



# IEEE CASS Opportunities

*Ricardo Reis*

# Circuits and Systems – Engineering Behind our Digital Lives

Circuits and Systems is the **Ubiquitous, Transversal, Multidisciplinary** and **Enabler Technology** to Meet the Challenges of the 21<sup>st</sup> Century

Extract information from physical events (Monitoring)

Interaction with the environment (Actuation)

Storage, smart processing and computation (Artificial Intelligence)

Any where, any time connectivity (Communications)

Energy-aware technologies and more... (Sustainability)



# IEEE Circuits and Systems Society

## Field of Interest

The IEEE Circuits and Systems Society promotes the advancement of the **theory, analysis, design, tools, and implementation of circuits and systems**. The field spans their theoretical foundations, applications, and architectures, as well as circuits and systems implementation of algorithms for signal and information processing.

Through high quality publications, conferences, technical and educational activities, and leadership opportunities, CASS

cultivates advances in circuits and systems

keeps members abreast of the latest information and technologies

gives members the opportunity to influence the future of CAS

# CASS at a Glance

10,731  
**Members and  
Affiliates**

120+  
**Countries**

2,129  
**Student  
Members**

10  
**Geographic  
Regions**

133  
**Sections**

118 (59 + 59)  
**Chapters**

88  
**Student  
Branch Chapters**

**Affinity Groups:**  
YP, WIE, DEI

7  
**IEEE Councils**

4 (+2)  
**IEEE Technical  
Communities**

16  
**Transactions,  
Journals, and  
Magazines**

2.5 + million  
**Downloads  
(only fully  
sponsored)**

51,000 +  
**Citations  
(only fully  
sponsored)**

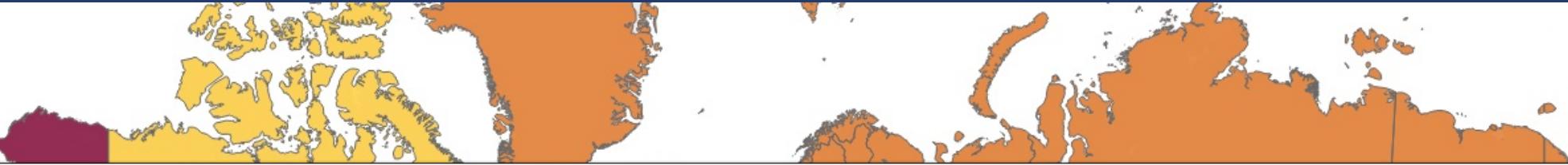
35  
**Conferences  
10,000 +  
Participants**

144,000 +  
**views  
ISCAS 2021**

# CASS in Latin America (R9)



# Membership Geographic Distribution



## Total members (without affiliates)

	R1-6	R7	R8	R9	R10	Total
<b>2022</b>	3268	296	2242	491	4265	10562
<b>2021</b>	3385	311	2266	555	4149	10666
<b>2020</b>	3548	322	2300	538	3819	10527

Region

## Student members

	R1-6	R7	R8	R9	R10	Total
<b>2022</b>	241	37	289	201	1396	2164
<b>2021</b>	263	42	312	239	1382	2238
<b>2020</b>	294	52	332	219	1191	2088



R 10

36



# Some Membership Benefits

**Conferences**

**Publications**

**Technical Activities**

**Regional Activities and Membership**

**Continuous Education**

**Collective Initiatives**

# Conferences

The IEEE CAS Society sponsors technical conferences, symposia, and workshops to provide networking opportunities with peers from around the world, and exchange high-quality, rigorously peer-reviewed scientific and technological knowledge.

## Global Flagship Conferences:

Int. Symposium on Circuits and Systems (ISCAS)

## Regional Flagship Conferences

<b>R1-7</b>	<b>MWSCAS</b>
<b>R7-R8</b>	<b>NEWCAS</b>
<b>R8</b>	<b>ICECS</b>
<b>R9</b>	<b>LASCAS</b>
<b>R10</b>	<b>APCCAS</b>

## Premier Conferences

Int. Conf. on Artificial Intelligence Circuits and Systems (AICAS)

Int. Symp. on Integrated Circuits (ISICAS). **J2C event**

IEEE Biomedical Circuits and Systems Conference

# PUBLICATIONS



In addition to benefits offered for IEEE membership, CASS offers:

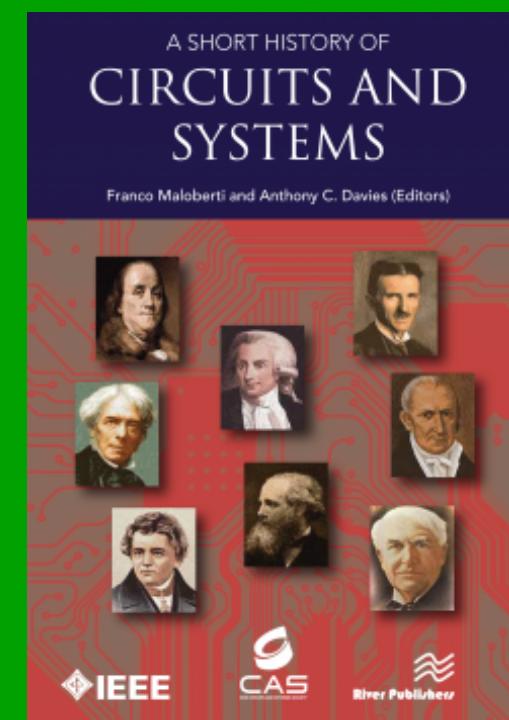
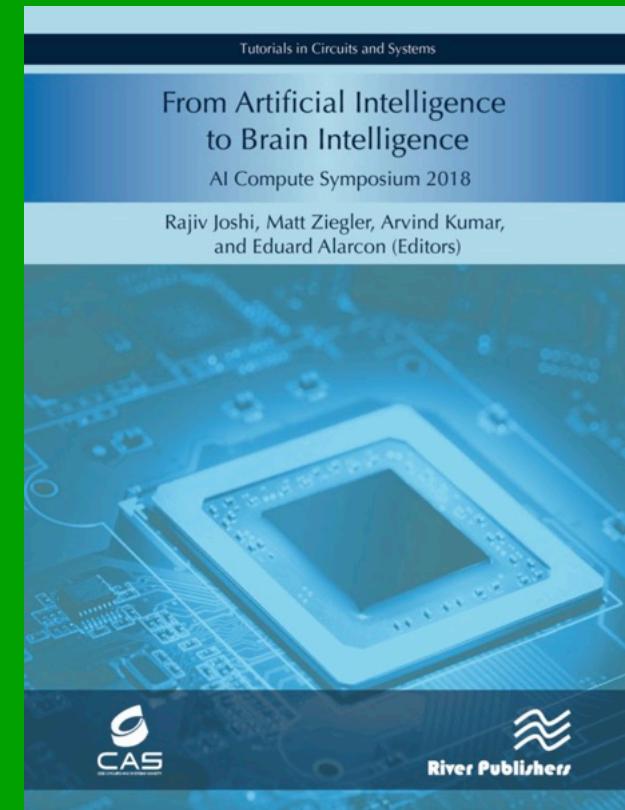
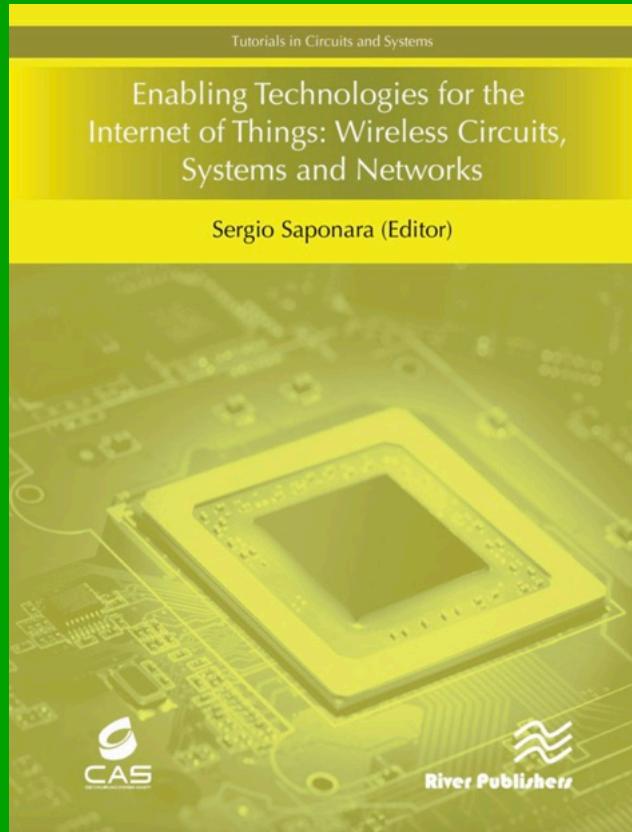
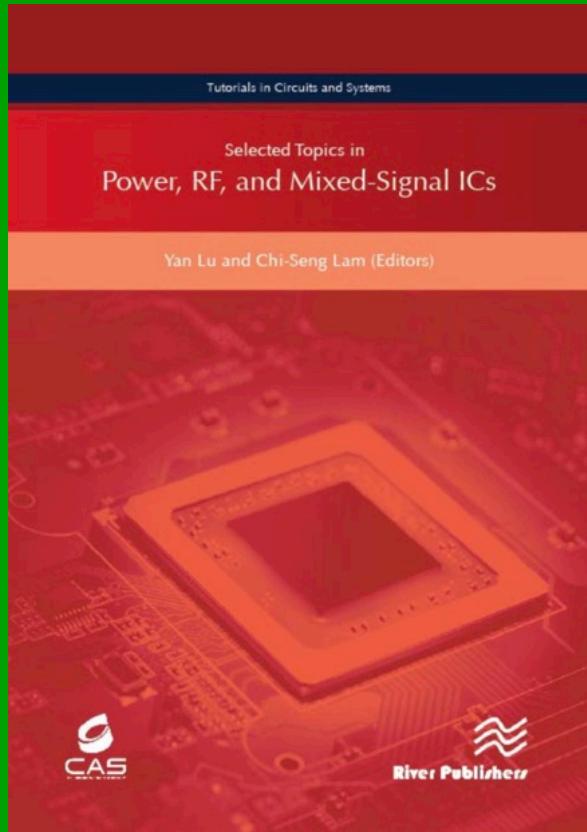
- Access to the new IEEE Open Journal of Circuits and Systems (electronic)
- Free CAS Magazine (electronic)
- Free JETCAS (electronic)
- Free CAS Society Newsletter (electronic)
- Free RFIC Virtual Journal (electronic)
- Free RFID Virtual Journal (electronic)
- Free access to CAS Society Conference Digital Library
- Free access to the **NEW CAS Society Resource Center**
- Student members receive free access to all CASS journals

**IEEE Transactions on Circuits and Systems I**  
**IEEE Transactions on Circuits and Systems II**



# CASS eBooks

The pdf version is free for CASS members  
About US\$10 for other IEEE members



# Seasonal Schools

IEEE CASS Seasonal School

## Circuits and Systems for IoT

[www.inf.ufrgs.br/cass/iot/](http://www.inf.ufrgs.br/cass/iot/)



August 5 to 9, 2019, Porto Alegre, Brazil



2019 edition: Porto Alegre, Brazil



IEEE Seasonal School on  
Circuits and Systems for IoT

3rd edition

Bordeaux, FRANCE

31st May - 4th June 2021

4th edition: Bordeaux, France, September 2022

# IEEE CASS Seasonal School on Physical Design Automation



Past editions:

- 2017 - Porto Alegre, Brazil
- 2018 - Chiayi, Taiwan
- 2019 - Beijing, China

# Seasonal Schools

Call for Seasonal Schools

In Person or Hybrid Seasonal Schools can get a support of US\$5000

Virtual ones can get US\$ 2000

Book based on slides with comments (see CASS webpage)



For information contact [danilo.demarchi@polito.it](mailto:danilo.demarchi@polito.it)

## 3rd AgriFood Electronics IEEE CAS Seasonal School

Smart Technologies for a Sustainable Agriculture

September 26-27, 2022 - Politecnico di Torino, Turin, Italy

In this seasonal school agribusiness issues will be presented, associated with the sustainability of the agriculture from the agronomy's point of view, as well as from the circuits and systems perspective. The school, organized in **Hybrid Mode**, aims to motivate researchers, students, and industry to successfully address the growing world-feeding challenge by finding the right economical solutions. This seasonal school, that we are repeating on a yearly basis, is meant to become the meeting point for professionals working on **Precision and Smart Agriculture, IoT, sensors, electronic circuits, electronic systems, Integrated Circuits, and many more**.

