

2024 Annual Report (June 2023 – May 2024)

ASP Technical Committee/ Special Interest Group

IEEE Circuits and Systems Society

Chairman: Ayman Fayed
Chair-Elect/Secretary: Nathan Neihart / Aatmesh Shrivastava

1. Technical Committee/Special Interest Group Meeting(s):

Please provide information on the TC/SiG meetings held in the past year, including date, time, location, attendance rate, and if a quorum was present.

The IEEE Circuits and Systems Society Analog Signal Processing Technical Committee holds one annual TC meeting during ISCAS. The last meeting was held in hybrid mode and took place on May 23, 2023, at 1:00-2:00 PM (UTC-8:00). There was a total of 30 members present (in-person plus remote) out of 53. Three new members were elected, namely In Hee Lee, Vishal Saxena, and Cheng Huang.

2. Voting Members:

First Name	Last Name	Email	Affiliation	IEEE Region	IEEE Grade
Alfredo	Arnaud	aarnaud@ucu.edu.uy	UCU and BQN Uruguay	9	SM
Edoardo	Bonizzoni	edoardo.bonizzoni@unipv.it	University of Pavia	8	SM
Pak Kwong	Chan	epkchan@NTU.EDU.SG	Nanyang Technological University	10	
Joseph	Chang	ejschang@NTU.EDU.SG	Nanyang Technological University	10	
Degang	Chen	djchen@IASTATE.EDU	Iowa State University	4	
Vanessa	Chen	vanessachen@cmu.edu	Carnegie Mellon University	2	SM
Jose	De la Rosa	jrosa@IMSE-CNM.CSIC.ES	Institute of Microelectronics of Seville, IMSE-CNM (CSIC/University of Seville)	8	F
Andreas	Demosthenous	a.demosthenous@UCL.AC.UK	University College London	8	
Ayman	Fayed	Fayed.1@OSU.EDU	The Ohio State University	2	SM
Jorge	Fernandes	jrf@tecnico.ulisboa.pt	Instituto Superior Tecnico	8	SM
Igor	Filanovsky	ifilanov@ualberta.ca	University of Alberta	7	
Randy	Geiger	rigeiger@IASTATE.EDU	Iowa State University	4	
Joao	Goes	goes@fct.unl.pt	NOVA University Of Lisbon	8	
Roberto	Gomez-Garcia	roberto.gomezg@UAH.ES	University of Acalá	8	F
Sohmyung	Ha	sohmyung@nyu.edu	New York University Abu Dhabi	8	SM
Luis	Hernandez	luish@ING.UC3M.ES	Carlos III University	8	SM
Jeremy	Holleman	jhollem3@uncc.edu	University Of Tennessee Knoxville	3	
Cheng	Huang	chengh@iastate.edu	Iowa State University	4	M
Ankesh	Jain	ankesh@ee.iitd.ac.in	Indian Institute of Technology, Delhi	10	SM
Matt	Johnston	MATTHEW.JOHNSTON@OREGONSTATE.EDU	Oregon State University	6	SM
Jusung	Kim	jusungkim@hanbat.ac.kr	Hanbat	10	
Raafat	Labadibi	raafat.lababidi@ensta-bretagne.fr	Ensta Bretagne	8	M
In Hee	Lee	inhee.lee@pitt.edu	The University of Pittsburgh	2	SM
Qiang	Li	qli@uestc.edu.cn	U. Of Electronic Science And Technology Of China	10	
Zhipeng	Li	zhipeng@ALUM.MIT.EDU	Marvell Semiconductor	6	SM
Shahriar	Mirabbasi	shahriar@ECE.UBC.CA	U British Columbia	7	
Tawfiq	Musha	musah.3@osu.edu	The Ohio State University	2	SM
Laleh	Najafizadeh	laleh.najafizadeh@RUTGERS.EDU	Rutgers	1	

