

# 2022 Annual Report (June 2021 – May 2022)

## Electronics for Agrifood Special Interest Group

### IEEE Circuits and Systems Society

Chairman: Victor Grimblatt  
Secretary: Francois Rivet

## 1. Special Interest Group Meeting(s):

The Electronics for Agrifood SIG was created in July 2021, so we have developed some activities during the period.

Only one meeting has been held so far. The meeting was on September 13<sup>th</sup>. and it was virtual. We had over 20 participants in the meeting, and we discussed about the creation of the group and the potential activities we can develop.

## 2. Voting Members:

First Name	Last Name	Affiliation	Email	IEEE Grade	IEEE Region
Danilo	Demarchi	Politecnico di Torino	danilo.demarchi@polito.it	Senior	8
Marios	Sophocleous	University of Cyprus	sophocleous.marios@ucy.ac.cy	Member	8
Matias	Miguez	UCU	mmiguez@ucu.edu.uy	Member	9
Francois	Rivet	Université de Bordeaux	francois.rivet@ims-bordeaux.fr	Member	8
Victor	Grimblatt	Synopsys	Victor.grimblatt@synopsys.com	Senior	9
Alper	Bozkurt	North Carolina State University	aybozkur@ncsu.edu	Senior	1-6
Daniel	Lai	Victoria University	Daniel.Lai@vu.edu.au	Member	10
Marco	Carminati	Politecnico di Milano	marco1.carminati@polimi.it	Senior	8
Zhongyang	Cheng	Auburn University	chengzh@auburn.edu	Member	1-6
Mario	Casu	Politecnico di Torino	mario.casu@polito.it	Senior	8
Mohammad	Russel	Dalian University of Technology	mrussel@dut.edu.cn	Senior	10
Alfredo	Arnaud	UCU	alfrarnaud@gmail.com	member	9
David	Polese	Consiglio Nazionale delle Ricerche	david.polese@cnr.it	Not member	8
Paddy	French	Delft university of technology	p.j.french@tudelft.nl	Member	8
Luisa	Petti	Free University of Bozen-Bolzano	luisa.petti@unibz.it	Member	8
Alberto	Sanchez	Universidad San Francisco de Quito	asanchez@usfq.edu.ec	Member	9
Carlos	Muñoz	Universidad de la Frontera	carlos.munoz@ufrontera.cl	Member	9
Hugo	Burgos	Universidad San Francisco de Quito	hburgos@usfq.edu.ec	Member	9
Paolo	Motto Ros	Politecnico di Torino	paolo.mottoros@polito.it	Member	8
Alfonso	Chacon Rodriguez	Tecnologico de Costa Rica	alchacon@tec.ac.cr	Member	9
Umberto	Garlando	Politecnico di Torino	umberto.garlando@polito.it	Member	8

Pietro	Ibba	Free University of Bolzano-Bozen	pietro.ibba@natec.unibz.it	Member	8
Arys	Indira Carasquilla	Tecnologico de Costa Rica	acarrasquilla@tec.ac.cr	Member	9
Renato	Rimolo Donario	Tecnologico de Costa Rica	rrimolo@tec.ac.cr	Senior	9
Alessandr	Sanginario	Politecnico di Torino	alessandro.sanginario@polito.it	Member	8
Alvaro	Pardo	UCU	apardo@ucu.edu.uy	Member	9
Jose Augusto	Miranda Nacif	Universidade Federal de Viçosa	jnacif@ufv.br	Member	9
	Jalaja	Bangalore Institute of Technology	jalajas@ieee.org	Member	10
Roberto	La Rosa	ST	roberto.larosa@st.com	TBD	9
Oswaldo	Menendez	Universidad Andres Bello	oswaldo.menendez@unab.cl	TBD	9
Daoud	Urdu	Wageningen University & Research	daoud.urdu@wur.nl	TBD	8
George	Beers	Wageningen University & Research	george.beers@wur.nl	TBD	8
Sjaak	Wolfert	Wageningen University & Research	sjaak.wolfert@wur.nl	TBD	8

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

	2021
Total number of SIGs	%
Regions 1 – 6 (U.S.A.)	6
Region 7 (Canada)	0
Region 8 (Europe/Africa, Middle East)	48
Region 9 (Central/South America)	36
Region 10 (Asia/Pacific)	9

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

	2020
Total number of SIGs	%
Male	91
Female	9

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

	2020
Total number of SIGs	%
Academia	91
Industry	9
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
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Victor Grimblatt	CAS	LASCAS 2022	General co-chair
Victor Grimblatt	CAS	FoodCAS@ISCAS2021	General Co-Chair
Danilo Demarchi	CAS	BioCAS 2021	TPC Co-Chair
Danilo Demarchi	CAS	FoodCAS@ISCAS2021	General Co-Chair
Marios Sophocleus	CAS	FoodCAS@ISCAS2021	TPC Co-Chair
Matias Miguez	CAS	FoodCAS@ISCAS2021	TPC Co-Chair
Francois Rivet	CAS	FoodCAS@ISCAS2021	Keynote Chair

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

Your Name	Conference Sponsors	Conference/Event Title	Your Role
Victor Grimblatt	CAS, CEDA	VLSI-SoC 2021	TPC Co-Chair