Electronics applied to following topics will be addressed:

- Sensors for Agriculture
- Soil Analysis
- Growth and Health Monitoring
- Food Waste Process and Reutilization
- IoT Applied to Agribusiness



Register at <http://mines.polito.it/ssafe22>





# Regional Activities

## CASS Industry Forums

**CASIF** is a program to increase interaction between academia and industry and demonstrate CASS technical leadership.

**CASS will provide funding support for up to 50% of the expenses for each selected Industry Forum, depending on the funding availability. (Some industry supports can**

IEEE Lebanon Joint Chapter  
PES CAS PELS  
IE12/PE11/CAS04/PEL35

**HICHAM ARAFA**  
Future of Automotive

**AMR ABDEL-HAMID**  
Artificial Intelligence of Things: The Opinion of

**IBRAHIM SOBH**  
Computer vision for Autonomous Driving

**RENÉ DE JONG**  
Bringing intelligence to the edge with Arm CPUs

**IEEE CAS-IF SUMMER-I 2021**  
The CAS Emerging and Selected Topics for Industry Forums (CASIF) 2021

**RAPID DEVELOPMENT OF ARTIFICIAL INTELLIGENCE (AI), ELECTRONIC SYSTEMS AND IOT TECHNOLOGIES**

**AUGUST 7, 2021**

A banner for the Industry Academia Conclave 2021. It features the IEEE CAS logo, the Industry Academia Conclave logo, and the IEEE Bangalore Section logo. The text "Industry Academia Conclave 2021" is prominently displayed in the center, with "Industry", "Presents", and "Academia" in a smaller font below it. The background is a light blue with faint white puzzle piece patterns.

# Conferences

## Industry Co-Sponsored Events

Together with the **IEEE Circuits and Systems Society** and the **IEEE Electron Devices Society**, **IBM Research** is hosting the **5th AI Compute Symposium** virtually.

The IBM and IEEE sponsored Symposium will bring together dreamers, thinkers, and innovators in cutting-edge research for a two-day forum to explore AI Compute challenges and future research directions. This symposium is **free of charge**.



# 2023 International Symposium on Circuits and Systems (ISCAS)

- **Date and Location:**

21-25 May 2023, Monterey, California, USA

- **Conference Theme:**

“Technology Disruption and Society”

- **Conference Venue:**

Monterey Convention Center

- **Call for Papers Deadline:**

24 October 2022

- **Planned Conference Events:**

- Welcome Reception 22 May, Monterey Bay Aquarium
- Gala Dinner 24 May, Monterey Beach House



## CALL FOR PAPERS

### IMPORTANT DATES

#### CALL FOR PAPERS DEADLINES

**October 24, 2022**

Regular Paper Submission

**December 5, 2022**

Transactions Paper Submissions

**December 19, 2022**

Author Notification

**February 4, 2023**

Final Manuscript Submission



### TOPICS OF INTEREST

The IEEE International Symposium on Circuits and Systems (ISCAS) is the flagship conference of the IEEE Circuits and Systems (CAS) Society and the world's premiere forum for researchers in the active fields of theory, design and implementation of circuits and systems. This is accomplished through technical conference sessions, poster sessions, live demonstration sessions, and publication of conference papers. ISCAS 2023 will be driven by the theme “Technology Disruption and Society” aiming to emphasize the potential of the CAS Society to find innovative solutions to challenges facing society today.

**This year's meeting will highlight the following innovation themes:**

- » Artificial Intelligence & Deep Learning
- » Big Data Processing
- » Internet of Things
- » Distributed and Decentralized Systems
- » Intelligent Video Analytics and Vision Systems
- » Zettabyte Communication Infrastructure
- » Storage Class Memories and Computational Storage
- » Personalized Healthcare Systems
- » Brain: Innovative NeuroTechnologies
- » Disaster and Pandemic Prevention and Mitigation
- » Green and Sustainable Computing and Systems
- » Technologies for Responsible, Fair and Ethical IT

**Collecting contributions in all areas of Circuits and Systems, including but not limited to:**

- » Analog and Mixed Signal Circuits and Systems
- » Digital Integrated Circuits and Systems
- » Power and Energy Circuits and Systems
- » Sensory Circuits and Systems
- » Nonlinear Systems and Circuit Theory
- » Digital Signal Processing
- » Multimedia Systems and Applications
- » Communications Circuits and Systems
- » Biomedical Circuits and Systems
- » Neural Networks and Neuromorphic Engineering
- » Beyond CMOS: Nanoelectronics and Heterogeneous System Integration
- » Education in Circuits and Systems

**Paper Submission**

Selected papers will be invited for possible publication either in the IEEE Transaction on Circuits and Systems – Part I, in the IEEE Transaction on Circuits and Systems – Part II, or in the IEEE Transaction on Biomedical Circuits and Systems.

**About Monterey**

Picture seaside cliffs and pristine beaches, where you might spot whales, sea otters and migrating birds. From famous writers' haunts to Spanish Missions, the history here is just as fascinating as the geography. Aside from the epic scenery, you'll savor unforgettable flavors from the area's award-winning food and wine scene. Plus, there are limitless opportunities for recreation, including world-class golf, shopping, kayaking, hiking and only 70 miles from Silicon Valley.

Please visit: [iscas2023.org](http://iscas2023.org)



# IEEE International Symposium on Circuits and Systems

May 19-22 2024, Singapore  
Resorts World Convention Centre

[Submission Site\\*](#)[Watch Video](#)

\*Submission site to be opened at later dates.