Nagarjuna	Nallam	nallam@ieee.org			
Nathan	Neihart	neihart@IASTATE.EDU	Iowa State University	4	
Filippo	Neri	filippo.neri@BLUEWIN.CH	Renesas Electronics	8	SM
Luis	Oliveira	l.oliveira@FCT.UNL.PT	NOVA School of Science and Technology	8	SM
Marvin	Onabajo	MONABAJO@ECE.NEU.EDU	Northeastern University	1	SM
Gaetano	Palumbo	gaetano.palumbo@dieei.unict.it	University of Catania	8	F
Nuno	Paulino	nunop@uninova.pt	Uninova	8	
Salvatore	Pennisi	salvatore.pennisi@UNICT.IT	University of Catania - Italy	8	F
Taimur	Rabuske	taimur.rabuske@IEEE.ORG	Analog Devices, Inc	1	M
Elkim	Roa	efroa@uis.edu.co	Samsung	6	
Gordon	Roberts	gordon.roberts@MCGILL.CA	McGill	7	
Arindam	Sanyal	arindam.sanyal@asu.edu	Arizona State University	6	M
Mohamad	Sawan	sawan@WESTLAKE.EDU.CN	Westlake University	10	
Vishal	Saxena	vsaxena@udel.edu	University of Delaware	2	
Aatmesh	Shrivastava	aatmesh@ece.neu.edu	Northeastern University	1	
Jose	Silva-Martinez	jsilva@ECE.TAMU.EDU	Texas A&M University	5	
Robert	Sobot	rsobot@UWO.CA	University Of Waterloo	7	
Paul	Sotiriadis	pps@IEEE.ORG	National Technical University Of Athens	8	
Robert B.	Staszewski	robert.staszewski@ucd.ie	University College Dublin	8	
Thierry	Taris	thierry.taris@IMS-BORDEAUX.FR	University of Bordeaux/Bx-INP	8	SM
Ge	Tong	GETONG@NTU.EDU.SG	Nanyang Technological University	10	
Jerald	Yoo	gerald@snu.ac.kr	Seoul National University	10	
Lei	Zhang	zhang.lei@TSINGHUA.EDU.CN	Tsinghua University	10	M
Xi	Zhu	xi.zhu@uts.edu.au	University of Technology Sydney	10	SM

Geographical distribution of TC/SIG members (percentage of total).

	2023
Total number of TCs	%
Regions 1 – 6 (U.S.A.)	36.54%
Region 7 (Canada)	7.69%
Region 8 (Europe/Africa, Middle East)	32.69%
Region 9 (Central/South America)	1.92%
Region 10 (Asia/Pacific)	19.23%

Gender distribution of TC/SIG members (percentage of total).

	2023
Total number of TCs	%
Male	90.38%
Female	5.77%

Distribution of TC/SIG members by affiliation (percentage of total).

	2023
Total number of TCs	%
Academia	88.46%
Industry	7.69%
Government	0%

3. Accomplished Technical Activities

3.1. IEEE Conference/Event organizations

(First priority, please highlight conference/events technically and financially co-sponsored by the CAS Society).

