CHAIRMAN

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Minutes of the CNNAC Technical Committee Annual General Meeting

29 May 2000 6:00pm-7:30pm
Neptune Room, Hotel President Wilson
ISCAS 2000, Geneva

Attendance

Paolo Arena, Geoffrey Barrows, Gert Cauwenberghs, Leon Chua, Pier Paolo Civalleri, Joel Davis, Luigi Fortuna, Marco Gilli, Ruey-wen Liu, Robert Newcomb, Yoshifumi Nishio, Veikko Porra, Angel Rodriguez-Vazquez, Tamas Roska, Bertram Shi, Peter Szolgay, Mamoru Tanaka, Ronald Tetzlaff, Joos Vandewalle, Akos Zarandy

Welcome of new members

Tamas Roska welcomed five new members to the Technical Committee: Paolo Arena, Servando Espejo, Marco Gilli, Peter Szolgay and Akos Zarandy. The committee is now at its maximum size of 30 members.

Amendments of Bylaws/Adoption of Bylaws

Tamas Roska discussed two proposed amendments to the proposed bylaws. The first called for the establishment of an Associate Member grade. This amendment is intended to help foster interactions with CAS members who are not working directly on Cellular Neural Networks and Array Computing, but on closely related areas (e.g. nonlinear dynamics or sensors). The second introduced Regional Representatives, who would be members of the Technical Committee responsible for coordinating activities and responding to requests for information from within a given geographical region. The proposed bylaws with both amendments were adopted unanimously. The text of the final version of the bylaws as approved is attached as Appendix A.

Three associate members were elected to membership in the technical committee by unanimous vote: Geoffrey Barrows, Chung Yu Wu and Maciej Orgorzalek

Chung Yu Wu was elected unanimously as the Regional Representative for Asia-Pacific. Paolo Arena was elected as Regional Representative for Europe. The vote was unanimous except for one abstention by Paolo Arena.

Report from nomination committee/Election of New Officers

Leon Chua reported nominations from the nomination committee for the next set of officers who assume their positions after ISCAS 2000. The committee nominated Luigi Fortuna for the post of Chair elect and Bertram Shi for the position of Secretary. The election of Luigi Fortuna was unanimous except for one abstention by Luigi Fortuna. The election of Bertram Shi was unanimous except for one abstention by Bertram Shi.

Report from Chairman

Tamas Roska thanked the members of the Technical Committee for their help in coordinating reviews for ISCAS 2000. He reported that the Technical Committee members will be responsible for coordinating reviews and organizing special sessions for ISCAS 2001. Reviewing will be coordinated by groups of committees. The CNNAC TC has been grouped with the Sensors TC, the Multimedia TC and the Vision TC. Tamas Roska also reported that Mona Zaghloul (outgoing head of the Sensors TC) agreed that the CNNAC TC and the Sensors TC would organize a joint special session at ISCAS 2001. According to the newly adopted bylaws, the Chair Elect (Luigi Fortuna) is in charge of organizing special sessions for ISCAS. **(Action: Luigi Fortuna)**

Tamas Roska reported that the nominations for Distinguished Lecturer submitted by the CNNAC TC for 2000, were not considered last year due to their late submission. He noted that Dr. Youfa would be the new coordinator for the Distinguished Lecturer Program. The new Secretary, Bert Shi, will be in charge of resending the nominations from last year to Dr. Youfa for consideration in the 2001 Distinguished Lecturer Program. **(Action: Bert Shi)**

Tamas Roska sent a one page summary of the activities of the Technical Committee to the Circuits and Systems magazine describe TC. This summary was apparently lost during processing. Tamas Roska will resubmit a new version within next few days, highlighting recent activities of the committee.

Tamas Roska reported that the organizer of the upcoming IEEE Workshop on Neural Networks for Signal Processing has asked him to give a keynote presentation and to organize a special session. The conference will be held between Dec. 10-13, 2000 in Sydney, Australia. Technical Committee members were invited to present papers or to nominate authors for this special session. Interested members should contact Bertram Shi with the details. **(Action: All Members, Bert Shi)**

Report from CNNA 2000

Tamas Roska thanked Luigi Fortuna for his excellent work in organizing CNNA in Catania, Italy.

