

## CIRCUITS AND SYSTEMS SOCIETY Cellular Neural Networks and Array Computing Technical Committee



Tamas Roska Analogical and Neural Computing Lab. Computer and Automation Institute Hungarian Academy of Sciences Kende-u. 13, Budapest, H-1111, Hungary Tel: +36-1-209-5263, Fax: +36-1-209-5264 Email: <u>roska@sztaki.hu</u>

A. Andreou Johns Hopkins Univ. L. Fortuna Univ. Catania R. Newcomb Univ. Maryland B. Sheu Univ. Southern California R. Tetzlaff Univ. Frankfurt G. Cauwenberghs Johns Hopkins Univ. M. Ismail Ohio State Univ. J. Nossek Tech. Univ. Munich B. Shi (secretary) Hong Kong Univ. Sci. Tech. A. Ushida Tokushima Univ.

Univ. of California Berkeley C. Lau Office of Naval Research V. Porra Helsinki Univ. Technology B. Spaanenburg Univ. Groningen J. Vandewalle K. U. Leuven

L.O. Chua

P. P. Civalleri Politecnico di Torino R. W. Liu Univ. Notre Dame A. Rodriguez-Vazquez Univ. Sevilla M. Tanaka Sophia Univ. A. Csurgay Tech. Univ. Budapest G. Moschytz ETH Zurich F. Salam Michigan State Univ. V. Tavsanoglu South Bank Univ.

# Minutes of the CNNAC Technical Committee Meeting at ECCTD'99

1 September 1999 1:00pm-2:30pm Rododendro Room, Regina Palace Hotel, Stresa, Italy

#### Present:

A. Ushida (AU), B. Shi (BS), G. Moschytz.(GM), J. Vandewalle (JV), L. Chua (LC), L. Fortuna (LF), L. Spaanenburg (LS), M. Bayoumi (MB). Marco Gilli (MG), M. Tanaka (MT), R. W. Liu (RWL), R. Tetzlaff (RT), T. Roska (TR), V. Porra (VP), V. Tavsanolgu (VT)

## Introduction (TR)

TR thanked M. Bayoumi for his assistance in establishing the technical committee. The committee is looking forward to his advice and experience as we proceed.

## Website (RT)

RT reported the status of the Technical committee's website. The structure of the website has been established, however the content of the subsections below the main page (e.g. hardware or software) is still incomplete. RT suggested that subcommittees be formed which would be in charge of the content of each sub-section.

A second issue is the machine which would host the website. Although the CAS website does provide a list of the technical committees and links to the websites of those technical committees, it currently does not provide hosting for those websites. After some discussion, RT agreed to host the technical committees website on one of his computers which has fast access to the internet. A guest account, accessible by members of the technical committee, will enable them to update the information on the website directly. Details of the location of the web page and the guest account will be distributed to members of the technical committee. (Action: RT)

The technical committee is encouraged to forward their contact information to RT for inclusion in the page listing research groups active in CNN research, as well as otherr information which should be included in the website. *(Action: All members)* 

## CNNA (LF)

LF reported on the status of the arrangements for the international Symposium on Cellular Neural Networks and Their Applications (CNNA) to be held in Catania, Italy in 2000. He acknowledged the help of Marco Gilli,

the cooperation of ST Microelectronics in Catania, as well as the assistance of numerous students involved in the organization process.

The Symposium on Nonlinear Dynamics in Electronic Systems (NDES) will be held in conjunction with CNNA to encourage interactions between the two groups of researchers. One of the priorities in the organization will be to keep student registration fees low in order to encourage student participation.

TR has discussed the establishment of links between the Sensors and MEMS Technical Committee and the CNNAC Technical committee with M. Zaghloul (MZ) at ISCAS in Orlando and the MWSCAS in Las Cruces. It was suggested that MZ and two other researchers working in the Sensors and MEMS area be invited to give tutorials at the CNNA 2000.

VP will be hosting CNNA in 2002 in Finland. A team has already been formed to coordinate the organization. The location is not yet settled, but will most likely be close to Helsinki. After some discussion, it was agreed that the organizers would target to hold the conference in June. The dates of other conferences being organized around the same time will also be considered.