Your Name	Conference Sponsors	Conference/Event Title	Your Role
Lei Zhang	IEEE CASS	ISCAS	ASPTC Member
Jose M. de la Rosa	IEEE CASS	IEEE International Symposium on Circuits and Systems (ISCAS 2023, 2024)	Review Committee Member / Session Chair
Jose M. de la Rosa	IEEE CASS	IEEE Midwest Symposium on Circuits and Systems (MWSCAS 2023, 2024)	Steering Committee Member
Jose M. de la Rosa	IEEE CASS	IEEE Midwest Symposium on Circuits and Systems (MWSCAS 2023)	Review Committee Member / Session Chair
Edoardo Bonizzoni	IEEE CASS	MWSCAS 2023	Track Chair
Edoardo Bonizzoni	IEEE CASS	ICECS 2023	Publication Co-Chair and Track Chair
Tawfiq Musah	IEEE CASS	ISCAS 2023	Session Chair / RCM
Taimur Rabuske	IEEE CASS	ISCAS 2024	RCM
Thierry Taris	IEEE CASS	ISCAS 2024	RCM
Sohmyung Ha	IEEE CASS	ISCAS	Session chair / RCM
Salvatore Pennisi	IEEE CASS	ISCAS 2023	RCM
Marvin Onabajo	IEEE CASS	2024 IEEE Intl. Symposium on Circuits and Systems (ISCAS)	Technical Review Committee Member
Marvin Onabajo	IEEE CASS	2024 IEEE Intl. Midwest Symposium on Circuits and Systems (MWSCAS)	Track Co-Chair, Analog and Mixed Circuits and Systems
Ankesh Jain	IEEE CASS	IEEE International Symposium on Circuits and System, Singapore 2024	Review committee member (RCM)
Inhee Lee	IEEE CASS	ISCAS 2024	RCM
Inhee Lee	IEEE CASS	MWCAS 2023	RCM
Matthew Johnston	IEEE CASS	MWSCAS 2023	Track Chair
Cheng Huang	IEEE CASS	ISCAS	Review Committee Member
Arindam Sanyal	IEEE CASS	ISCAS 2023	RCM
Arindam Sanyal	IEEE CASS	MWSCAS 2023	Local arrangements co-chair
Raafat Lababidi	IEEE CASS	NEWCAS 2024	Track Chair
Raafat Lababidi	IEEE CASS	ISCAS 2024	RCM chair
Vanessa Chen	IEEE CASS	ISCAS 2024	RCM
Alfredo Arnaud	IEEE CASS	IEEE CASS Tour Montevideo	Organizing Committee
Alfredo Arnaud	IEEE CASS	IEEE ISCAS 2024	TPC member
Alfredo Arnaud	IEEE CASS	IEEE LASCAS 2024	Special Sessions Chair
Alfredo Arnaud	IEEE CASS	IEEE LASCAS 2024	Steering Committee
Jorge Fernandes	IEEE CASS	15th IEEE LATIN AMERICAN SYMPOSIUM ON CIRCUITS AND SYSTEMS (LASCAS) 2024	Technical Program Co-Chair
Jorge Fernandes	IEEE CASS	IEEE SMACD (2023 edition of the International Conference on Synthesis, Modeling, Analysis and Simulation Methods, and Applications to Circuit Design (SMACD))	IC Design Competition Co-Chair
Jorge Fernandes	IEEE CASS	IEEE ISCAS 2023 conference (IEEE International Symposium on Circuits and Systems)	Track Chair Analog and Signal Processing Track
Jorge Fernandes	IEEE CASS	IEEE ESSCIRC/ESSDERC Conferences (ESSDERC- 53rd European Solid-State Device Research Conference and ESSCIRC - 49th European Solid-State Circuits Conference)	Technical Program Committee Chair

(Second priority, please highlight conference/events technically by the CAS Society).

Your Name	Conference Sponsors	Conference/Event Title	Your Role
Edoardo Bonizzoni	IEEE CASS	PRIME 2024	Industrial Liaison Chair
Salvatore Pennisi	IEEE CASS	PRIME 2023 -Valencia	Steering committee member
Raafat Lababidi	IEEE CASS	ISCES 2024	Track chair
Alfredo Arnaud	IEEE CASS, Sensor Council, IMS, CFRID	IEEE CAFE 2023	TPC member

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

3.2. IEEE Journal Editorships:

(Please highlight the journals that are (co-)sponsored by the CAS Society, cf., <https://ieeecas.org/publications>). Please don't report journals that are NOT sponsored by the CAS Society.