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>)

Your Name	Journal Sponsors	Journal Title	Your Role
Victor GRIMBLATT	IEEE CAS	JETCAS	Guest Editor
Danilo Demarchi	IEEE CAS	JETCAS	Guest Editor
Julio Georgiou	IEEE CAS	JETCAS	Guest Editor
Yosi Shacham	IEEE CAS	JETCAS	Guest Editor

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

### 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

### 3.4. Keynote Speeches/Invited Talks:

Your Name	Invited by	Event/Conference Title	Talk Title	Date
Luisa Petti	Conference organization	International Conference on Micro/Nanoelectronics Devices, Circuits and Systems	Flexible Electronics for Low-Cost and Unobtrusive Sensor Systems Everywhere	January 2022
Luisa Petti	Seminar organization	WE-Heraeus-Seminar "Curvilinear Condensed Matter: Fundamentals and Applications	Flexible electronics and sensorics based on low-cost and high throughput processes	June 2021
Luisa Petti	Symposium organization	International Symposium on Flexible and Organic Electronics (ISFOE21)	Cost-effective and high throughput processing of flexible electronics: from materials to systems and applications	July 2021
Luisa Petti	Workshop organization	International Workshop on Flexible Hybrid Electronics -	Flexible and printed electronics for sensing and biosensing devices and systems	October 2021

		Manufacturing, Processes & Applications		
Luisa petti	School organization	2nd Seasonal School-2021 Technology and Agri-Business: Feeding a Growing Population		December 2021
Zhongyang Cheng	Seminar organization	Agricultural and Biological Engineering, University of Florida,	Novel Sensor Technologies for Food Safety and Precision Agriculture	September 2021
Zhongyang Cheng	Conference organization	2021 Alabama Water Resources Conference	Novel water sensors for precision agriculture	September 2021
Zhongyang Cheng	Seminar organization	35th Annual Meeting Southern Section, AOAC International	Wireless Sensor for in-situ Detection of Bacterial Cells in Liquid Media and on Surface	April 2022
Mohammad Russel	Naming Normal University,P.R.China	The 3rd International Conference on Advances in Civil Engineering, Energy Resources and Environment Engineering (ACCESE 2021)	Microwave sensor measurement system to monitoring the current smart city environmental challenges	May 2021
Mohammad Russel	Conference organsation	The 2021 International Conference on Ocean Engineering and Application Technology (ICOEAT 2021)	Microwave sensor measurement system could be a novel approach to monitoring the marine environmental challenges	October 2021
Mohammad Russel	Department of Environmental Science, FLSI, BUITEMS, Quetta, Pakistan	How covid-19 affects nature? and Impact of climate change on the regional ecosystem	Smart measurement systems to monitor the current environmental challenges	November 2021
Victor Grimblatt	Seminar organization	II INTERNATIONAL CONGRESS FROM PLANT HEALTH TO COMMUNITY HEALTH: FOCUS ON BIOTECHNOLOGY AND FUNCTIONAL FOOD	Increasing the Soil Productivity in a Sustainable Way: IoT to the Rescue	May 2022
Danilo Demarchi	Webinar Invited Talk	Digital Food Ecosystem Webinar	IoT for Precision Agriculture	Nov 2021

### 3.5. Other distinguished IEEE services

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

Your Name	Organization	Position/Activities	Period
Alfredo Arnaud	IEEE Urucon	Vice General Chair	2021
Alfredo Arnaud	CUTI	Forum Chair	Dec 2021
Luisa Petti	IEEE EDS Flexible Electronics & Display	TC Member	2021
Luisa Petti	IEEE RFID TC on Additively Manufactured Electronics Systems	TC member	2021
Victor Grimblatt	CAS	BoG member	2021-2022
Victor Grimblatt	CAS	Chaper chair	2021-2023
Danilo Demarchi	Sensors Council	Representative for CAS	2020-2021
Danilo Demarchi	CAS	Founder of Transactions on AgriFood Electronics	Feb 2022

### 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

1. 2nd Seasonal School on Agribusiness

- From 12/6/21 to 12/9/21.
- 12 lecturers
- Over 30 attendees
- Fully virtual seasonal school

2. FoodCAS 2021

- One day workshop
- 2 keynote speakers
- 9 papers presented out of 13 received papers
- All papers had at least 3 reviews
- Accepted papers published in IEEE Xplore

3. LASCAS 2022 Special Session on Agrifood

- Held 3<sup>rd</sup> March 2022
- 5 papers were presented during the session
- In person session

4. Collaboration with Sensor Council

- Sensor Council collaboration on topics related to sensors for Agrifood. Shared setup of the new Transactions on AgriFood Electronics and the new conference CAFÉ (Conference on AgriFood Electronics).

5. Approval of IEEE Transactions on AgriFood Electronics, February 2022

## 6. 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?

- 3<sup>rd</sup> Seasonal School on Agribusiness, Sept 2022
- Launch of TAFE, Jan 2023
- Workshop on AgriFood Electronics (WAFE), Feb 2023
- CASIF on AgriFood Electronics, Sept 2022
- Increase the number of participants as well as the participant's regions