

2024 Annual Report (June 2023 – May 2024)

Nonlinear Circuits and Systems (NCAS) Technical Committee

IEEE Circuits and Systems Society

Chairman: Federico Bizzarri
 Chair-Elect: Erivelton Nepomuceno
 Secretary: Tommaso Addabbo

1. Technical Committee Meeting:

Location: mixed-mode meeting (ISCAS2023 - Monterey - USA and Zoom Meeting)

Date: 22nd May 2023

Time: 1.30 pm - Pacific Time

Attendance rate: 25% (17 out of 67)

Quorum: not reached (“whenever voting occurs during a meeting, a quorum applies requiring at least the ceiling of one third of the regular TC members to be present at the meeting”).

2. Voting Members (62):

Last Name	First Name	Affiliation	Email	IEEE Grade	IEEE Region
Abraham	Isaac Palliath	Intel Corporation	isaac.abraham@intel.com	Senior	R6
Addabbo	Tommaso	University of Siena	addabbo@dii.unisi.it	Member	R8
Bizzarri	Federico	Politecnico di Milano	federico.bizzarri@polimi.it	Senior	R8
Callegari	Sergio	University of Bologna	sergio.callegari@unibo.it	Senior	R8
Chen	Guanrong (Ron)	City University of Hong Kong	gchen@ee.cityu.edu.hk	Life Fellow	R10
Cheng	Chi Tsun (Ben)	RMIT University	ben.cheng@rmit.edu.au	Senior	R10
Colombo	Alessandro	Politecnico di Milano	alessandro.colombo@polimi.it	Senior	R8
Comminiello	Danilo	Sapienza University of Rome	danilo.comminiello@uniroma1.it	Member	R8
Corinto	Fernando	Politecnico di Torino	fernando.corinto@polito.it	Senior	R8
Di	He	Shanghai Jiao Tong University	dihe@sjtu.edu.cn	Senior	R10
Di Bernardo	Mario	Università degli Studi di Napoli Federico II	mario.dibernardo@unina.it	Fellow	R8
Dominguez-Pumar	Manuel	Technical University of Catalonia	manuel.dominguez@upc.edu	Senior	R8
El Aroudi	Abdelali	Universitat Rovira i Virgili	abdelali.elaroudi@urv.cat	Senior	R8
Elwakil	Ahmed	University of Sharjah	elwakil@ieee.org	Senior	R8
Feely	Orla	University College Dublin	orla.feely@ucd.ie	Fellow	R8
Fiore	Davide	University of Naples Federico II	davide.fiore@unina.it	Member	R8
Galayko	Dimitri	Université Pierre et Marie Curie	dimitri.galayko@lip6.fr	Member	R8
Galias	Zbigniew	AGH-University of Science and Technology	zbigniew.galias@agh.edu.pl	Senior	R8

Giaouris	Damian	Newcastle University	damian.giaouris@newcastle.ac.uk	Member	R8
Gökmar	Izzet Cem	Işık University	cem.gokmar@isikun.edu.tr	Life Fellow	R8
Green	Michael	University of California Irvine	mgreen@uci.edu	Senior	R6
Hayes	Brendan	Dublin City University	brendan.hayes@dcu.ie	Member	R8
Iu	Ho-Ching (Herbert)	The University of Western Australia	herbert@ee.uwa.edu.au	Senior	R10
James	Alex Pappachen	Indian Institute of Information Technology and Management	a.james@iiitmk.ac.in	Senior	R10
Jha	Amit	Integrated Device Technology	ajha@ieee.org	Member	R6
Jiang	Guo-Ping	Nanjing University of Posts & Telecommunications	jianggp@njupt.edu.cn	Senior	R10
Kennedy	Peter	University College Dublin	peter.kennedy@ucd.ie	Fellow	R8
Kolumbán	Géza	Pázmány Péter Catholic University	kolumban@itk.ppke.hu	Fellow	R8
Lau	Francis	Hong Kong Polytechnic University	francis-cm.lau@polyu.edu.hk	Fellow	R10
Leuciuc	Adrian	Cadence Design Systems	aleuciuc@cadence.com	Senior	R2
Leung	Henry	University of Calgary	leungh@ucalgary.ca	Fellow	R7
Li	Xiang	Fudan University	lix@fudan.edu.cn	Senior	R10
Linaro	Daniele	Politecnico di Milano	daniele.linaro@polimi.it	Member	R8
Ling	Wing-Kuen	Guangdong University of Technology	yongquanling@gdut.edu.cn	Senior	R10
Lodi	Matteo	University of Genoa	matteo.lodi@unige.it	Member	R8
Madian	Ahmed	Nile University	amadian@nu.edu.eg	Senior	R8
Mathis	Wolfgang	Leibniz University Hannover	mathis@tet.uni-hannover.de	Fellow	R10
Meucci	Riccardo	University of Florence	riccardo.meucci@ino.cnr.it	Senior	R8
Nepomuceno	Erivelton Geraldo	Federal University of São João del-Rei	nepomuceno@ufsj.edu.br	Member	R9
Nishio	Yoshifumi	Tokushima University	nishio@ee.tokushima-u.ac.jp	Senior	R10
Ogorzalek	Maciej J.	Jagiellonian University	maciej.ogorzalek@uj.edu.pl	Fellow	R8
Oliveri	Alberto	University of Genoa	alberto.oliveri@unige.it	Member	R8
Pareschi	Fabio	Politecnico di Torino	fabio.pareschi@polito.it	Senior	R8
Psychalinos	Costas	University of Patras	psychal@upatras.gr	Senior	R8
Radwan	Ahmed	Nile University	agradwan@nu.edu.eg	Senior	R8
Rojas Norman	Alejandro José	Universidad de Concepcion	arojasn@udec.cl	Senior	R9
Rong	Zhihai	University of Electronic Science and Technology of China	rongzhh@gmail.com	Member	R10