Your Name	Journal Sponsors	Journal Title	Your Role
Xi Forest Zhu	IEEE CAS	IEEE Journal on Emerging and Selected Topics in Circuits and Systems	Lead Guest Editor
Xi Forest Zhu	IEEE CAS	IEEE Trans. On Circuits & Systems, Regular Papers	Associate Editor
Jose M. de la Rosa	IEEE-CAS	Transactions on Circuits and Systems – I: Regular Papers	Editor-in-Chief
Edoardo Bonizzoni	IEEE CAS	TCAS-II	Editor in Chief
Tawfiq Musah	IEEE CASS	TCAS II	Associate Editor
Sohmyung Ha	IEEE CAS	Transactions on Biomedical Circuits and Systems	Associate Editor
Luis Bica Oliveira	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs (TCAS-II)	Associate Editor
Marvin Onabajo	IEEE CAS	IEEE Transactions on Circuits and Systems I	Associate Editor, 2022-2023 term
Marvin Onabajo	IEEE CAS	IEEE Circuits and Systems Magazine	Associate Editor, 2022-2023 term
Inhee Lee	IEEE CAS	TCAS-I	Guest Editor
Roberto Gomez-Garcia	IEEE CAS	IEEE Transactions on Circuits and Systems I: Regular Papers	Associate Editor
Roberto Gomez-Garcia	IEEE CAS	IEEE Journal on Emerging and Selected Topics on Circuits and Systems	Guest Editor
Matthew Johnston	IEEE CASS	TBioCAS	Associate Editor
Matthew Johnston	IEEE CASS	OJ-CAS	Associate Editor
Matthew Johnston	IEEE CASS	TCAS-II	Associate Editor
Cheng Huang	IEEE CAS	IEEE Transactions on Circuits and Systems - II	Associate Editor (2020.1 – 2023.12)
Vanessa Chen	IEEE CAS	IEEE Transactions on Circuits and Systems I: Regular Papers (TCAS-I)	Associate Editor
Vanessa Chen	IEEE CAS	IEEE Transactions on Biomedical Circuits and Systems	Associate Editor

3.3. Awards, Honors, and Recognition

(Fellow, Distinguished Lecturer, Outstanding Service, Best Paper Awards, and so on by the CAS Society)

Your Name	Awards / Honors / Recognition	Period
Marvin Onabajo	IEEE Circuits and Systems Magazine Best Associate Editors of 2022	Received in 2023
Ankesh Jain	SSCS Outstanding Reviewer Award	2023
Roberto Gomez-Garcia	Fellow IEEE	Class of 2023
Matthew Johnston	CASS Distinguished Lecturer	2024-2025

3.4. Keynote Speeches/Invited Talks:

Your Name	Invited by	Event/Conference Title	Talk Title	Date
Jose M. de la Rosa	IEEE NEWCAS 2023 General Chair (Conf. Organizers)	Tutorial at the IEEE Interregional NEWCAS Conference	Using Artificial Neural Networks for the Automated Design of Analog Circuits – Application to $\Sigma\Delta$ Converters	June 26, 2023
Jose M. de la Rosa	The University of Edinburgh	Centre for Electronics Frontiers	Automated Design and Optimization of $\Sigma\Delta$ Analog-to-Digital Converters	June 27, 2023
Jose M. de la Rosa	IEEE SMACD 2023 General Chair (Conf. Organizers)	Tutorial at the IEEE International Conference on Synthesis, Modeling, Analysis and Simulation Methods, and Applications to Circuit Design (SMACD)	Design Automation of Analog And Mixed-Signal Circuits Using Artificial Neural Networks	July 3, 2023
Jose M. de la Rosa	IEEE AICAS 2024 General Chair (Conf. Organizers)	Tutorial at the IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS)	ANN-assisted Design of Analog and Mixed-Signal Circuits and Systems	April 22, 2024