Photo Credit: Singapore Tourism Board



# 2023 Latin American Symposium on Circuits and Systems (LASCAS, R9)

## Date and Location:

28 February-3 March 2023 Quito, Ecuador

## Call for Papers Deadline:

4 September 2022

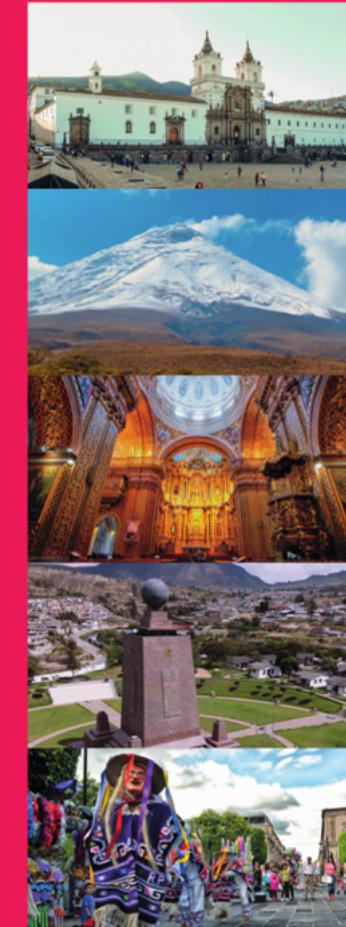
Best papers selected to TCAS 2 and TCAS 1



## LASCAS 2023

An IEEE CASS Flagship Conference

14<sup>th</sup> IEEE LATIN AMERICAN SYMPOSIUM ON CIRCUITS AND SYSTEMS  
February 28 - March 03, 2023  
QUITO, ECUADOR



In the fascinating volcanic mountain slopes of Quito, the first UNESCO World Heritage site, the IEEE CASS flagship conference brings together acknowledged researchers, engineers, students, and practitioners from all around the world.

Technical novelties and tutorial overviews are most welcomed on the following circuits and systems topics, however not limited to:

- Analog and Digital Circuits
- Mixed-Mode Circuits
- Biomedical Electronics
- Communication/RF Circuits
- Wireless Sensor Networks
- Nanoelectronics
- Electronic Design Automation
- VLSI Systems and Applications
- FPGA Design and Applications
- Circuit Testing
- Fault Tolerant Circuits
- Circuits and Systems for Space and Nuclear Applications

**Special Session Proposal:** September 4, 2022

**Paper Submission:** September 4, 2022

**Tutorial Submission:** September 4, 2022

**Notification of Acceptance:** October 31, 2022

**Camera Ready:** November 11, 2022

Accepted paper will be submitted for inclusion into IEEE Xplore. Best papers will be invited to the special issue/section of the IEEE Transactions on Circuits and Systems I (TCAS-I) and IEEE Transactions on Circuits and Systems II (TCAS-II).

### General Chairs:

Lionel Trojman, ISEP, France

Luis-Miguel Procel, Universidad San Francisco de Quito, Ecuador

### Program Chairs:

Alexander Fish, Bar-Ilan University, Israel

Alexandra Zimpeck, Universidade Católica de Pelotas, Brazil

### Special Sessions Chairs:

Andreas Burg, EPFL, Switzerland

Ramiro Taco, Universidad San Francisco de Quito, Ecuador

### Social Activities:

Besides the technical program, a very entertaining social program is planned. Special optional tours to tourist attractions, as Galapagos Islands, will be available to the Symposium attendees and their guests

# LASCAS2024

## Punta del Este, Uruguay

February 27 - March 1, 2024



# 2023 IEEE International Conference on Electronic Circuits and Systems(ICECS, R8)

## Date and Location:

December 4-7, Glasgow, Scotland

Best papers selected to TCAS 2 and TCAS 1



The 30<sup>th</sup> IEEE International Conference on Electronics, Circuits and Systems (ICECS) will be held in Istanbul, Turkey 4-7 December 2023. As the flagship conference of IEEE Circuits and Systems Society in Region 8 (Europe, Middle East, and Africa), ICECS 2023 will consist of tutorials, plenary lectures, regular, special and poster sessions focusing on recent trends, emerging technologies and advances. "Best-, Women in CAS-, Young Professional- and Student-Paper Awards" will be presented.

## CONFERENCE COMMITTEE

### Honorary Chairs:

Magdy Bayoumi, Josef Nossek, Franco Maloberti, Thanos Stouraitis, Vedat Taşhanoglu

### Conference Chairs:

Cem Göknar, Siddik Yarman

### Technical Program Chairs:

Müştak Erhan Yalçın, Norbert Herencsar

### Industrial Relations Chairs:

Mohammed Ismail, Mustafa Berke Yelten

### Finance Chairs:

Serdar Özoguz

### Tutorial Chairs:

Ahmed S. Elwakil, Ronald Tetzlaff

### Special Sessions Chairs:

Tayfun Nesimoğlu, Neslihan Serap Şengör

### Publicity and Public Relations Chairs:

Ricardo Reis, Ljiljana Trajkovic, Yonca Brunini

### Publication Chairs:

Onur Kaya, Edoardo Bonizzoni, Tuba Ayhan

### Multimedia Publications Chairs:

M.Tamer Eskil

### Demo Chairs:

Michele Magno, Okan Zafer Batur

### Awards Chairs:

Hadi Heidari, Cüneyt Güzelış, Nihal Pekergin

### Local Arrangement and Conference Secretariat:

Cengiz Korkmaz, Mehmet Eldegez (Dekon Congress and Tourism)

## IMPORTANT DATES

### 26 MAY

Special Session and Tutorials Proposals

### 2 JUNE

Notification of Special Session Acceptance

### 16 JUNE

Paper Submissions

### 15 SEPTEMBER

Notification of Paper Acceptance

### 13 OCTOBER

Camera-Ready Paper Submission & Early Registration Deadline

Conference proceedings will be indexed and published on IEEE Xplore and selected papers will be published in IEEE Transactions. Topics include but are not limited to

- Analog/Mixed-Signal/Microwave Circuits
- Bio-Medical, Bio-Inspired Circuits/Systems
- EDA, Test and Reliability
- Digital Circuits and Systems
- Linear and Non-Linear Circuits and Systems
- Non-Linear Devices, Memristors
- Low-Power, Low-Voltage Design
- Embedded and Micro/Systems
- Neural Networks, Machine/Deep Learning
- Sensors and Sensing Systems
- Signal Processing, Image and Video
- VLSI Systems and Applications
- Smart Systems for CAS Applications

## OPENING AND PLENARY LECTURES

**Mehmet Toner**, Professor, Massachusetts General Hospital and Harvard Medical School, on *"Microchip Technologies for Clinical and Biomedical Applications."*

**Burak Göktürk**, Vice President of Engineering, Google Cloud AI Industry Solutions at Google, on *"How We Carefully Lift the Use of AI Across the Globe."*

**Luca Benini**, Chair of Digital Circuits and Systems@ETHZ, Full Prof@ the University of Bologna. *"10 years of PULP: Developing energy efficient computing architectures"*

# Publications

## Fully-Sponsored Periodicals

IEEE Trans. on Circuits & Systems – I Regular Papers (TCAS-I)