Sekiya	Hiroo	Chiba University	sekiya@faculty.chiba-u.jp	Senior	R10
Sengor	Neslihan Serap	Istanbul Technical University	sengorn@itu.edu.tr	Member	R8
Setti	Gianluca	Politecnico di Torino	gianluca.setti@polito.it	Fellow	R8
Sorrentino	Francesco	University of New Mexico	fsorrent@unm.edu	Member	R6
Storage	Marco	University of Genoa	marco.storage@unige.it	Senior	R8
Sun	Kangkang	Harbin Institute of Technology	kangkangsun2010@gmail.com	Member	R10
Sun	Jitao	Tongji University	sunjt@sh163.net	Member	R10
Suykens	Johan	Katholieke Universiteit Leuven	johan.suykens@esat.kuleuven.be	Fellow	R8
Trajkovic	Ljiljana	Simon Fraser University	ljilja@cs.sfu.ca	Life Fellow	R7
Ueta	Tetsushi	Tokushima University	ueta@tokushima-u.ac.jp	Senior	R10
Uwate	Yoko	Tokushima University	uwate@ee.tokushima-u.ac.jp	Member	R10
Wu	Jiajing	Sun Yat-sen University	wujiajing@mail.sysu.edu.cn	Member	R10
Xia	Yongxiang	Zhejiang University	xiayx@ieee.org	Senior	R10
Yalcin	Mustak Erhan	Istanbul Technical University	mustak.yalcin@itu.edu.tr	Senior	R8
Zheng	Wei Xing	University of Western Sydney	w.zheng@uws.edu.au	Fellow	R10

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

	2023
Total number of TCs	%
Regions 1 – 6 (U.S.A.)	8.1
Region 7 (Canada)	3.2
Region 8 (Europe/Africa, Middle East)	53.2
Region 9 (Central/South America)	3.2
Region 10 (Asia/Pacific)	32.3

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

	2023
Total number of TCs	%
Male	91.9
Female	8.1

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

	2023
Total number of TCs	%
Academia	93.6
Industry	6.4
Government	0.0

3. Accomplished Technical Activities

3.1. IEEE Conference/Event organizations

Conference/events technically and financially co-sponsored by the CAS Society.

