Minutes of the Neural Systems and Applications Technical Committee (NSA TC)

*** 2022 Annual Meeting***

Location: Austin, Texas, USA and via zoom

Date: May, 30th, 2022

1   Attendees

1.	Arindam Basu (Chair)	arinbasu@cityu.edu.hk
2.	Yoko Uwate	uwate@tokushima-u.ac.jp
3.	Silvia Zhang	xuan.zhang@wustl.edu
4.	Pamela Abshire	pabshire@isr.umd.edu
5.	Gert Cauwenberghs	gert@ucsd.edu
6.	Shih-Chii Liu	shih@ini.phys.ethz.ch
7.	Fernando Perez-Peña	fernandoperez.pena@uca.es
9.	Christian Mayr	christian.mayr@tu-dresden.de
9.	Piotr Dudek	p.dudek@manchester.ac.uk
10.	Tobi Delbruck	tobi@ini.phys.ethz.ch
11.	Chetan Thakur ◇	csthakur@iisc.ac.in
12.	Jim Harkin	jg.harkin@ulster.ac.uk
13.	Bernabé Linares Barranco	bernabe@imse-cnm.csic.es
14.	Melika Payvand	melika@ini.uzh.ch
15.	Charlotte Frenkel	c.frenkel@tudelft.nl
16.	Juan Pedro Dominguez-Morales	jpdominguez@atc.us.es

◇ Candidate new members

2   Opening, approval of the meeting agenda and the 2022 Neural Systems and Applications (NSA) meeting minutes

The Chair, Arindam Basu, welcomed the Neural Systems and Applications Technical Committee (NSA TC) members and opened the meeting. He also introduced the agenda and the NSA TC unanimously approved the proposed agenda.

The 2022 NSA meeting minutes were shared with the attendees by means of the committee's web page and email before the meeting. No objections were received. Furthermore, during meeting, the Chair asked the Technical Committee (TC) member to vote the approval of the 2021 meeting minutes, which were approved unanimously.

3   NSA highlights

The paper statistics were presented by the Chair. The NSA tracks received a total of 106 submissions (compared to). The total number of accepted papers for the NSA track was 69, giving an acceptance rate of 64.15%. We had 15 papers for the lecture sessions and poster sessions are all online. There were questions about the pressure from above to accept papers. 64% is a lot. In the past, we used to have 50% and it's very high. There is a question on why.

4   Best paper award

Silvia Zhang organized the best paper award.

Best paper: "A 120dB Programmable-Range On-Chip Pulse Generator for Characterizing Ferro-electric Devices" Shyam Narayanan, Erika Covi, Viktor Havel, Charlotte Frenkel, Suzanne Lancaster, Quang Duong, Stefan Slesazeck, Thomas Mikolajick, Melika Payvand, Giacomo Indiveri

Honorable mention: "An Event-driven Spiking Neural Network Accelerator with On-chip Sparse Weights" , Yisong Kuang, Xiaoxin Cui, Chenglong Zou, Yi Zhong, Zhenhui Dai, Zilin Wang, Kefei Liu, Dunshan Yu, Yuan Wang

The whole process was coordinated by Chair-elect Silvia Zhang, and was contributed by Juan Pedro Dominguez-Morales.

5   TC activities

- This year 15 members submitted their annual report, out of more than 70 members!

- Silvia Zhang was chosen as DLP. It's a great honor! Congratulations to her!

- This year NSA-TC has a strong presence at the Telluride neuromorphic workshop with three work groups on Lifelong learning, touch, and neuromorphic tools. Lectures will be streamed at Telluride. IEEE brain is a sponsor of Telluride and Gert Cauwenberghs is in the meeting.

6   TC Review Results

Arindam mentioned that each TC will go through an official review every 5 years.
Our strengths were mentioned to be: Leadership in AICAS, Telluride and Capocaccia workshops.

- It was suggested to consider getting CAS sponsorship for the neuromorphic workshops. There was some support, but some mentioned that it takes a long time to get their sponsorship. Also mentioned that if CAS supports about 50k it is worth it. Otherwise, if it's more like 5k, it's not worth it. Arindam will look into this and also check what the condition is.

- Our TC works on a "HOT" area and is aligned with CASS Mission and Vision. It's generally actively involved in low-power neuromorphic systems for bio-interfaces.

- Industry Innovation and Infrastructure: Both software and hardware AI are important aspects of industry innovation across the globe and is a core expertise of this TC.

- It was mentioned that we have to increase the diversity of our TC: more women, members from south America and under-represented regions. For example, LASCAS is from Latin America. In terms of female member, we are one of the best TCs!

- There was point raised to invite more people from the industry and see if they are interested in joining the TC. They can see what we do and potentially get involved. Startups included!

- We also had a discussion on how we define active vs in-active members, which was brought up during the review of the TC.

- The definition of active vs inactive is clear: " A Member is said to be active if he/she either attends the Annual Meeting at least once every 3 years or submits a write-up for inclusion in the Annual Report at least once every 3 years. The Secretary will email to all inactive Members to

encourage them to become active Members. A Member is said to be inactive if he/she had never attended the Annual Meeting in the past 5 years and had never submitted any write-up for the Annual Report in the past 5 years. In this case the Member is automatically removed from the Committee. "

However, it is not very clear between 3 to 5 years what happens and how we go about a member's activity. Also, we discussed about whether we should "retire" members after N number of years.

Tobi, Shih-Chii and Bernabe discussed to potentially put the member on "probation" between 3rd and 5th year, and if within the two years of probation they are still not active, we can remove them. Silvia suggested that for seeking volunteers, we can look at this pool of people in the "probation" and ask them for help, which would be a warning for getting out of the TC. Piotr instead suggested to remove them after 3 years and if the member really wants to be part of the TC, they can contact us and come back. Arindam suggested we can remove people if after a few reminders they do not reply. Bernabe mentioned that in another TC (SSTC), he wrote to seniors who were not active, and told them they are going to be removed and that resulted in people showing up.

- We also discussed Quorom: What if there are not enough people in the meeting to agree on decisions? Tobi suggested to always circulate the point of decision via email. That means, in the agenda before the meeting we should point out the items to be voted on. Then, if people do show up it means they do not want to vote! If we say this, it should be fine.

- Arindam mentioned that we need more participation in DLP and we should do more special sessions in conferences and journals.
- Tobi also mentioned that there is a possibility of special interest group (SIG) on AI hardware. Mainstream AI HW people are not involved in NSA-TC. Our TC is the most natural home to this. It is being in-grown with neuromorphic.

7   New members

1. Chetan Thakur assistant professor at IIT, Banglor.

He did his Postdoc with Ralph Etienne-Cummings, and his PhD with Andre Van Schaik. Everyone showed their support and no objection. He was elected to be part of the TC.

8   Officers for 2022-2023

The list of officers for the next year is same as elected last year. The team is as follows:

Past-Chair Arindam Basu

Chair Arindam Basu

Chair-Elect Silvia Zhang

Secretary Melika Payvand

Secretary-Elect Jason Eshraghian

9   End of meeting

No further discussion was needed and the meeting was adjourned.