

**2021 Annual Report (June 2020 – May 2021)**  
**Power and Energy Circuits and Systems Technical Committee (PECAS-TC)**  
**IEEE Circuits and Systems Society**

Chair: Tyrone Fernando  
Secretary: Giulia Di Capua

## 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 2020, on 13 October 2020, in virtual mode, due to covid-19 pandemic and conference venue restrictions. A total number of 20 members joined the 2020 meeting (list of attendees available in the minutes of the TC meeting held on October 2020).

The PECAS TC officers plan to have a virtual meeting during the month of May 2021, in conjunction with IEEE ISCAS 2020 virtual event (22-28 May 2021).

## 2. Members submitted Annual Reports:

To date, the PECAS-TC counts 63 active members (*voting members*) and 11 corresponding member (*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	Chi Tsun (Ben)	Cheng	Dept. of Manufacturing, Materials and Mechatronics, RMIT University	ctcheng@ieee.org	Senior	R10
2	Xiaolu (Lucia)	Li	Dept. of Electronic and Information Eng., The Hong Kong Polytechnic University	xiaolu.li@connect.polyu.hk	Member	R10
3	Hiroo	Sekiya	Graduate School of Eng., Chiba University	sekiya@faculty.chiba-u.jp	Senior	R10
4	Chi-Seng	Lam	State Key Lab. of Analog and Mixed-Signal VLSI & Inst. of Microelectronics, University of Macau	cslam@um.edu.mo	Senior	R10
5	Xi	Chen	Department of General Management GEIRI North America	xc@ieee.org	Senior	R6
6	Elkim Felipe	Roa Fuentes	Electrical Eng. School, Universidad Industrial de Santander	efroa@uis.edu.co	Member	R9
7	Junrui	Liang	School of Information Science and Tech. ShanghaiTech University	liangjr@shanghaitech.edu.cn	Member	R10
8	Herbert	Ho-Ching lu	School of Electrical, Electronic and Computer Eng., University of Western Australia	herbert.iu@uwa.edu.au	Senior	R10
9	Guido	Torelli	Dept. of Electrical, Computer and Biomedical Eng., University of Pavia	guido.torelli@unipv.it	Senior	R8
10	Junmin	Jiang	Dept. of Electrical and Electronic Eng. Southern University of Science and Technology	jiangjm@sustech.edu.cn	Member	R10
11	Adrian	Ioinovici	Electrical and Electronics Eng., Holon Institute of Technology	adrian@hit.ac.il	Fellow	R8
12	Chen	Zhiyuan	School of Microelectronics Fudan University	chen_zy@fudan.edu.cn	Member	R10
13	Ke-Horng	Chen	Dept. of Electrical and Computer Eng. University of National Chiao Tung	khchen@cn.nctu.edu.tw	Senior	R10
14	Wing-Kuen	Ling	School of Information Eng., Guangdong University of Technology	yongquanling@gdut.edu.cn	Senior	R10

15	Indumini	Ranmuthu	Texas Instruments Incorporated Power Management division	indu@ti.com	Senior	R5
16	Sijun	Du	Dept. of Electrical Eng. and Computer Science, University of California at Berkeley	sijun@berkeley.edu	Member	R6
17	Xi	Zhang	School of Automation, Beijing Institute of Technology	xizhang@bit.edu.cn	Member	R10
18	Xiaozhe	Wang	Dept. of Electrical and Computer Eng., McGill University	xiaozhe.wang2@mcgill.ca	Member	R7
19	Hiroataka	Koizumi	Dept. of Electrical Eng., Tokyo University of Science	littlespring@ieee.org	Member	R10
20	Anmol	Sharma	Texas Instruments Inc.	anmol@ti.com	Senior	R5
21	Tyrone	Fernando	Dept. of Electrical Electronic and Computer Eng., University of Western Australia	tyrone.fernando@uwa.edu.au	Senior	R10
22	Zhen (Daniel)	Li	School of Automation, Beijing Institute of Technology	zhenli@bit.edu.cn	Senior	R10
23	Giulia	Di Capua	Dept. of Electrical and Information Eng. University of Cassino and Southern Lazio	giulia.dicapua@unicas.it	Senior	R8

Geographical distribution of TC Full Members (percentage of total)

	2020-21
Total number of TCs	63 FMs (May 2021)
Regions 1 – 6 (U.S.A.)	27%
Region 7 (Canada)	1.6%
Region 8 (Europe/Africa, Middle East)	17.5%
Region 9 (Central/South America)	4.8%
Region 10 (Asia/Pacific)	49.2%

Gender distribution of TC members (percentage of total)

	2020-21
Total number of TCs	63 FMs (May 2021)
Male	90.5%
Female	9.5%

Distribution of TC members by affiliation (percentage of total)

	2020-21
Total number of TCs	63 FMs (May 2021)
Academia + Research Center	92.1%
Industry	7.9%
Government	0%

### 3. Accomplished Technical Activities

#### 3.1. IEEE Conference/Event organizations (2020-2021):

Please highlight conference/events technically and/or financially co-sponsored by the CAS Society