Luigi Fortuna briefly reported the activities at the conference. One of the highlights was the awarding of the Lauria On Excusa to Leon Chua at the Conference. This was the first Lauria On Excusa awarded by the faculty of the university in its entire history. Luigi reported that the Rector of the University called him afterward to express his satisfaction at the award.

The conference attracted a large number of submissions. In the end, authors from 30 different countries presented their work. The conference was also well attended.

One new aspect to the conference was a school on cellular neural Networks for undergraduate students, which was held in parallel with the conference. Postgraduate students working on cellular neural networks were enlisted to teach to younger students. Each student completing the course received a diploma signed by Leon Chua. Students commented that they were extremely satisfied with the course.

Six to seven of the papers presented at the conference would be selected for publication in a special issue of Soft Computing Journal. It was agreed that Tamas Roska would be the head of the selection committee.

CNNA 2002/2004

Originally, it had been proposed that CNNA 2002 be held in Helsinki and CNNA 2004 be held in Frankfurt. Veikko Porra reported that in retrospect, the close timing of ECCTD in 2001 and CNNA in 2002 both in

Helsinki may not be the best choice. Veikko Porra suggested that the order of the locations of the two conferences be switched. Ronald Tetzlaff indicated his readiness to organize CNNA 2002 in Frankfurt. The committee endorse this proposal and thanked Ronald Tetzlaff in advance for his efforts.

Web site

Ronald Tetzlaff noted that the web site of the TC is now hosted physically on the same server as the rest of the Circuits and Systems Society web pages. The address of the web site is http://www.cas.ieee.org/~cnnactc/ Although disk space is limited to 30MB, the pages now occupy only 10MB.

One of the primary issues which must be addressed is that the content of some of the subsections of still incomplete. Ronald Tetzlaff noted that he needs input from members of the TC to complete these sections. Members interested in contributing their efforts should contact Ronald Tetzlaff directly. **(Action: All Members)**

Tamas Roska noted that the CNN Bibliography which is accessible from the website now contain over 1000 papers. This bibliography is updated every quarter. Papers from CNNA and ISCAS would be added within one month.

Veikko Porra noted very pleased with the organization of the website. Committee concurred with their expression of appreciation of Ronald Tetzalff's efforts.

CNN Young researcher's contest

Bertram Shi reported on the results of the CNN Young Researcher's Contest. This contest was organized by M. Gilli, C. Rekeczky, B. E. Shi and M. Tanaka. It was held in conjunction with the 6th IEEE International Workshop on Cellular Neural Networks and their Applications (CNNA 2000) held in Catania, Italy between 23-25 May 2000. Participants in the contest were given the task of deriving a Cellular Neural Network based algorithm to extract watermarks embedded into a set of images. A web page was set up which contained the description of the contest and a description of the quantitative evaluation criteria used to decide the winning entries. After registering through the web page, participants were able to download a student version of the CNN simulator and programming environment as well as example training images of watermarked images. Participants were also able to track the performance of their submitted algorithms via this web page on testing images, which were not released to the participants. Cash prizes of US$500, US$300, US$200 and certificates were awarded to the top three entries.

The goal was to provide students and young researchers worldwide with an opportunity to familiarize themselves with the capabilities of the CNN Universal Machine. Judging by the response to the contest, this goal was successfully achieved. In total, 23 users registered for the contest from a variety of countries in North America, Europe and Asia. Authors of the top the three winning entries were invited to present their results at the 6th IEEE International Workshop on Cellular Neural Networks and their Applications (CNNA 2000) held in Catania, Italy on 24 May 2000. The winning entries came from researchers in Spain, the United States and France. Both the organizing committee of the contest and the conference attendees were impressed by the high quality of the winning solutions.

The committee formally acknowledged their appreciation for the superlative efforts of Csaba Rekeczky in setting up the task, the web site, the evaluation criteria and in evaluating the results.

