

Women in Control Newsletter

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1. Editor's Note ... Editor Position Open

Dear Friends and Colleagues,

Happy New Year to all of you. I hope everyone is in good health and great spirits. Let the year 2000 bring you many new opportunities for success and happiness.

Some changes have occurred in the positions and offices within IEEE CSS and also WiC. Cheryl Schrader is the 2000 CSS VICE PRESIDENT FOR CONFERENCES and also THE PROGRAM CHAIR for the 2000 CDC. Bozenna Pasik-Duncan will be Chair of the IEEE CSS International Committee, and also in charge of the CSS Task Force on Globalization. I have been appointed the Chair of Women-in-Control. Dawn Roberson is the WebTeam Coordinator, and also in charge of the database. Both Bozenna and Cheryl will continue as Advisors to our group. I thank the volunteers who have served us in the past year, and I welcome the new volunteers.

We are looking for a new Editor for this newsletter. Please volunteer or nominate ... send email to fnchowdh@louisiana.edu. I would be very glad to recommend someone from outside the USA for this position: everything is done electronically, so physical location is not important. Please consider volunteering for this job. I assure you, it will be a rewarding experience. It definitely has been for me. Thank you all.

Sincerely,

Fahmida Chowdhury

2. From Ann Reimers

Hello Women-In-Control! I wanted to share a recent accomplishment of mine with you and encourage you to pursue the same goal. I was recently upgraded to a Senior Member in the IEEE! Along with my new ID card came a list of things that I am now able to do in the IEEE. I can serve in any elected office in the organization. I can serve as a reference for others who want to apply for Senior Member status and I can review Senior Member elevation requests on a peer review panel. But beyond these new things that are now open to me, I must say that I feel a sense of accomplishment that I didn't know I would feel when I started filling out the paperwork. It's just nice to be recognized for my work! Because I have not stayed in one place for too long in my career, I don't really have any other concrete symbol of the progress I have made in my work. It feels good to say I am now a Senior Member in the IEEE.

So this is how you can be one too: I have a PhD, so that counts for 5 years toward the 10 year requirement in professional practice. If you have a Baccalaureate degree in an IEEE-related field it counts for 3 years; a Masters degree counts for 4 years. The rest of the tens years' experience I got from working in industry, though teaching or research can count as well.

Then, you need to show "significant performance" over a course of five years. Significant performance is defined at http://www.ieee.org/membership/grades_cats.html#SENIORMEM. I was in a management capacity for 2 years in a commercial company overseeing engineering projects, which is considered to be "technical direction or management" or "substantial engineering responsibility or achievement". Then I published several papers during the last three years of my research for my PhD dissertation, which is classified as "publication of engineering or scientific papers, books, or inventions." Other options for significant performance include academic endeavors, such as "Development or furtherance of important scientific or engineering courses", or work in engineering-related fields, such as "Contributions in areas such as technical editing, patent prosecution, or patent law "

Finally, you need three IEEE members of grade Senior Member or above to fill out reference forms. Alternatively, and what I did, you can get two references and one Nominating Member. The Nominating Member need only provide their name and IEEE number; they don't need to fill out a form. A while ago, Bozenna Pasik-Duncan wrote in this newsletter that she would act as Nominating Member for anyone in the group that wanted to try to upgrade, so I took her up on her promise. (Thanks Bozenna!) The other two references I got from former professors of mine.

And now that I am able, I will act as Nominating Member for anyone else that wants to apply. Just email me at reimers@seas.gwu.edu. And good luck! I hope we have many more female Senior Members in the IEEE.

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Dear Friends ,

HAPPY NEW YEAR TO EACH OF YOU AND ALL OF YOU AND YOUR FAMILIES !

CONGRATULATIONS TO FAHMIDA ON BEING CHAIR OF WOMEN IN CONTROL GROUP !

CONGRATULATIONS TO CHERYL ON BEING the 2000 CSS VICE PRESIDENT FOR CONFERENCES AND THE PROGRAM CHAIR OF THE 2000 CDC !

CONGRATULATIONS TO ALL OTHERS IN EDITORIAL, CONFERENCES PROGRAMS AND COMMITTEE CHAIRS POSITIONS !!!

I was planning to write my reflections on two year CSS Vice Presidency for Membership Activities. But since I am still working (I hope a few more days only) as the Vice President I decided to postpone my reflections to the next issue of our Newsletter and share with you tasks on which I have been recently working.

I would like to invite you again to join me on those tasks. I hope that many of you will find something that interests you. The Four Tasks that I have been recently working on and that will occupy me this year are the following :

1. NSF Workshop on Ideas and Technology of Control and Systems in High School Math and Science Education Technical Sponsorship by the IEEE Control Systems Society and the American Automatic Control Council June 27, 2000 at the Hyatt Regency, Chicago, Illinois in conjunction with the Nineteenth American Control Conference (ACC) June 28-30.