Your Name	Conference Sponsors	Conference/Event Title	Your Role
Xiaolu (Lucia) Li	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>Review Committee Member</li> </ul>
Hiroo Sekiya	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>Tutorial Co-Chair</li> </ul>
Elkim Felipe Roa Fuentes	IEEE CAS	<b>LASCAS 2021</b> IEEE Latin American Symposium on Circuits and Systems 20-24 February 2021 Arequipa, Peru	<ul style="list-style-type: none"> <li>TPC Member</li> <li>Steering Committee Member</li> <li>Session Chair</li> </ul>
Elkim Felipe Roa Fuentes	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>TPC Member</li> <li>Session Chair</li> </ul>
Junmin Jiang	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>Review Committee Member</li> <li>Session Chair</li> </ul>
Chen Zhiyuan	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>Session Chair</li> </ul>
Sijun Du	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>Session Chair</li> </ul>
Hiroataka Koizumi	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>Review Committee Member</li> </ul>
Anmol Sharma	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>Review Committee Member</li> </ul>
Anmol Sharma	IEEE CAS	<b>ICECS 2020</b> IEEE Int. Conf. on Electronics Circuits and Systems 23-25 November 2020 Glasgow, UK (virtual)	<ul style="list-style-type: none"> <li>Review Committee Member</li> </ul>
Tyrone Fernando	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>Review Committee Member</li> <li>Session Chair</li> </ul>
Zhen (Daniel) Li	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>Track co-chair</li> <li>Review Committee Member</li> <li>Session Chair</li> <li>Overview Lecturer</li> </ul>
Giulia Di Capua	IEEE CAS	<b>ICECS 2020</b> IEEE Int. Conf. on Electronics Circuits and Systems 23-25 November 2020 Glasgow, UK (virtual)	<ul style="list-style-type: none"> <li>YP &amp; WICAS co-Chair</li> <li>Track co-Chair</li> </ul>
Giulia Di Capua	IEEE CAS	<b>ISCAS 2021</b> IEEE Int. Symposium on Circuits and Systems 22-28 May 2021 Daegu, Korea (on site and virtual)	<ul style="list-style-type: none"> <li>Track co-chair</li> <li>Review Committee Member</li> <li>Session Chair</li> </ul>

#### 3.2. IEEE Journal Editorships (2020-2021):

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	Circuits and Systems Society Newsletter	Associate Editor
Chi-Seng Lam	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Guest Editor for ISICAS 2021
Chi-Seng Lam	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Guest Editor for ISICAS 2020
Chi-Seng Lam	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Guest Editor for Special Issue on ISCAS 2020
Herbert Ho-Ching lu	IEEE CAS	IEEE Jour. on Emerg. and Selected Topics in Circuits and Systems	Associate Editor-in-Chief
Herbert Ho-Ching lu	IEEE CAS	IEEE Trans. on Circuits and Systems II: Express Briefs	Associate Editor

Xiaozhe Wang	IEEE CAS	IEEE Trans. on Circuits and Systems II: Express Briefs	Associate Editor
Tyrone Fernando	IEEE CAS	IEEE Trans. on Circuits and Systems I: Regular Papers	Associate Editor
Giulia Di Capua	IEEE CAS	IEEE Trans. on Circuits and Systems I: Regular Papers	Associate Editor
Giulia Di Capua	IEEE CAS	IEEE Trans. on Circuits and Systems I: Regular Papers	Guest Editor for ISICAS 2021
Giulia Di Capua	IEEE CAS	IEEE Trans. on Circuits and Systems I: Regular Papers	Guest Editor for ISICAS 2020
Giulia Di Capua	IEEE CAS	IEEE Trans. on Circuits and Systems II: Express Briefs	Guest Editor for Special Issue on ISCAS 2020

### 3.3. Awards, Honors, and Recognition (2020-2021)

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
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### 3.4. Keynote Speeches/Invited Talks (2020-2021):

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
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### 3.5. Other distinguished IEEE services (2020-2021)

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
Xi Chen	IEEE CAS	Treasurer	2020-2021
Xi Chen	IEEE CAS	Secretary of the Santa Clara Valley Chapter	2021-present
Tyrone Fernando	IEEE CAS	PECAS-TC chair	2019-2021
Zhen (Daniel) Li	IEEE CAS	PECAS-TC chair-elect	2019-2021
Giulia Di Capua	IEEE CAS	PECAS-TC secretary	2019-2021

## 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 "Wearable Sensing Techniques & Power Solutions for IoT Devices Session", ISCAS 2021, Daegu, Korea (on site and virtual conference) - 22-28 May 2021  
*Junrui Liang, organizer and session chair*
  - Half-day tutorial on "Vibration/Motion-powered IoT: Electromechanical Dynamics and Low-power Circuit-and-system Designs", ISCAS 2021, Daegu, Korea (on site and virtual conference) - 22-28 May 2021  
*Junrui Liang, organizer and speaker*
  - Special Session on "Image Feature Extraction Using Advanced Transform and Learning-based Approaches", VCIP 2020, virtual conference - 1-4 December 2020  
*Wing-Kuen Ling, organizer*
- (3) Organized new CASS initiatives (*none*)
- (4) Established cross-TCs/SIGs collaborations (*none*)
- (5) Awards received by the TC or the TC members
  - Best Student Hardware Award Finalist, ASME Smart Materials, Adaptive Structures, and Intelligent Structures Conference (SMASIS), September 2020  
*Junrui Liang, recipient*
  - Distinguished Member of technical Staff, Texas Instruments Inc., December 2020  
*Indumini Ranmuthu, recipient*

- 17th National Innovation Award in 2020, Research Center for Biotechnology and Medicine Policy, December 2020  
*Ke-Horng Chen, recipient*
- 2020 Macronix Golden Silicon Awards for Outstanding Advisor, Macronix Education Foundation, Macronix International Co., Ltd., July 2020  
*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.