

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



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# Minutes from the Annual General Meeting 2007 of the IEEE-CAS Cellular Neural Network and Array Computing Technical Committee (New Orleans, May 29<sup>th</sup>, 2007)

#### Attendance

Victor M. Brea, Ricardo Carmona, Emmanuel Drakakis, Piotr Dudek, Marco Gilli, Bertram Shi, Ronald Tetzlaff, Akos Zarandy

# Matters arising from minutes of 2006 AGM at ISCAS 2006

The minutes of the 2006 AGM were endorsed unanimously by the Committee.

#### Review of Technical Activities in 2006

#### **CNNA 2006**

Ronald Tetzlaff, Chair of the Committee, reviewed the 10th IEEE International Workshop on Cellular Neural Networks and their Applications (CNNA'06). It was held in Istambul, Turkey, from May 28th to 30th. This workshop was organized by Prof. Vedat Tavsanoglu (General Chair) and Prof. Sabri Arik (Program Chair). The highlights of the conference were the presentation of new visual microprocessors and their mission critical applications, multimodal sensing-processing, including tactile and auditory scene analysis, computational complexity theory, CNN universal chips, chipsets and engine boards, biologically faithful neuromorphic CNN models for predicting/explaining/using new discoveries in neuroscience, CNN algorithms for dynamic spatiotemporal phenomena and innovative real-life, mission critical applications, live demos and hands-on-experience. A total of 60 papers were presented in lecture format. The keynote talks were given by Prof. T. Roska, on "Cellular Nonlinear Nano-giga-scale Architectures (CNNA)- Converging Sensory Computing Hardware Platforms and Related Wave Logic Inferencing", and Prof. A. Rodriguez-Vazquez, on "From Photons to Decisions: The CMOS Challenge". A full-

day tutorial and demo session was held. The tutorial, endorsed by this Committee, was entitled "CNN Wave Computing: Theory, Architectures, Implementations and Applications" and was presented by M. Gilli, C. Rekeczky and B. Shi. The live demo session, organized by P. Arena and C. Rekeczky, had 10 different demonstrations on real-time applications of array processing hardware.

#### **ISCAS 2007**

Ronald Tetzlaff did an account of the presence of the Committee in the on-going ISCAS. There was a pretty low participation in the tracks promoted by the Committee, only 11 papers made their way to the final program. The causes might be on one side in the lower submission as compared to previous editions (31 submissions in 2006 and only 21 this time), and, on the other side, there was a directive to accept, globally and by track, 49% of the papers received, resulting in barely two and a half sessions dedicated to the topics covered by this Committee. Ronald Tetzlaff insisted in the necessity of considering, from the point of view of the Committee, that ISCAS is the main yearly event of the CAS Society, so it is extremely important that we make a special effort to encourage participation.

#### State of the Committe

The Technical Committees of the Circuits and Systems Society have been audited to get an updated picture of the current situation of all of them. Our Committee is well positioned in most of the performance indexes employed, only falling a little back in participation in ISCAS. This should be taken care of. Concerning the number of members and the degree of activity that they carry out, all Committees have been suggested to activate those members that have not participated that much in the last years, and to realize an update of the list of members. The attending members convened to send an E-mail to all the members of this Committee remembering the compromise to assist to the meetings, and that failing to assist to three consecutive annual meetings, as stated in our Bylaws, is the equivalent to resignation from membership.

# **Upcoming conferences**

#### **ECCTD 2007**

Ronald Tetzlaff announced that in the upcoming 18<sup>th</sup> European Conference on Circuit Theory and Design (ECCTD'07), to be held in Seville, Spain, two members of the Committee, Prof. Leon O. Chua and Prof. Maciej Ogorzalek, will be giving plenary lectures. Following this Ricardo Carmona made a brief account of the activities in ECCTD'07 involving the topics covered by this Committee. There are three tracks in the technical program chaired by members of the Commitee (M. Gilli, P. Dudek, B. Shi and A. Paasio) dedicated to nonlinear circuits, gigascale systems: neural networks, CNNs and fuzzy systems and image processing and multimedia systems. Around 50 papers have been received concerning the interests of the Committee. There will be one special session organized by Ronald Tetzlaff.

### **CNNA 2008**

The 11<sup>th</sup> IEEE International Workshop on Cellular Neural Networks and their Applications (CNNA'08) will be held in Santiago de Compostela, Spain. Victor Manuel

Brea gave an update on the preliminary local arrangements for this conference. He transmitted the convenience, because of the interaction with the calendar of the city, of celebrating CNNA'08 in mid-July. The assisting members agreed after conceding that every date presents some difficulties for somebody, and if the change was going to facilitate accommodation of the participants it was truly worth.

#### **CNNA 2010**

The assisting members decided to postpone any decision concerning the 12<sup>th</sup> CNNA because there are several proposals, some of them still to be detailed, and it would be wise to wait for a larger attendance to decide on this matter.

#### **ISCAS 2008**

Ronald Tetzlaff remembered that September 7 is the deadline for Special Session proposals submission to ISCAS'08. The members agreed that the promotion of special sessions stimulates as well the participation in the general program. Deadlines for paper submission are October 5, for regular sessions, and November 2 for special sessions. It should be stressed, to our peers and contacts, that the proper consignation of the track to which the paper is going to be directed will greatly help to make a better account of the participation of our Committee in ISCAS, avoiding the desegregation of papers related with the Committee topics into sessions promoted by other committees.

## Nomination of Dr. Emmanuel Drakakis for Membership

The proposal of Dr. Emmanuel Mic. Drakakis (Imperial College, London) for membership was formally done by Ronald Tetzlaff. After a brief summary of his activities and an account, on behalf of Dr. Drakakis, of his interests in joining the Committee, he was unanimously accepted into it by the assisting members, therefore becoming a member.

# Annual Report

Ronald Tetzlaff is requesting information from the members concerning their activities in this field to be incorporated into the Annual Report.

#### Other Issues

An update on the status of the Expert Meeting that is being organized by Ronald Tetzlaff in Frankfurt/Main is given. The first responses from industry are being received and dates are being considered.

The materials of the tutorial day given in CNNA'06 are being collected and considered to be incorporated to the IEEE Expert Now courses.