

Minutes from the *Cellular Nanoscale Networks and Array Computing-Technical Committee Meeting*

ISCAS,28/05/2019, Sapporo, Japan

The following people are present at the committee meeting:

- 1, Alon Ascoli
- 2, András Horváth
- 3, Angela Slavova
- 4, Georgios Sirakoulis
- 5, Ricardo Carmona Galan
- 6, Ronald Tetzlaff
- 7, Vedat Tavşanoğlu
- 8, Victor Brea
- 9, Ioannis Messaris

The following topics were discussed:

1, Organization of the next Cellular Nanoscale Networks and Applications (CNNA) conference

The next CNNA conference will be organized next year, in 2020 in Catania. The conference will return to Sicily after 20 years and will be organized at the University of Catania. Catania is the 2nd largest city in Sicily, it can be easily reached by various airline and traditionally an important and recognized place of CNN research.

The proposed time was the last week of August or the first week of September. After a short discussion and taking other conference schedules and teaching activities into consideration, the committee proposed the last week of August as a possible date for the conference.

2, Trends at ISCAS 2019 and CNNs

The committee has discussed the current trends of research, both in a global sense and with particular attention at ISCAS 2019. There are more and more papers, which deal with neural networks, many of these are CNNs, but, in most cases, feedback loops are not exploited in these architectures, i.e. only feed-forward CNNs are applied (all together, 39 papers, presented at ISCAS this year, contained CNN as a keyword).

Looking into the future, the committee has to follow these trends, emphasizing also the importance and potential of feedback connections in neural networks. The members further agreed to share and utilize the theoretical knowledge, which has been gathered over the past decades in the scientific field of convolutional neural networks.

3, New president of the committee

Alon Ascoli was elected as the new president of the committee and Andras Horvath will serve as the secretary. Alon Ascoli heartily thanked Fernando Corinto for his hard and fruitful work as president of the committee throughout the past 2 years, wishing to do as good as him during the new mandate.

4, New committee members

Ioannis Messaries was proposed as a new committee member. He is working in the research group of Ronald Tetzlaff and Alon Ascoli, with whom he is investigating the computing capabilities of CNNs with memristive elements. Ioannis Messaries was accepted as a committee member by unanimous voting.

It was also remarked that Arturo Buscarino and Maide Bucolo (Universita' degli Studi di Catania) are also committee members since the 16th edition of the Int. Workshop on Cellular Nanoscale Networks and their Applications (CNNA), Budapest, 28-30 August 2018. In that occasion, over the course of the TC meeting, they were both accepted as new CNNAC TC members unanimously.

5, Other related conferences

The following conferences were mentioned and discussed as scientific venues of potential interest to our technical committee.

The next International Conference on Memristive Materials, Devices, and Systems (MEMRISYS) will take place in Dresden between the 8th and the 11th of July this year (more details may be found at <https://www.iee.et.tu-dresden.de/mem2019/>).

The 26th IEEE International Conference on Electronics, Circuits, and Systems (ICECS) will be held in Genova (Italy) between the 27th and the 29th of November this year. Ronald Tetzlaff and Alon Ascoli, on one side, and Georgios Sirakoulis and some his colleagues, on the other side, are organizing two separate special sessions on memristors and their applications (including the potential of these devices in extending the functionalities of CNNs) at ICECS (more details may be found at <https://www.ieee-icecs2019.org/>).

Angela Slavova mentioned that the European Conference on Circuit Theory and Design (ECCTD) is not going to take place this year. It should have been organized in Prague by a local community, but, unfortunately, several problems, which have occurred over the past months, have prevented the organizers to fulfill their commitment. The ECCTD community should soon take a decision regarding whether it makes sense to keep the conference as a bi-annual scientific venue in the coming years.

Dresden, 16/06/2019

Alon Ascoli, President of the CNNAC-TC
András Horváth, Secretary of the CNNAC-TC