Scope of the Workshop

The workshop is organized by the National Science Foundation for High School Teachers of Math and Science and it is a follow up to the NSF/CSS Workshop on New Directions in Control Engineering Education held at Coordinated Science Laboratory, University of Illinois at Urbana-Champaign, October 2-3, 1998.

The purposes of the workshop are to enhance cooperation among various control groups and high school teachers of Math and Science throughout the USA and the world by emphasizing control and systems ideas and technology and to increase the general awareness of the importance of control and systems technology and its cross-disciplinary nature among high school teachers and high school students.

Control and Systems science occurs in many different disciplines and its applications occur in a wide variety of technologies. It involves a variety of tasks, such as, modeling, identification, simulation, planning, decision making and optimization .

Application areas of control and systems include transportation, manufacturing, communications, process industries, body system, stock market, and commercial products. The basic control systems science influences and impacts many diverse disciplines such as biology, physics, chemistry, economics and medicine.

The needs of industry at present for well trained systems scientists are growing and changing, due to marketplace pressures and advances in technology. Future generations of our students will have to be broadly educated to cope with cross-disciplinary applications and rapidly changing

technology. The backgrounds of our students are changing too. They are prepared to work with modern computing technologies. The time is thus ripe for major renovations in Math and Science High School Education.

It is important to develop a cross-disciplinary set of examples, demonstrations and laboratory exercises that illustrate systems and control across the entire spectrum of Math and Science. Some of those examples will be presented during the Workshop.

The outcomes of the first workshop are expected to be of global interest and applicability. It is expected to make high school teachers of Math and Science more aware of the fundamental importance of the control systems technology in the day-to-day lives of people everywhere .

The control systems technology underlies virtually all aspects of modern society, from the movies, video games, and toys that entertain us, to the homes that shelter us, the farms that feed us, the trains, planes, ships, and automobiles that transport us, the offices and factories that employ us, the hospitals that heal us, and the war machines that both threaten and protect us.

We will share with high school teachers our successful control stories , existing tools and experiments in control and we will listen to teachers' needs and expectations . By doing this we hope to establish close partnership between control community and high school Math and Science teachers . There is so much to be gained by exchanging ideas and sharing of educational experiences and practices .

NOTE : Any comments on the above will be highly appreciated . Thanks. I am in the process of inviting potential speakers and teachers and also members of the Program Committee . Any suggestions related to invitations will be also highly appreciated . Would you like to be involved , please let me know . You will make me happy !

2. People to People Ambassador Program

I will lead a control delegation to the People's Republic of China under the People to People Ambassador Program. I am very excited about meeting all my Chinese friends again ! The Program invited our Society to lead control systems delegation to China and I was asked to lead a delegation at a minimum participation level of 15 delegates. The program is responsible for making all program arrangements, both professionally and logistically, and they will handle team recruitment. They rely on the delegation leader to define the professional objectives of the delegation and the leader has input at all stages of the program's development.

They will invite members of IEEE-Control Systems Society and other pertinent associations. If you will receive the invitation and would be interested JOIN ME ! A delegation consists of 15 to 30 members and the program is approximately two weeks in length. Activities for delegates are fairly work-intensive, involving participants in at least 20 hours but no more than 30 hours a week of meetings and field site visits. A number of cultural and social activities are also planned. At the conclusion of the project, our organization will publish a journal of the exchange. The journal will document the results of professional meetings and activities.

Ideally they'd like the delegation to travel in the fall of 2000 (convening in Los Angeles on October 20 and returning on November 3) .

I came up with the following :

Professional Purpose Statement

A delegation of specialists in Control Systems has been selected to visit the People's Republic of China. The purpose of this delegation is to visit academic and industrial research institutions, and to learn about the study and the uses of control systems in China. The program is being arranged by the People to People Ambassador Program.

The delegation will meet with Chinese Control Systems specialists to exchange methods and ideas while participating in discussion groups, workshops, and site visits of facilities and universities that are pertinent to their respective fields.

The following subjects are of particular interest to the delegation. These topics may be further refined to incorporate the specialized interests and expertise of the individual delegates.

- Control systems research
- Control systems teaching
- Applications of control systems
- Emerging areas of research and applications in control systems
- Support for control systems research

The delegates will be prepared to participate in formal and informal discussions of a professional nature.

It is intended that these exchanges contribute to efforts for increased international understanding, both professionally and personally.

3. CSS International Affairs Committee

I am the 2000 chair of the CSS Standing International Affairs Committee .

I would like to identify one member of the CSS in every country who will serve as an Ambassador for her/his country and represent the best interests of her/his country . In this way I hope to do my best to make the CSS truly international and make the Society aware of needs and expectations from each country and all countries .

NOTE : WOULD YOU LIKE TO BE INVOLVED , PLEASE LET ME KNOW AND YOU WILL MAKE ME HAPPY !!!! OR DO YOU WANT TO RECOMMEND SOMEONE , PLEASE DO IT ! THANKS.

4. CSS Task Force on Globalization.

I chair this very important for our Society Task Force . I will share with you my report to the Board of Governors .

