

Meeting Minutes of the  
IEEE Circuits and Systems Society (CASS)  
Cellular Nanoscale Networks and Memristor Array Computing Technical Committee (CNN-MAC)  
ISCAS, Austin, Texas  
2022.05.31

Attendees on site in Austin:

- Alon Ascoli (TU Dresden)
- Shahar Kvatinsky (Technion)
- Richard Schroedter (TU Dresden)
- Xuan Hu (UT Dallas/Apple Inc.)
- Vasileios Ntinias (TU Dresden)
- Neil Kemp (Univ. of Nottingham)
- Ronald Tetzlaff (TU Dresden)
- Ricardo Carmona (IMSE CSIC Univ. of Sevilla)
- Alkis Hatzopoulos (Aristotle Univ. of Thessaloniki)
- Bernabé Linares-Barranco (IMSE CSIC Univ. of Sevilla)

Other people have joined virtually via zoom, including

- Tingwen Huang (Texas A&M University at Qatar)
- Georgios Christos Sirakoulis (Democritus University of Thrace (DUTH), Xanthi, Greece)
- Sabina Spiga (CNR-IMM–Unit of Agrate Brianza)
- Gianauelio Cuniberti (TU Dresden)
- John Paul Strachan (Peter Grünberg Institute (PGI-14), Forschungszentrum Jülich, and RWTH Aachen University)
- Christos Papavassiliou (Imperial College London)
- Alex James (Digital University Kerala)
- Giacomo Innocenti (University of Firenze)
- Mauro Di Marco (University of Siena)
- Angela Slavova (Bulgarian Academy of Sciences)
- Valeri Mladenov (Technical University of Sofia)
- Ahmet Samil Demirkol (TU Dresden)

The following topics were discussed during the meeting:

1. New Directions and Perspectives from the Circuits and Systems Society Technical Activity (CASS-TA) Division Meeting
  - 14 TCs, 3 Special Interest Groups (SIGs)
  - TC/SIG Annual Reports
  - TC 5-Year Review and TC/SIG Report (2021: NCAS, CNN-MAC, NSATC; 2022: ASP, CASEO, DSP)
  - Standards Activities Sub Division (SASD) Status and Plans (the IEEE CASS SASD provides an open, inclusive, and transparent environment for voluntary consensus standardization, and other industry consensus activities in the area of Circuits and Systems)
  - CASS is continuing its “CAS Emerging and Selected Topics for Industry Forums” (CASIF) program on emerging and cross-discipline topics, where industrial speakers describe real-world challenges, and academic speakers describe potential technologies that could address those challenges. The second call is open since 06/15, the deadline is 07/15, and the result announcement is due on 07/31. CASIFs funded in the first call are listed here: 1) *Exascale Computing: 2025 View of Compute Era*, location: Bangalore, India; 2) *Challenges in Formal Verification of ASIC Chips*, location: Gachibowli Hyderabad, India; 3) *Wearable Devices*, location: Notre Dame University, IN, U.S.
  - New SIG on Artificial Intelligence (AI) Hardware. Scope: facilitate and increase technical activities related to AI hardware and evaluate the possibility of starting a new journal on AI hardware (Provisional management committee: Gianluca Setti, Arindam Basu, Jennifer Blain Christian)
  - Initiatives on Climate Change. Electronics-based and information technologies can contribute to reducing the impact of climate change. On the other hand, the market for electronics and information technologies is a major contributor to climate change. IEEE can and should contribute to the response to the climate crisis.
  
