Talks (2021-2022):

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
Chi-Tsun (Ben) Cheng	University of Technology and Applied Sciences, Ibra, Oman	2021 Industrial Revolution Four (IR4-Era)	"The Digitalization Process in Australia's SMEs – Challenges and Solutions"	June 2021
Anmol Sharma	IEEE CAS Region 7	Lecture at Technical University Munich, Germany	"Evolving Landscape of Integrated Power Management"	June 2021

3.5. Other distinguished IEEE services (2021-2022)

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	2021-2022
Giulia Di Capua	IEEE CAS	PECAS-TC chair-elect	2021-2022
Giulia Di Capua	IEEE CAS	Women in Engineering Committee Member – CASS coordinator	2021-2022
Xi Chen	IEEE CAS	PECAS-TC Secretary	2021-2022
Xi Chen	IEEE CAS Santa Clara Valley Chapter	Vice-Chair	2021-2022

5. 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 "Energy-Efficient Power Solutions for Future IoT Devices", ISCAS 2022, Austin, Texas, USA (on site and virtual conference) - 28 May – 1 June 2022
(9 submissions, 2 sessions)
Sijun Du, organizer and session chair
 - Special Session on "Wireless Power Transfer Systems: Enhanced modeling, Simulation and Design", SMACD 2021, Erfurt, Germany (virtual conference) - 19-22 July 2021
(4 submissions)
Giulia Di Capua, organizer and session chair
 - Special Issue on "Towards Reliability Enhancement and Smarter Sensing for Emerging Interacting Dynamics in High Renewable Penetrated Power System", TCAS-1, March 2021
(74 submissions, 31 published papers, 5 citations, 4678 full text views)
Zhen Li, Abdelali El Aroudi, Xiaozhe Wang, Innocent Kamwa, co-Editors
- (3) Organized new CASS initiatives (none)
- (4) Established cross-TCs/SIGs collaborations (none)

(5) Awards received by the TC or the TC members

- National Science Foundation's CAREER Award, February 2022
Daniel K. Molzahn, recipient
- 2021 IEEE PES Outstanding Young Engineer Award for contributions to the theory and practical application of nonlinear optimization algorithms for electric power systems, July 2021
Daniel K. Molzahn, recipient
- Best paper awards for paper entitled "Performance Analysis of IPT Systems for Electric Vehicles Dynamic Battery Charging", International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design, Erfurt, Germany, 19-22 July 2021
Giulia Di Capua, recipient
- 2021 Outstanding Research Award, Ministry of Science and Technology (Taiwan), May 2022
Ke-Horng Chen, recipient
- 2021 Outstanding Research Award, Institute of Engineering Education Taiwan (IEET), June 2021
Ke-Horng Chen, recipient
- 2020 Macronix Golden Silicon Awards for Outstanding Advisor, Macronix Education Foundation, Macronix International Co., Ltd., August 2021
Ke-Horng Chen, recipient

6. TC CHARTER:

- (1) How can your TC amend the TC name/scope/charter, if the ballots are collected at a TC meeting or by internet? What is the quorum for a valid ballot? What is the required % to pass the amendment?

Future amendments to these bylaws will be by a majority vote of the Committee members present at an annual Committee meeting, or by majority vote of members who respond through an email ballot.

- (2) How can your TC select the TC Chair? Does the Chair-Elect is elected 1 year or 2 years earlier? Do you allow an out-of-sequence election for the Chair (if the Chair-Elect cannot assume the role of Chair)?

The Committee has four officers: a Chair-Elect, a Chair, a Past-Chair, and a Secretary. Each will serve a two-year term.

The Chair-Elect is elected by a majority vote of the Voting Members present at the annual Committee meeting, falling just prior to the end of the term of the current Chair-Elect. The Chair-Elect must be a Voting Member of the Committee.

The Chair-Elect can assume the role of Chair if the current Chair resigns before his/her term expires. The Chair-Elect assumes the position of Chair immediately after the ISCAS following his/her two-year term.

The Secretary, who will also act as Treasurer for the TC, will be elected by a majority vote of the Voting Members present at the annual Committee meeting, falling just prior to the end of the term of the current Secretary. S/he will serve a two-year term commencing immediately after the ISCAS of his/her election.

- (3) Does the TC have a membership structure that specifies the number of years and terms that a member can serve?

There is no a predetermined number of years that a member can serve. The TC will maintain and publish annually the TC Roll of Members, including email addresses, a record of attendance at the Annual Meeting, participation in activities, and class of membership. In particular, the IEEE and IEEE CASS memberships will be yearly checked (e.g., in occasion of ISCAS conferences), in order to keep up-to-date TC list of participants. The procedure to be implemented includes the following steps:

- the TC, in the person of the Secretary and on behalf of the Chair, is required to send membership reminders to all PECAS members during months prior ISCAS;
- on demand, PECAS members are required to provide updates on their membership status;
- at the date of ISCAS, non-active Full Members and/or Full Members who have not yet renewed IEEE/IEEE CASS membership will become Corresponding Members for the rest of the year, thus avoiding their immediate leave from the TC;
- at the date of ISCAS, Corresponding Members who have not renewed IEEE/IEEE CASS membership will leave the TC;
- the TC will inform all members about any change in their current position.