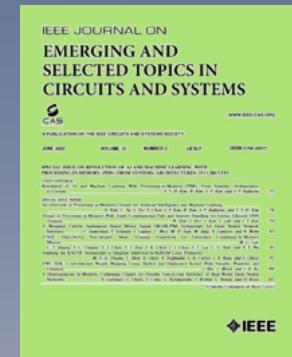
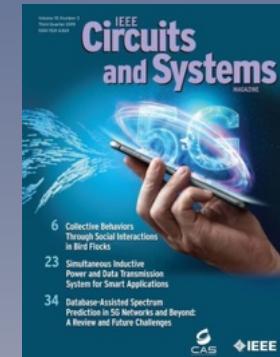
IEEE Trans. on Circuits & Systems – II Express Brief (TCAS-II)

IEEE Trans. on Circuits & Systems for Video Technologies (T-CSVT)

IEEE J. on Emerging Topics in Circuits & Systems (JETCAS)

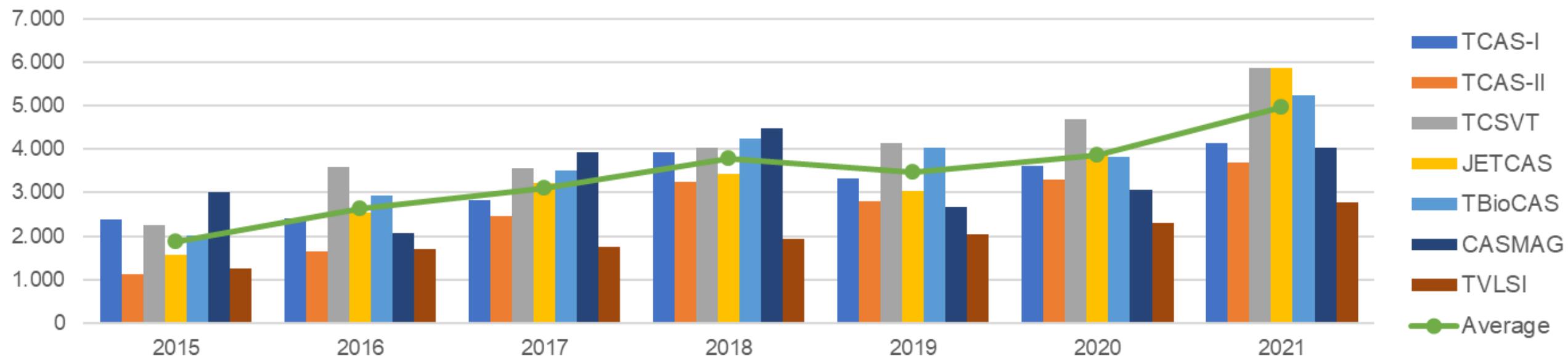
IEEE Open Journal on Circuits and Systems (OJCAS). **Full OA journal**

IEEE Circuits and Systems Magazine (CASM)



# Publications

## Impact Factor



# Publications

Periodicals co-sponsored

IEEE Trans. on Biomedical Circuits and Systems  
**NEW! IEEE Trans. on AgriFood Electronics**  
 IEEE Trans. on Network Science and Engineering  
 IEEE Trans. on Very Large Scale Integration (VLSI) Systems  
 IEEE Design and Test Magazine  
 IEEE Radio Frequency Integration (RFIC) Journal  
 IEEE Trans. on Multimedia  
 IEEE Trans. on Multimed. Syst.  
 IEEE Trans. on Mobile Computing  
 IEEE J. on Exploratory Solid-State and Nanoscale Physics  
 IEEE J. on Flexible Electronics



**IEEE Transactions on AgriFood Electronics**

The IEEE Transactions on AgriFood Electronics (TAFE) are the key reference for publishing your research about the application of electronics to the AgriFood value chain.

The submission portal will be open on **November 2022**

**TAFE Scope**

TAFE is the cutting edge research publication covering circuits and systems, integrating the needed sensors, actuators and interfaces, applied to the AgriFood chain of value, including technologies for food related to its production, processing, quality control along the distribution chain, and preservation, which require various integrated sensing systems, actuators, manufacturing, and diverse integration levels such as Printed-Circuit Board (PCB), System in Board (SiB), System on Chip (SoC), System in package (SiP), and packaging techniques.

**TAFE KeyPoints**

Innovative Electronic Solutions for:

- Precision Agriculture
- Smart Livestock Farming
- Global Warming Facing
- Reduction of Pesticides
- Optimization of Resources
- Better Food Production
- Food Safety
- Food Processing
- Food Transportation

For information contact: [daniilo.demarchi@polito.it](mailto:daniilo.demarchi@polito.it)

80%

50%

60%

Journal (RFIC-VJ). 33.3%

Journal (JXCD). 11%





# Publications and more

## IEEE Councils



## IEEE Tech Comm





# TECHNICAL COMMITTEES

CASS has 14 Technical Committees promoting technical activities in various areas and 3 Special Interest Group

It is easy to join these committees; all Technical Committees are listed at [ieee-cas.org](http://ieee-cas.org) and meet throughout the year



# Technical Activities Committees and Special Interest Groups

Analog Signal Processing

Biomedical and Life Science Circuits and Systems

Cellular Nanoscale Networks and Memristor Array Computing

Circuits and Systems for Communications

Circuits and Systems Education and Outreach

Digital Signal Processing

Multimedia Systems and Applications

Nanoelectronics and Gigascale Systems

Neural Systems and Applications

Nonlinear Circuits and Systems

Power and Energy Circuits and Systems

Sensory Systems

VLSI Systems and Applications

Visual Signal Processing and Communications

Special Interest Groups

Flexible Hybrid and Printed Electronics

AgriFood Electronics

Internet of the Things

Artificial Intelligence Circuits and Systems \*

# Technical Activities

## Broad and Deep Technical Expertise

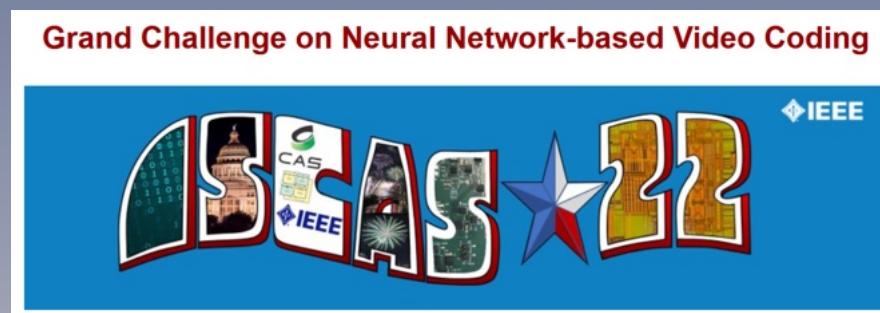
**Review Process in flagship events**

**Organize Thematic Conferences (e.g., BioCAS, VCIP)**

**Satellite Workshops** alongside main conferences



**Grand Challenges** based on open source database



**AutoCAS (Autonomous Mobility CAS)**

Autonomous Mobility Circuits and Systems Workshop (AutoCAS 2022)



**IEEE BioCAS 2022 Grand challenge on Respiratory Sound Classification**

# Technical Activities

## Standards

### Standard developments

Upcoming Outreach Events: We are planning several outreach events as part of CAS conferences such as AICAS, ISCAS, NewCAS, MWCAS, BioCAS in 2022. More details can be found on the SASD Events page.