# ISCAS-2000 (TR)

TR reported that all technical committees are asked to propose special sessions to be held at ISCAS in Geneva in 2000. The deadline for submission of propsals is September 15. At this time, only the title of session, the list of speakers and their presentations need be supplied. JV noted that notification of acceptance of the special session would be given within 10 days. This is to enable authors to submit their papers for consideration in the regular session should the special session proposal be rejected.

LF suggested that one session would not be sufficient to adequately represent recent research in CNNs. He proposed two sessions: one focusing on theoretical aspects, the other on application/hardware aspects. The committee endorsed this proposal.

TR asks members to send proposals for presentations at the special sessions to him via email within one week. He will organize the proposals into two special session proposals to be submitted to the ISCAS organizing committee. (*Action: all members*)

M. Zaghloul (MZ) has suggested a joint special session organized jointly by the CNNAC technical committee and the Sensors & MEMS technical committee. MZ will be the primary organizer of this session. This joint session will hopefully have a large industrial participation, especially on the sensors area. LF may be able to suggest some speakers through contacts through a Measurement Systems conference to be held in Catania. (Action: LF)

MT reported that NOLTA 2000 will held in Dresden. Prof. Oishi of Waseda University is organizing it. Any members who would like to propose a plenary talk or special session are asked to contact MT. (Action: all members)

JV informed the technical committee that it is expected to propose a committee to handle the review process for ISCAS 2000. TR and M. Zaghloul will be joint chairs for Neural Systems Track. It was agreed that the technical committee members would serve as the review committee. The review process should be completed by the end of December. BS will forward a list of technical committee members to JV. (Action: **BS**)

Members are reminded to send all final decisions regarding conferences to RT for announcement in the website.

# **Competition for young researchers (BS)**

BS reported that the organizing committee for the CNN Design Competition for Young Researchers 2000 consists of Csaba Rekeczky, MG and BS. LC suggested that MT also take part in the organization to encourage participation from Japanese researchers.

The contest will have two parts. The first is a CNN template design contest, which will emphasize theoretical aspects in the design of a new and innovative template. Submission will be in the form of a paper which describes the new template, its functionality, as well as theoretical justification for its performance, stability, robustness, etc. The second contest will be an analogic programming contest. Contestants will be given a task for which they must design an algorithm written in CNN AMC code. A simulator will be provided for downloading by the team at the Hungarian Academy of Sciences. Example input images and desired output will be provided by the contest organizers, with evaluation to take place on a separate test set of images unseen by the participants.

RWL has agreed to help publish the contest announcment in the CAS newsletter once it is ready.

In order to encourage student participation, it was agreed that all students entering the contest would be eligible for free registration at CNNA 2000, where the award ceremony will take place. The registration fees will be covered by the Technical Activities Board (MB).

## Bylaws (RWL)

RWL informed the committee that the minimum number of office bearers for a technical committee is three: the Chairman, the Chair-elect and the Secretary. At ISCAS'99 it was also agreed that the past chairman would also be an office bearer.

The bylaws need to specify rules dictating how the office bearer are chosen and the length of term to ensure that one set of people does not unfairly dominate the technical committee. RWL suggested that in addition to the office bearers, the technical committee consider the formation of a Steering Committee. This committee would oversee the long term vision and direction of the technical committee, whereas the chairman and secretary are typically more involved with the day to day operation. After some discussion, TR suggested that sample Bylaws of other technical committees provided by MB be circulated among members. The Bylaws would be formalized at ISCAS 2000. (Action: MB,TR)

## **Distinguished Lecturers (LC)**

LC reported that the deadline for nomination of distinguished lecturers was September 15. Those members wishing to nominate Distinguished Lecturers are asked to send their nominations to TR within one week. TR will compile a list of Distinguished Lecturers and forward it to MB. *(Action: all members)* 

## **Other Issues**

There being no other issues, the meeting was adjourned at 2:30pm.