2. Discussion and proposal of new initiatives to extend the activities in the CASS:
  - Initiative 1: Plan Cross-Society Special Sessions at ISCAS, i.e. at the flagship conference of our IEEE CASS, as well as at the flagship conference of some other partner IEEE society (e.g. see the ongoing cooperative plan for Cross-Society Sessions, involving our IEEE CASS and the IEEE Information Theory (IT) Society, at both ISCAS 2023 and at the International Symposium on Information Theory (ISIT) 2023)
  - Initiative 2: Plan Industry Workshops at ISCAS (1-2 hours per workshop, allowing industry partners to keep track of the latest scientific breakthroughs in their field of interest, to demonstrate new technologies, as well as to recruit students)
  - Initiative 3: Student Research Showcase and Student Job Fair at ISCAS (allocate special sessions to let Ph.D. students, close to graduation, present their research, and set up events to facilitate student recruitment, as enabled also through Initiative 2)
  
3. New initiative under discussion
  - Allow Free Booths at ISCAS for Sister Societies and Other Organizations (it is then expected that, in return, CASS will have the opportunity to advertise its technical activities (TAs) in booths hosted by scientific events planned by the partners)

#### 4. Announcements of upcoming conferences or scientific events of interest to the TC:

- IEEE MOCAS 2022 (<http://www.ids.uni-bremen.de/conf/mocast2022/index.html>)
- IEEE NANO 2023
- IEEE ICECS 2022 (<https://2022.ieee-icecs.org/>)
- IEEE ISCAS 2023 ([https://www.iscas2022.org/files/documents/2022-05/iscas23-cfp\\_web.pdf](https://www.iscas2022.org/files/documents/2022-05/iscas23-cfp_web.pdf))
- IEEE ECCTD 2023 (Chair: Prof. F. Corinto)
- IEEE CNNA 2023 (introduction from Prof. G.Ch. Sirakoulis)

#### 5. Possible new members of our technical committee (TC) were introduced. The candidates presented themselves, especially in relation to the focus of their research activities. The list of candidates follows:

- Sabina Spiga (CNR-IMM–Unit of Agrate Brianza, Italy)
- Alex James (Digital University Kerala)
- Gianaurelio Cuniberti (TU Dresden)
- Alkis A. Hatzopoulos (Aristotle Univ. of Thessaloniki)
- Vasileios Ntinis (TU Dresden)
- Richard Schroedter (TU Dresden)
- Tingwen Huang (Texas A&M University at Qatar)
- Xuan Hu (UT Dallas/Apple Inc.)

Each of these candidates was welcomed into the TC by unanimous decision.

#### 6. Candidates for entering the TC in the next meeting (possibly in autumn 2022)

The following people, interested to join the TC, were not present at this meeting, and, as a result, their voting is postponed to the next meeting:

Eby Friedman (University of Rochester), Joseph Friedman (UT Dallas), S. Kumar (Sandia National Laboratories), Chuandong Li (Southwest University), Daniel Bedau (Western Digital), Su-in Yi (Texas A&M University)

#### 7. Attention was drawn on the following special issue on memristors, which is open for paper submission till July 15<sup>th</sup>, 2022:

A. Ascoli, G. Sirakoulis, R. Tetzlaff, and Shimeng Yu, Special Issue on “Memristive Circuits and Systems for Edge-Computing Applications,” IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS), expected publication: Dec. 2022

## 8. New meeting

A new meeting is expected later this year. The goal of the next meeting will be to promote the development of activities which could potentially provide increasing visibility to our TC. In this regard A. Ascoli, together with A. James and Bhaskar Choubey (Siegen University), is about to launch an IEEE CASS Seasonal School on the theme - Intelligence in Chip: Integrated Sensors and Memristive Computing.

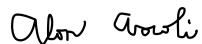
In the future, if this receives positive feedback from the TC members, one additional meeting could be inserted in our yearly program of technical activities, in the form of a workshop, ideally in-person, for sharing knowledge, exchanging ideas, presenting scientific breakthroughs, especially if someone is eager to advertise his/her latest research developments, as well as for providing pedagogical seminars, particularly to the benefit of early-career researchers

Let us involve researchers from currently under-represented regions of the world, and improve the gender balance

Contact Alon Ascoli and Andras Horvath at any time during the year for advertising activities, and initiatives of interest to our community.

With my best regards  
Alon Ascoli

Dresden, 18/06/2022



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