IEEE Circuits and Systems Society Standards Activities Sub Division

- ⊕ [SASD Committee](#)
- ⊕ [SASD Standards Committees](#)
- ⊕ [SASD Events](#)



### Examples

*IC Design and Test for Emerging Circuits and Systems*. Chair: **Vahid Vahidfar**

*Emerging Processor Systems*. Chair: **Travis Anderson**

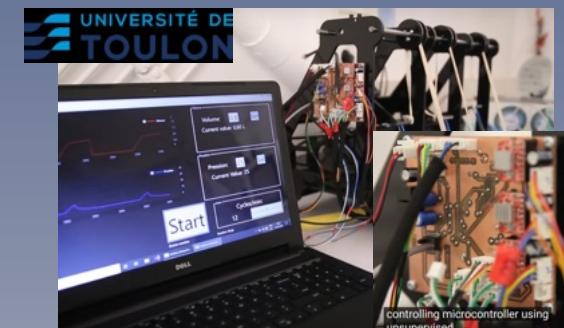
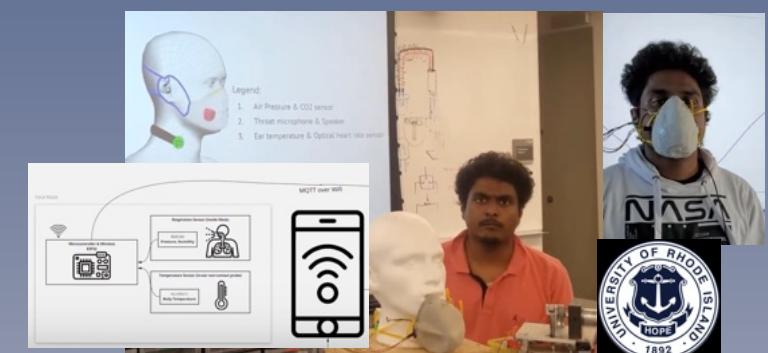
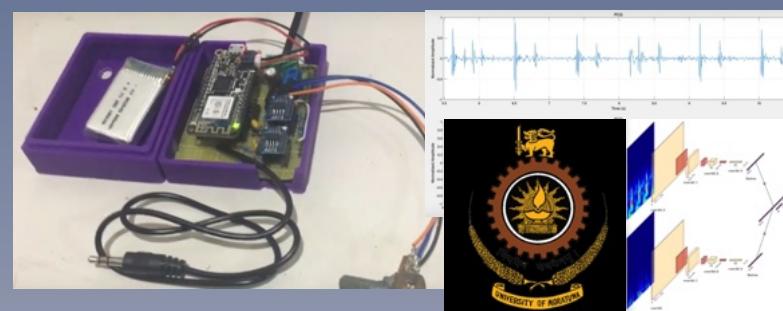
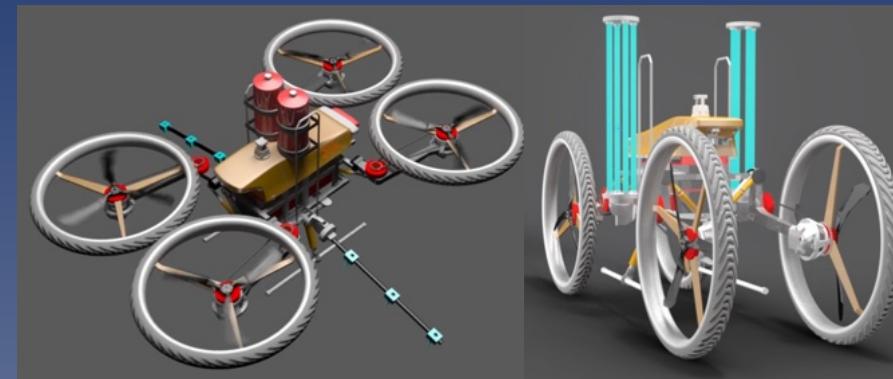
*Domain-Specific Accelerators*. Chair: **Mehran Nekuii**

*Flexible and Wearable Circuits and Systems*. Chair: **Yong Lian**



# Technical Activities

## CASS Covid-19 Competitions





# CASS CHAPTER ACTIVITIES

Chapters are local units which favor activities among members and organize many local events including, but not limited to, CASS Distinguished Lecturer talks, seasonal schools, workshops in emerging topics and general networking events.

IEEE CASS has approximately 123 chapters worldwide, composed of the following:

**Region 1-7:** 36

**Region 8:** 36

**Region 9:** 17

**Region 10:** 34

A full listing can be found on our website at:  
<http://ieee-cas.org/ram-division>

# Regional Activities

**Chapters and Student Branches** are administrative units which favor activities among members and organize local events.

In addition to IEEE funding, the CAS Society provides the following financial support to its Chapters:

An amount that will depend on an assessment of the activities carried out in the previous year and on the plans for the current year.

Chapters can also apply for **support** to participate in different CASS Programs (e.g., **Distinguished Lecturer** talks, **CASS Seasonal Schools**, or **CASS Industry Forums**) or develop **local initiatives** (e.g., Workshops on emerging topics, networking events, or DEI activities) through the CASS **Outreach Initiative**

\$500 in “start-up” funds for new chapters.