Jose M. de la Rosa	IEEE ISCAS 2024 General Chair (Conf. Organizers)	Tutorial at the IEEE International Symposium on Circuits and Systems (ISCAS)	Using Neural Networks to Optimize the Design of Analog and Mixed-Signal Circuits and Systems	May 19, 2024
Arindam Sanyal	Cirrus Logic	Cirrus Tech Talk	Enhancing performance of data converters using AI	July 2023
Alfredo Arnaud	Universidad Iberoamericana, México	Invited Talk, Workshop agrifood & technology	RFID & IoT for Agrifood	June 2023
Alfredo Arnaud	IEEE CASS Rio Grande do Sul Chapter	IEEE CASS RS Talks 2023	IoT within the Agribusiness Industries	November 2023

3.5. Other distinguished IEEE services

(For example, CAS BoG, Region/chapter leadership, TC chair/secretary)

Your Name	Organization	Position/Activities	Period
Jose M. de la Rosa	IEEE-CAS	Member-at-Large BoG	2023-2025
Jose M. de la Rosa	IEEE	IEEE TechRxiv Editorial Advisory Committee	2023-2024
Jose M. de la Rosa	IEEE-CAS	IEEE-CASS Plagiarism Committee Chair	2023-2024
Salvatore Pennisi	IEEE CAS	Fellow Evaluation Committee	March 2024-to present
Salvatore Pennisi	IEEE CAS	Distinguished Lecturer Selection Committee Member	2023-to present
Luis Oliveira	IEEE Portugal CAS Chapter	Vice-Chair	2023-2024
Luis Oliveira	IEEE CAS SB Counselor	NOVA University Student Branch Counselor	2023-2024
Ankesh Jain	Indian Institute of Technology Delhi	Secretary- IEEE SSCS Delhi Chapter	2019-Present
Alfredo Arnaud	IEEE R9, TEMS	IEEE IoT&AI challenge (student contest) steering committee	2023
Alfredo Arnaud	IEEE Uruguay Section	Steering committee	2023-2024
Jorge Fernandes	IEEE CAS	IEEE Analog Signal Processing Technical Committee (ASPTC) Chair	2023
Jorge Fernandes	IEEE SSCS	IEEE ESSERC Steering Committee Member for 2024 (ESTC)	2024

4. TC Significant Technical Leadership and Innovations

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

- (1) Established/organized new CASS journals/conferences/workshops
 - a. Please include title, scope, status (e.g., submissions, published papers)
- (2) Organized special issues in CASS journal, special sessions/tutorials in CASS conferences, CASS seasonal schools, CASS industrial forums, or CASS competitions
 - a. 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)
- (3) Organized new CASS initiatives
- (4) Established cross-TCs/SIGs collaborations
- (5) Awards received by the TC/SIG or the TC/SIG members

Many members of the ASP Technical Committee have been involved in numerous activities throughout the year. Activities include editorship duties in IEEE journals, as well as steering and technical program committee roles in CASS conferences. However, it has been historically challenging to get all members to participate in the annual RCM duties needed for ISCAS, and a considerable number of them have been inactive for quite some time. This resulted in an excessive workload for the active members in a way that should not be expected in a committee of this size. Over the past year, the chair was forced to make the difficult decision of removing several members who have either been inactive for an extended period, have become unresponsive to communications from the chair, or regularly fail to observe the deadlines for performing their expected duties. This was essential for streamlining the annual paper review process for ISCAS and ensuring a smooth and timely execution of the TC duties. For ISCAS 2024, every member of the committee has served as RCM and largely fulfilled their duties in a timely fashion and with a very well-balanced load. I hope this level of engagement will continue in the future.

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?

- Modify the TC bylaws to ensure that participation in the annual RCM duties and respecting deadlines for fulfilling committee responsibilities are required for continued membership.
- Continued efforts for recruiting new members.
- The current manual process used for gathering the data needed for compiling the annual and 5-year TC reports makes generating these reports very laborious and time-consuming, especially for large TCs. The issue was brought to the attention of the IEEE CASS Executive Committee and requests were made for investing into automating the reporting process.