Motivated by the success of the contest, the TC formally endorsed a proposal to the Technical Activities Board for US$1000 on a biannual basis to support the continuation of this contest. The money would be used to support the prizes awarded. The contest would continue to be held in conjunction with CNNA. Tamas Roska reported that this proposal was accepted by the Technical Activities Board at its ISCAS 2000 meeting on Saturday, May 27, 2000. Leon Chua suggested that this news be broadcast as soon as possible so that more people would be aware that this contest will be held again in the future. **(Action: Bert Shi)**

Tamas Roska proposed to leave the web site open for people to try the contest task. Bert Shi will work with Csaba Rekeczky on the details. **(Action: Bert Shi)**

Robert Newcomb suggested that the results of the contest be announced in Circuits and Systems magazine. Leon Chua amplified this suggestion with a proposal that a full description of the details of the contest be written for publication in Circuits and Systems magazine. Bert Shi would work with Csaba Rekeczky in preparing this document **(Action: Bert Shi)**

CNN Summer School

Tamas Roska reported that Marco Gilli made a proposal at the meeting at CNNA that the TC should initiate a CNN Summer School, perhaps to be held biannually on years alternating with CNNA. The goal would be to gather both established researchers in the field, along with students and newcomers for an extended period of time to initiate and or extend collaborative efforts on Cellular Neural Networks. Marco Gilli agreed to be in charge of organizing this summer school for the summer of 2001. Tamas Roska would investigate the possibility of obtaining funding for this event from sources such as the IEEE CAS TAB. **(Action: Marco Gilli, Tamas Roska)**

AOB

Veikko Porra invited members of the committee to propose tutorials and special sessions on Cellular Neural Networks to be held at ECCTD. **(Action: All members)**

Appendix A

Bylaws of the

Cellular Neural Networks and Array Computing

Technical Committee of the IEEE Circuits and Systems Society

The goal of the Cellular Neural Networks and Array Computing (CNNAC) Technical Committee is to foster research, development, education and industrial dissemination of knowledge relating to the emerging field of cellular dynamic computers and models briefly called CNN computing. CNN ("cellular neural/nonlinear network") computing is used as a generic terms for analog and logic (analogic) stored programmable array computers and models with a core of mainly locally interconnected dynamical systems. The activity is genuinely multidisciplinary, drawing upon knowledge and expertise from fields such as biology, physics and chemistry, in addition to areas more traditionally associated with the IEEE such as electrical and computer engineering, computer science and information technology .

Membership

Membership of the CNNAC Technical Committee is open to any IEEE member. Membership is approved by a majority of active members present at any of the Committee's general meetings. Membership is by recommendation and by majority vote of the members present at a meeting. A member is removed from the committee if he/she does not attend three consecutive annual committee meetings. The committee shall have up to 30 members.

In order to foster interchange and with researchers working in areas related to but not directly regarded as Cellular Neural Networks and Array Computing, the committee may include a maximum of 10 Associate Members. The conditions and election for Associate Members shall be the same as those for regular membership. Associate Members shall be invited to attend all meetings and to provide input on the operation of the Technical Committee. However, Associate Members do not have voting rights. An associate member is removed from the committee if he/she does not attend three consecutive annual committee meetings.

At any time, the Committee shall have three officers: the Chair, the Secretary and either the Chair-elect or the Past Chair. Both the Chair and the Secretary serve two year terms. The Chair-elect and Past Chair serve one-year terms.

A subset of the members of the committee shall be designated as Regional Representatives, which function as local contact points for information about the Technical Committee and as coordinators of activities within a designated geographical region. Regional Representatives shall be designated each year at ISCAS with no limit on the number of times any member can serve as a Regional Representative.

Meetings

The annual meeting of the committee will be held at the International Symposium of Circuits and Systems (ISCAS). Other general meetings will be held at the European Conference on Circuit Theory and Design (ECCTD) and the Workshop on Cellular Neural Networks and their Applications (CNNA). Any business requiring Committee approval will be transacted at the annual or general meeting, with the exception of the election of officers, which shall take place only at the annual meeting. Outside of the annual and general meetings, the three Officers can, upon a majority vote, undertake unplanned business on behalf of the Committee, provided that these activities do not require formal committee approval and that they be reported to the Committee at the next meeting.