# CASS TALKS

Organized by CASS Rio Grande do Sul Chapter

Each Friday, 1:30 PM

presentations are realtime

YouTube Live @ IEEE CASS Rio Grande do Sul Chapter

<https://www.youtube.com/cassriograndedosul>

IEEE CASS RS Talks 2022  
UFRGS, Porto Alegre, Brazil

1:30 PM (Brasilia Time, GMT-3), July 22, 2022

Dr. Tiago Reimann, Siemens EDA, USA

Challenges and Methods for Hotspot Detection and  
Advanced Process Node Yield Ramp Improvement

**Abstract:**

In the semiconductor fabrication process, yield is negatively impacted by defects that appear systematically within specific patterns of the physical layout design. Those defective patterns are popularly known as hotspots, and they can arise due to various causes. There are several known approaches of hotspot detection. One approach for hotspot detection is Machine Learning (ML), where known hotspot and non-hotspot patterns are used for training the model to be used afterwards in prediction of new hotspots. With the continuous growth in IC manufacturing complexity, developing new process nodes has become an ever-increasing challenge. From the initial process node architectural explorations to initial design rule specifications to early RET development and "risk production" early NPI (New Product Introductions), critical decisions with far reaching performance and yield impact must be made. Applying innovative methods to enable early and broad engineered testing informs better architectural decisions and performance tradeoffs. Methods to identify, root-cause, categorize known yield detractors and to flag unknown potentially new risk patterns enable product yield risk mitigation and continuous learning. Accumulated learning from each step, each stage and each new product leads to more robust designs and ultimately higher performance and improved yield. This presentation will talk about known challenges and some techniques applied to hotspot detection and dataset selection to accelerate advanced process node yield ramp.

**Short CV:**

Tiago Reimann received his Computer Engineering degree, Master's and PhD in Microelectronics from Universidade Federal do Rio Grande do Sul (UFRGS - Brazil). He was a member of the winning team in the ISPD 2013 Discrete Gate Sizing Contest and interned with IBM Research Lab at Austin, TX. He joined Mentor Graphics in 2016, working in the physical design group. Tiago is currently a Staff Engineer at Siemens EDA in the Calibre IC Manufacturing Solutions engineering team focusing on methods to improve product yield and provide faster ramp by structuring and analyzing massive amounts of data, creating predictive machine learning models, and generating actionable analysis.

YouTube Live @ IEEE CASS Rio Grande do Sul Chapter  
<https://www.youtube.com/cassriograndedosul>



IEEE CASS RS Talks 2022  
UFRGS, Porto Alegre, Brazil

November 25, 2022, 1:30 PM (Brasilia Time, GMT-3)

Prof. Ian O'Connor, University of Lyon, France

Emerging Technology Based 3D Compute  
Cubes for Edge Intelligence

YouTube Live @ IEEE CASS Rio Grande do Sul Chapter  
<https://www.youtube.com/cassriograndedosul>





# CASS Outreach Initiative

CASS provides funding to activities aligned with CASS mission that may have impact on the community and on its membership.

Any CASS member, Chapter or Technical Committee can apply.

Two calls per year

Check <http://ieee-cas.org/financial-activities> for the rules and the list of supported proposals since 2012, as well as past reports of the supported initiatives.

# Regional Activities

## Distinguished Lecturer Program

**DLP**, virtual or in-person, provides **CASS chapters** around the world with talks by experts on topics of interest and importance to the CASS community. It, along with our conferences and publications, is the way we use to disseminate knowledge in the CASS field.

**2022-23 DLP Roster. 10 Speakers, 21 Lectures**



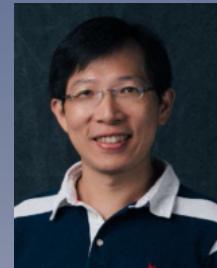
Chua Zhang



Michael P. Kennedy



Silvia Zhang



Wen-Hsiao Peng



Yu Cao



G. A. Rincón-Mora



Hongliang Li



Massimo Alioto



Partha P. Pande



Jennifer B. Christen

# Student Travel Awards



Travel Grants (air fare, hotel, ...) to students that are authors in CASS flagship conferences.

Can support the participation in past and future CASS flagship conferences (like LASCAS).

4 times per year

# CASS Membership

Special Discount for customers in Developing Nations:

Use the code **CASS23DEVNAT50**  
50% off IEEE CASS Membership



IEEE CASS Student Membership US\$11 year (with the 50% discount will be US\$5.50 per year)

IEEE Student Membership US\$27  
(with the 50% discount with code **FUTURE50** it will be US\$13.50)

# STUDENT DESIGN COMPETITION

The IEEE Circuits and Systems Society (CASS) invites you to participate in the 5th CASS Student Design Competition. The CASS Student Design Competition is a worldwide competition where undergraduate students will suggest and execute projects on Electrical Engineering, Computer Engineering and related areas. The focus should be on finding a solution to a real-life problem based on circuits and systems.

Three phases:

1<sup>st</sup> at chapter level

2<sup>nd</sup> at regional level

Final competition during ISCAS, in Monterey, USA, May 21 - 25, 2023

CASS supports travel of up to 3 members of each of the finalist teams to present their work during ISCAS.

Detailed information on <http://ieee-cas.org/>

Prepare your team for the 2023/2024 edition (finals at ISCAS in Singapore)