Your Name	Conference Sponsors	Conference/Event Title	Your Role
Ljiljana Trajkovic	IEEE CAS	ISCAS 2024	Track Chair, Education in Circuits and Systems
Fabio Pareschi	IEEE CAS	MWSCAS 2023	Track Chair, Power and Energy
Mustak Erhan Yalcin	IEEE CAS	IEEE 30th International Conference on Electronics, Circuits and Systems (ICECS)	Technical Program Co-Chair
Ahmed Madian	IEEE CAS	ISCAS 2024	Track Chair, Nonlinear Circuits and Systems
Costas Psychalinos	IEEE CAS	ISCAS 2024	Track Chair, Nonlinear Circuits and Systems
Yoshifumi Nishio	IEEE CAS	ISCAS 2024	TPC Chair
Yoshifumi Nishio	IEEE CAS	ISOCC 2024	Technical Program Committee Co-Chair
Elena Blokhina	IEEE CAS	ISCAS 2024	Tutorial Chair
Elena Blokhina	IEEE CAS	ICECS 2024	Special Session Chair
Yoko Uwate	IEEE CAS	ISCAS 2024	Women in CAS (WiCAS) Program Chair
Yoko Uwate	IEEE CAS	APCCAS 2024	DEI Chair
Yoko Uwate	IEEE CAS	ISOCC 2024	WiCAS co-chair
Dimitri Galayko	IEEE CAS	ICECS 2024	General chair
Gianluca Setti	IEEE CAS	AICAS 2024	Technical Program Co-chair
Gianluca Setti	IEEE CAS	BIOCAS 2024	International Liaisons

Conference/events technically co-sponsored by the CAS Society

Your Name	Conference Sponsors	Conference/Event Title	Your Role
Riccardo Meucci	IEEE CAS	COMPENG 2024 - 2024 IEEE Workshop on Complexity in Engineering	General Co-Chair
Federico Bizzarri	IEEE CAS	COMPENG 2024 - 2024 IEEE Workshop on Complexity in Engineering	Member of the Scientific Committee
Chen Guanrong	IEEE CAS	COMPENG 2024 - 2024 IEEE Workshop on Complexity in Engineering	Member of the Scientific Committee
Di Bernardo Mario	IEEE CAS	COMPENG 2024 - 2024 IEEE Workshop on Complexity in Engineering	Member of the Scientific Committee
Di He	IEEE CAS	IEEE CASS Shanghai-Shikoku Joint Workshop	Technical Program Chair
Ahmed Madian	IEEE CAS	35th The International Conference on Microelectronics	Technical Program Chair
Elena Blokhina	IEEE CAS	PRIME 2024	Steering Committee

3.2. IEEE Journal Editorships:

Journals that are (co-)sponsored by the CAS Society.

Your Name	Journal Sponsors	Journal Title	Your Role
Zbigniew Galias	IEEE CAS	IEEE Journal on Emerging and Selected Topics in Circuits and Systems	Guest Editor
Daniele Linaro	IEEE CAS	IEEE Open Journal of Circuits and Systems	Associate Editor
Yongxiang Xia	IEEE CAS	IEEE Open Journal of Circuits and Systems	Associate Editor
Matteo Lodi	IEEE CAS	IEEE Transactions on Circuits and Systems I: Regular Papers (TCAS-I)	Associate Editor
Erivelton Nepomuceno	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs (TCAS-II)	Associate Editor

Mustak Erhan Yalcin	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Associate Editor
Hiroo Sekiya	IEEE CAS	IEEE Journal on Emerging and Selected Topics in Circuits and Systems	Senior Editor
Chi-Tsun (Ben) Cheng	IEEE CAS	IEEE Transactions on Circuits and Systems I: Regular Papers	Associate Editor
Chi-Tsun (Ben) Cheng	IEEE CAS	IEEE Transactions on Circuits and Systems II: Express Briefs	Associate Editor
Chi-Tsun (Ben) Cheng	IEEE CAS	IEEE Open Journal of Circuits and Systems	Associate Editor
Chi-Tsun (Ben) Cheng	IEEE CAS	IEEE Journal on Emerging and Selected Topics in Circuits and Systems	Associate Editor
Ahmed Madian	IEEE CAS	Special issue on Transaction Circuit and Systems II dedicated to ISCAS 2024	Guest 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
Johan Suykens	IEEE CIS Neural Networks Pioneer Award	2024
Federico Bizzarri	The Nonlinear Circuit and Systems Technical Committee of the IEEE Circuits and Systems Society presented a Best Track Manuscript Recognition to A.M. Brambilla, D. del Giudice, D. Linaro, F. Bizzarri for the manuscript "An Impedance Method for Stability Analysis of Power Systems with Large Penetration of Inverter Based Resources," presented at ISCAS 2023.	May 2023
Federico Bizzarri	2023 Best Associate Editor for the IEEE Open Journal of Circuits and Systems	Awarded in 2024
Chi-Tsun (Ben) Cheng	2022 Best Associate Editors - IEEE Transactions on Circuits and Systems Part II	Awarded in 2023
Ahmed Madian	Distinguished Lecturer Program CASS	2024-2025
Costas Psychalinos	Best Student Paper Award in 46 th International Conference on Telecommunications and Signal Processing (TSP)	July 2023