Duties and Election of Officers

Chair

The Chair presides over committee meetings and is responsible for all interactions with the CAS Society. With the assistance of the Secretary, he/she is responsible for reporting the activities of the Committee to the CAS Board of Governors on a timely basis. The Chair is also responsible for recommending Associate Editors for the CAS Transactions.
The Chair is not directly elected, but assumes the chairmanship immediately after the ISCAS following his/her one year term as Chair-elect. The Chair must be a member of both the Committee and of the Circuits and Systems Society. The Chair serves a two year term.

Past Chair

The Past Chair is responsible for organizing any and all CNNAC Technical Committee-sponsored special sessions and workshops at ISCAS. He/She is also responsible for assisting the Chair in transacting the business of the committee.
The Past Chair is not directly elected, but assumes his/her position immediately after the ISCAS following his/her two year term as Chair. The Past Chair must be a member of both the Committee and of the Circuits and Systems Society. The Past Chair serves a one year term.

Chair-elect

The Chair-elect is responsible for organizing any and all CNNAC Technical Committee-sponsored special sessions and workshops at ISCAS. He/She is also responsible for assisting the Chair in transacting the business of the committee.
The Chair-elect will be elected by majority vote of the members of the Committee present at the annual meeting falling in the first year of the term of the current chair. The Chair-elect must be a member of the Committee and of the Circuits and Systems Society. He/She assumes the Chair-elect position immediately after the ISCAS of his/her election and serves a one-year term. The Chair-elect assumes the chairmanship of the Committee after the ISCAS following his/her one year term.

Secretary

The Secretary, who will also act as the Treasurer for the Technical Committee, will record the minutes of the yearly meeting and maintain the roll of the committee. The Secretary will be the contact point for the Committee's nominations for CAS Society awards and for nominating transactions papers in the field of cellular neural networks and array computing for the Best Paper Awards. He/She will report on Committee activities through the IEEE Circuits and Systems Society Newsletter at least twice a year (following ISCAS in the Summer and prior to ISCAS in the Spring).
The Secretary will be elected by the membership of the Committee present at the annual meeting falling in the second year of the term of the current Secretary. He/She will serve for a two -year term commencing immediately after the ISCAS of his/her election. The Secretary must be a member of both the CNNAC Technical Committee and the Circuits and Systems Society.

Activities

The Committee will be responsible for nominating individuals for the various CAS society Awards, and for nominating deserving papers in the area of Cellular Neural Networks and Array Computing for each of the CAS Society's Best Paper Awards. Every active Committee member will be solicited by the Secretary to submit potential nominees. The Officers will decide the names to be submitted to the CAS Award Committees from the names submitted by the members.
The Committee will organize a special session and/or workshop on Cellular Neural Networks and Array Computing at each ISCAS. The Chair-elect or Past Chair will be responsible for organizing this activity at the ISCAS following the annual meeting where he/she assumes his/her position. The Chair is expected to assist in the organization, but final responsibility lies with the Chair-elect or Past Chair.
The Committee will recommend new Associate Editors for the Transactions of the Society in the fields relating to Cellular Neural Networks and Array Computing to the Editorial Board of the CAS Society. The Committee will accept nominations for these positions and review them at an annual meeting preceeding the term of the incoming editors. The Chair will be responsible for learning when each Editorial Board will be formed and for soliciting nominations from the Committee membership in a timely manner.

The Committee may engage in other activities such as editing a reprint books, the organizing of special issues of an IEEE publication, workshops, conferences, and other publication activities in the area of Cellular Neural Networks and Array Computing.

Amendments

Future amendments to these bylaws will be by a majority vote from the Committee members present at an annual meeting or from majority of the members at large through mail. Any bylaw amendment can be introduced at the Committee meeting, provided that at least one of the three Officers has been notified at least one month prior to the Committee meeting. Approval by the three Officers is not necessary, but notification is required. An approved amendment will take effect the day following the conclusion of the annual meeting where it was approved.

1 June 2000