Meeting minute of the Cellular Nanoscale Networks and Memristor Array Computing
Technical Committee (CNN-MAC)
2021.05.25.

Attendees:

Ahmet Samil Demirkol
Alon Ascoli
András Horváth
Angela Slavova
Christos Papavassiliou
Georgios Sirakoulis
Joshua Yang
Kristóf Karacs
Mustak Erhan Yalcin
Ricardo Carmona Galan
Richard Stanley Williams
Ronald Tetzlaff
Shahar Kvatinsky
Peter Szolgay
Xavier Villasis

The following topics were discussed during the meeting:

1. Trends of paper submission at ISCAS 2021

The number of ISCAS papers on cellular neural networks has been progressively declining over the past few editions, and no exception was witnessed this year. Meanwhile, the proportion of ISCAS papers, which are related to the memristor research field, has kept as high as in the previous editions, especially thanks to the organisation of two large special sessions on computing centered around the underlying disruptive nanotechnologies.

2. Upcoming conferences 2021

Among those of interest to our community, we highlighted the following ones:

- The CASS spotlight conference, specifically ISCAS, Daegu, South Korea, May 22-29
- The light-house conference for our TC, namely Cellular Nonlinear Networks and Their Applications (CNNA), Catania, Italy, Sept. 29-30
- The Memristor and Memristive Symposium, Catania, Italy, Oct. 1
- EMRS Spring Meeting, hosting a symposium on neuro-inspired information processing: from novel materials concepts for neuromorphic computing to local processing of biological signals, Strasbourg, France, May 31, June 4
- International Conference on Modern Circuits and Systems Technologies (MOCAST) on Electronics and Communications, hosting a workshop on emergent memristive devices, circuits and systems for wave computing, Thessaloniki, Greece, July 5-7

- Int. Conference on Neuromorphic Computing (ICNC), in occasion of the 50th anniversary of Chua's memristor discovery in 1971, Wuhan, China, Oct. 15-17
- Int. Conference on Memristive Materials, Devices & Systems (MEMRYSIS), Tsukuba, Japan, Nov 1-4

3. Member candidate voting

A few distinguished researchers, in particular Prof. Richard Stanley Williams, Prof. Shahar Kvatinsky, Prof. Joshua Yang, Prof. Christos Papavassiliou, and Dr. Ahmet Samil Demirkol, were recently invited by A. Ascoli to join the TC as new members. Today they attended our meeting and introduced themselves to the TC. Then, they temporarily left the meeting, and the TC members were requested to express their opinion about the conferral of the membership status of the aforementioned researchers. All members unanimously agreed on the entry of these researchers into our TC.

4. Miscellaneous news

A. Ascoli has thanked the TC members, and in particular, the secretary Dr. A. Horvath, for their support during his mandate as Chair (2019-2021). In June he will step down and the Chair role will be assumed by Dr. A. Horvath. A. Ascoli will be appointed Past Chair. A new secretary shall have to be appointed.

Over A. Ascoli's presidency, and in particular this year, the TC has been officially renamed from Cellular Nonlinear Networks and Array Computing (CNNAC) into Cellular Nonlinear Networks and Memristor Array Computing (CNN-MAC). The newly-born TC has new by-laws and a new charter. IEEE CASS has approved our historical move, which has been strongly endorsed from Prof. L. Chua and inspired by Prof. R. Tetzlaff. Importantly, despite the focus of the TC has been stretched to enclose memristive technologies and memristor-centered strategies in array computing, the tradition of Cellular Nonlinear Networks should remain a Lighthouse for the TC, guiding and inspiring the activities of each one of us.

We further discussed about possible strategies to ensure sustainable growth for our TC in the years to come. Possible approaches are:

1) Regular planning of presentations of novel results in research fields of interest to our TC, as well as provision of lectures on selected topics within the CNN tradition and beyond (e.g. theory of cellular nonlinear networks, theory of memristor cellular nonlinear networks, in-memory computing hardware design, potential of resistance switching memories in array computing applications, etc.)
2) Membership status classification (senior membership conferred to those members which provide significant contribution to the TC activities)

It is on our agenda to organise an extraordinary meeting in June. We need to vote for the entry of other established researchers into the TC. A. Ascoli will invite the following Profs. at the incoming meeting: S. Kang, J.P. Strachan, A. Kenyon, R. Waser, S. Menzel, B. L. Barranco, T. Mikolajick, Q. Xia, and Chi Tse. They all expressed their willingness to enter our TC. During that meeting, we shall also choose a new secretary. Last but not least, we

shall also touch upon the potential introduction of new positions, namely the chair elect and the secretary elect, in our TC management. Prof. G. Sirakoulis proposed to create these two new roles to improve communication within the TC. He also expressed his willingness to serve as secretary elect.

Best regards   Dresden, 25.05.2021

A. Ascoli and A. Horvath