3.4. Keynote Speeches/Invited Talks:

Your Name	Invited by	Event/Conference Title	Talk Title	Date
Johan Suykens	WCCI organizers	WCCI-IJCNN 2024	Least squares support vector machines and deep learning	July 2024
Peter Kennedy	Prof. Sergio Callegari	Invited Lecture, Cesena	Why We Love and Hate Digital Delta Sigma Modulation	7 June 2023
Peter Kennedy	ACRC, Technion, Israel	Invited Lecture, online	Mitigating Nonlinear Phenomena in Fractional-N Frequency Synthesis	13 September 2023
Peter Kennedy	Prof. Fabio Villone, Prof. Marco Storace	Gasparini Doctoral School, Napoli, Italy	Foundations of Nonlinearity for Microelectronics	5-9 February 2024
Peter Kennedy	Prof. Masoud Babaie, Dr. Wanghua Wu	ISSCC 2024 Forum 5: Recent Developments in High-Performance Frequency Synthesis Circuits and Systems, San Francisco	Prediction and Mitigation of Spurs in Fractional Synthesizers	22 February 2024
Ljiljana Trajkovic	Organizers	ICBDE 2023, Jinan, China	"Machine learning for detecting Internet traffic anomalies"	Jun 16, 2023
Ljiljana Trajkovic	Prof. Haibin Zhu	E-CARGO Online Summer School	"THMS and more"	Jul 16, 2023
Ljiljana Trajkovic	Organizers	EEEMEET 2023, Vancouver, Canada	"Machine learning for detecting Internet traffic anomalies"	Aug 14, 2023
Ljiljana Trajkovic	Prof. Maciej Ogorzalek	ICIAM 2023, Waseda University, Tokyo, Japan	"Machine learning for detecting Internet traffic anomalies"	Aug 20, 2023
Ljiljana Trajkovic	Organizers	ICCVIT 2023: Chenzhou, China	"Machine learning for detecting Internet traffic anomalies"	Aug 25, 202
Ljiljana Trajkovic	Organizers	ECSSP 2023: Kunming, China	"Machine learning for detecting Internet traffic anomalies"	Aug 26, 2023
Ljiljana Trajkovic	Organizers	ECCST 2023: Shanghai, China	"Machine learning for detecting Internet traffic anomalies"	Sep 15, 2023