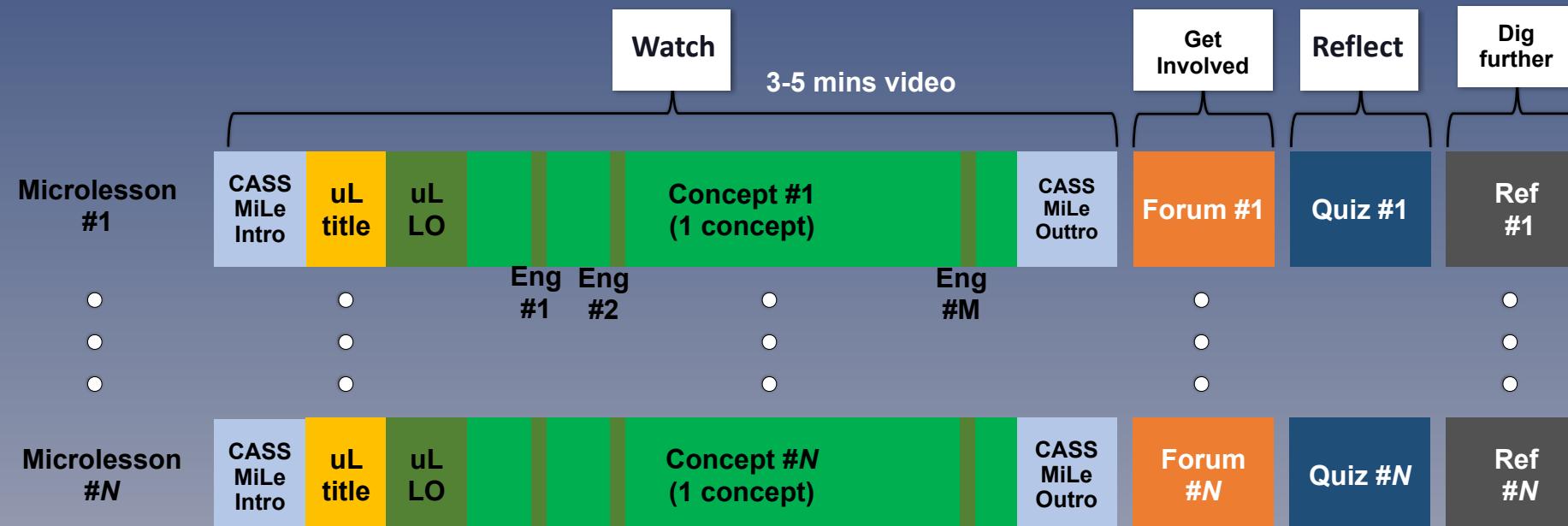
# Continuous Education

## CAS Micro Learning (MiLe)



The **CASS MiLe** e-learning platform presents Distinguished Lectures, 2-minutes paper, and Professional Guidance talks in a shorter, quicker, bite-sized form.

### IEEE CASS Certificate



# Continuous Education

## CAS Micro Learning (MiLe)



The CASS MiLe e-learning platform presents Distinguished Lectures, 2-minutes paper, and Professional Guidance talks in a shorter, quicker, bite-sized form.

### IEEE CASS Certificate



**On-Chip Epilepsy Detection:  
Where Machine Learning  
Meets Wearable,  
Patient-Specific  
Wearable Healthcare**

Prof. Jerald Yoo,  
National University of Singapore, Singapore



**Machine Learning and  
Deep Learning Systems:  
Low Energy VLSI  
Architectures and  
Applications**

Prof. Gerald Sobelman,  
University of Minnesota, USA



**Machine Learning for  
Analytics Architecture:  
AI to Design AI**

Prof. Gwo Giun (Chris) Lee,  
National Cheng Kung University, Taiwan

<https://ml.ieee-cas.org/>

# Collective Initiatives

## Women in CAS Program (WiCAS)

**WiCAS** is in charge of developing initiatives to promote the entry, retention and professional growth of women in the CAS Society and, in general, to inspire and motivate women in the domain of circuit and system for an efficient role in their professions.

**WiCAS** events can be organized as a **satellite event** in the frame of **all CASS conferences** or can be organized and promoted as an independent event by Technical Committees, Chapters and Special Interest Groups in CASS. WiCAS events are open and welcome everyone.



# Collective Initiatives

## Women in CAS Program (WiCAS)



**AICAS 2022**  
IEEE International Conference on  
Artificial Intelligence Circuits and Systems  
June 13-15, 2022  
Songdo Convencia, Incheon, Korea

**WiCAS Invited Speakers**



Dr. Soojung Ryu  
CEO, SAPEON Inc., Korea

[Biography](#) [Abstract](#)

**Designing an Efficient HW Accelerator for AI Workloads**

# Collective Initiatives

## Young Professionals Program

In addition to all of the benefits offered through standard membership (Technical and Regional activities, publications, conferences), student members of CASS receive the following additional benefits:

**Special Scholarship Opportunities (Predoctoral Grants)**

**Student Travel Awards Opportunities**

**Conferences specifically tailored to PhD Research (PRIME)**

**CASS Mentoring Program at CASS Flagship Conferences**

**Awarded Design Competitions**

**Young Professionals functions and initiatives (job fairs, roundtables, podcasts,...)**

**Special student discounts on CASS Conferences and Workshops**

**Outstanding Young Author Award in CASS Publications**



You should consider  
to be a member of

**IEEE Circuits and Systems Society**



# CASS STUDENT BRANCH



CASS Student Branches should be connected to professional CASS Chapters.

CASS Student Branches can request financial support to organize activities.

BTW:  
CASS Student Membership and  
CASS Graduate Student Membership have the same cost

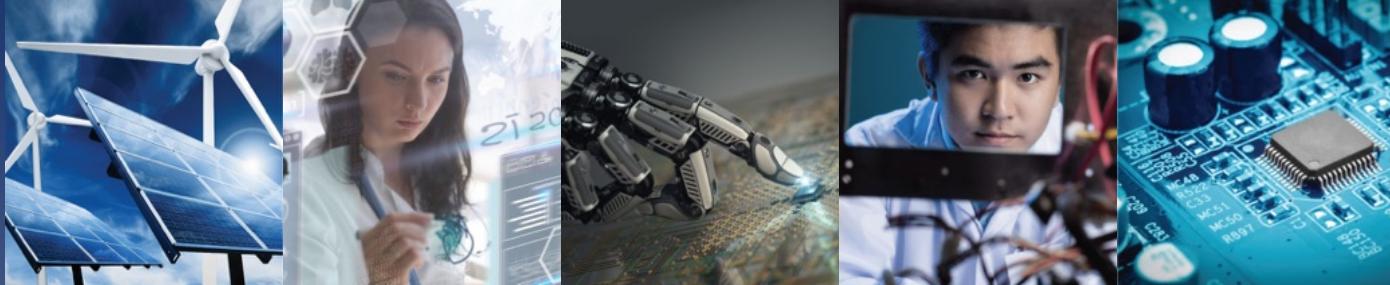
# How to launch a CASS Chapter



To do a petition to start a CASS Student Chapter it is needed only 6 Student that are CASS members

To do a petition to start a CASS Professional Chapter it is needed only 12 professionals that are CASS members, including CASS Graduate Student members.

# IEEE Circuits and Systems Society



## Reasons to Be(come) a CASS Member

- Participation in Conferences
- Be informed on the Latest Developments via DLP
- Receive Top Level Journals in your area
- Participation to Technical Committees
- Access to Emerging Technical Content
- Networking within your Geographic Community through CAS Chapters
- Professional Recognition by CASS Awards

# Region 9 Latin America



IEEE



Ricardo Reis  
R9 representative at CAS BoG



For more information, please visit:  
[www.ieee-cas.org](http://www.ieee-cas.org)

Thank you!

Something More