Ljiljana Trajkovic	Organizers	ICCSIE 2023, Putrajaya, Malaysia	"Machine learning for detecting Internet traffic anomalies"	Sep 21, 2023
Ljiljana Trajkovic	Organizers	ICAAI 2023, Istanbul, Turkey	"Machine learning for detecting Internet traffic anomalies"	Oct 13, 2023
Ljiljana Trajkovic	Organizers	WECE 2023, Guilin, China	"Machine learning for detecting Internet traffic anomalies"	Oct 27, 2023
Ljiljana Trajkovic	Organizers	BDCIA 2023, Huanggang, China	"Machine learning for detecting Internet traffic anomalies"	Nov 2, 2023
Ljiljana Trajkovic	Organizers	COMNETSAT 2023, Malang, Indonesia	"Machine learning for detecting Internet traffic anomalies"	Nov 23, 2023
Ljiljana Trajkovic	Organizers	ICAISE 2023, Errachidia, Morocco	"Machine learning for detecting Internet traffic anomalies"	Nov 24, 2023
Ljiljana Trajkovic	Organizers	ISCIMI 2023, Mexico City, Mexico	"Machine learning for detecting Internet traffic anomalies"	Nov 25, 2023
Ljiljana Trajkovic	Organizers	IEEE Southeastern Michigan SMC Chapter	"Machine learning for detecting Internet traffic anomalies"	Nov 28, 2023
Ljiljana Trajkovic	Prof. Ilhem Kallel	SMC DLP, Hammamet, Tunisia	"Machine learning for detecting Internet traffic anomalies"	Dec 13, 2023
Ljiljana Trajkovic	Prof. Ilhem Kallel	TSYP11, Hammamet, Tunisia	"Machine learning for detecting Internet traffic anomalies"	Dec 19, 2023
Ljiljana Trajkovic	Organizers	ICADCML 2024: VIT-AP University, India	"Machine learning for detecting Internet traffic anomalies"	Jan 5, 2024
Ljiljana Trajkovic	Organizers	EEISS 2023, Changsha, China	"Machine learning for detecting Internet traffic anomalies"	Jan 13, 2024
Ljiljana Trajkovic	Prof. Luke Chen	University, UK 2024	"Machine learning for detecting Internet traffic anomalies"	Feb 21, 2024
Ljiljana Trajkovic	Dr. Vakhtang Putkaradze	ATCO SpaceLab Speaker Series	Machine learning for detecting Internet traffic anomalies"	Feb 23, 2024
Ljiljana Trajkovic	Organizers	ICIEE 2024, Jeju, South Korea	"Machine learning for detecting Internet traffic anomalies"	Feb 27, 2024
Ljiljana Trajkovic	Organizers	CIDT 2024, Wuhan, China	"Machine learning for detecting Internet traffic anomalies"	Mar 8, 2024
Ljiljana Trajkovic	Organizers	ISPP 2024, Kunming, China	"Machine learning for detecting Internet traffic anomalies"	Mar 8, 2024
Ljiljana Trajkovic	Prof. Francesco Sorrentino	University of New Mexico, Albuquerque	"Machine learning for detecting Internet traffic anomalies"	Apr 19, 2024
Federico Bizzarri	Maynooth University IEEE Student Branch	Maynooth University IEEE Student Branch Opening Event	Inertia estimation in power systems	12/10/2023
Hiroo Sekiya	Organizers	ICRERA'23, 12th International Conference on Renewable Energy Research and Applications	Load-Independent High-Frequency Inverter and Its Applications.	Aug. 30, 2023
Chi-Tsun (Ben) Cheng	Hong Kong Electronics & Technologies Association (HKETA)	Innovate For Future 2023 (IFF2023)	Enabling Digital Transformation in Small and Medium Enterprises – Overcoming Obstacles and Realizing Opportunities	Aug. 5, 2023
Costas Psychalinos	Prof. Norbert Herencsar	46 th International Conference on Telecommunications and Signal Processing	Interdisciplinary Prospective of Non-Integer Order Circuits & Systems	July 12, 2023

3.5. Other distinguished IEEE services

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

Your Name	Organization	Position/Activities	Period
Peter Kennedy	IEEE Awards Board	Vice-Chair	2023-2024
Ljiljana Trajkovic	IEEE Election Oversight Committee	Chair	January 2023 - December 2024
Ljiljana Trajkovic	IEEE Hearing Board	Member	January 2023 - December 2023
Ljiljana Trajkovic	IEEE Brain Technical Community TC 2.0	Member of the Steering Committee	January 2023 - December 2024
Ljiljana Trajkovic	IEEE Fellow Committee	Member	January 2023 - December 2023
Ljiljana Trajkovic	IEEE Tellers Committee	Vice-Chair	January 2022 - December 2023
Alejandro Rojas	IEEE Chile Sur Section	Section Chair	2024-2025

Erivelton Nepomuceno	IEEE Nonlinear Circuits and Systems Technical Committee	Chair-Elect	May 2023 - current
Erivelton Nepomuceno	Maynooth University – IEEE Student Branch	Counselor	June-2023 - current
Federico Bizzari	IEEE Nonlinear Circuits and Systems Technical Committee	Chair	May 2023 - current
Danilo Comminiello	IEEE CAS Central & South Italy Chapter	Finance Chair	01/01/2023 - 31/12/2024
Mustak Erhan Yalcin	IEEE Circuits and Systems (CAS) Society Turkey Chapter (CH08131)	Chair	2022-2024
Mustak Erhan Yalcin	IEEE Istanbul Technical University Student Branch (STB96101)	Counselor	2022-2024
Hiroo Sekiya	IEEE CASS Diversity, Equity, and Inclusion Committee (DEI)	DEI BoG Representative	2023-2025
Ahmed Madian	IEEE Egypt Section	Chair	2024-2025
Ahmed Madian	IEEE African Council	Treasurer	2024-2025
Tommaso Addabbo	IEEE Nonlinear Circuits and Systems Technical Committee	Secretary	May 2023 - current

4. TC Significant Technical Leadership and Innovations

- Peter Kennedy - IEEE Awards Board - Vice-Chair - 2023-2024
- Johan Suykens - IEEE CIS Neural Networks Pioneer Award – 2024

5. New plans for the next year

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