NOTE : PLEASE JOIN ME ON THIS TASK SO I CAN DO BETTER . THANKS !

***** Task Force on Globalization *****

Report to the BOG

December 1999

"Globalization can be remembered as a time of profit and plunder or of diversity and enlightenment"-Oscar Arias, Nobel Peace Prize Laureate .

Objectives:

The Control Systems Society is an international society and we must identify and clarify areas of interest in transnational matters, particularly those involving Regions 7, 8, 9, and 10. For global competitiveness it is important to re-leverage resources in multinational environments, to reduce non-tariff trade barriers, and to work with colleagues in other countries. Now that the CSS membership has grown to have more than 50% of its total outside of North America, and now that the IEEE TAB is moving in various directions to ensure that globalization is a high priority item, the CSS goal toward globalization involves primarily membership recruitment, membership retention, and membership participation in regions outside of North America.

The Task Force Members:

The Task Force members are Michel Gevers, Steve Kahne, Dan Repperger and Molly Shor. In addition, we work closely with Kevin Passino, Vice President for Technical Activities.

Correspondence related to Globalization issues has been exchanged with the IEEE Office, and in particular the contact with Professor Hiromasa Haneda, Chair of the MD Transnational Membership Working Group has been established.

The IEEE office passed the following information:

"The ISF'98 recommendations, many of which deal specifically with the globalization issues, is available at www.ieee.org/organizations/corporate/stratplan/isf98/ The IEEE ExCom is responsible for monitoring the progress on achieving these recommendations. In terms of membership, IEEE has made great strides in globalization. For example, in the past year, overall membership is up by 5.3% but non-US membership has increased by 12.7%. Just ten years ago, IEEE US membership was 78.8% of total membership: today, US membership is 65.5% of total membership. If the increases in membership and the shift between US and non-US membership is maintained, we should achieve a 50-50 divisions between US and non-US membership in 2005 or 2006."

The following transnational activities have taken place :

The International Affairs Committee of the IEEE Control Systems Society set up a list of active control groups in countries where participation in regular IEEE activities is often difficult because of financial reasons. These countries are essentially in Latin America, Eastern Europe, Africa and Asia. The idea of setting up such a list of active control groups is that the IEEE Control Systems Society decided last year to make a special effort for promoting participation in IEEE CSS activities and dissemination of information for control people active in such countries. This effort includes the free distribution of conference proceedings, possibly also of journals or magazines, as well as the dissemination of relevant announcements and information. In addition, affiliation with the IEEE in the form of group membership, in order to reduce the affiliation fees, is also being considered. We plan to post information about the research of these listed groups.

We met with eight chairs of the CSS chapters outside of the United States last summer . We established the electronic Chapters Activities' Newsletter, which has been extremely well received

by members of chapters. We have established many new contacts, including South Africa and Latin America, regions which have become our targets for some time.

As a result of the responses to our survey sent to the chapters we concluded that the IEEE CSS should provide access for industry, students, academia, and the general public to the great wealth of existing control systems technology and expertise. This expertise includes research, control practice, methods, tools, problems, relevant patents, and information about the applications publically known to use those patents.

The World Wide Web and the new information technologies provide a tool for providing global access (without respect to geographical and political boundaries) to such information. The IEEE CSS should be recognized as the leader globally in providing access to information related to control .

The Technical Activities Board is actively pursuing several avenues to promote globalization of the IEEE Control Systems Society technical activities. First, members of the Board are improving their electronic services (web page and newsletters) so that all members have access to the same technical resource information. Second, specific technical committees are making additional efforts to collaborate with organizations in other countries that overlap with their own (e.g. IFAC). Third, there has been an active effort to appoint non-US based individuals to the highest ranking positions in TAB (e.g. as technical committee chairs). Fourth, conferences/workshops run by technical committees are being conducted outside of the US.

Plans for 2000 :

One of the big areas where we could have a real impact is to be sure that control students from around the world have opportunities to interact, at least electronically. We suggest that the CSS consider offering "scholarships" to students from developing countries which would be sufficient to pay student IEEE CSS fee for a short period of time in order to introduce these young people to the advantages of IEEE CSS membership. The Task Force members believe that more focus should be on our students. We have investigated what other societies have done in promoting students, e.g. inviting students from all of the local universities to attend symposia, presentations at local universities , and video conferences.

We have examined the statistics of membership of our society. There is a growth in students and a significant growth in women members, this latter group includes many students. As part of Globalization the CSS will be involved in two important events in the year 2000.

1. The first NSF Workshop for High School Teachers of Science and Math. This Workshop is organized in conjunction with the 2000 ACC in Chicago and will take place on June 27, the day before the ACC. We believe in engineer/teacher collaboration.
2. The control delegation to the People's Republic of China in October of 2000 will be lead by a CSS member under the sponsorship of the People to People Ambassador Program. This would be another possibility of making close contacts with control people from China where control has played a significant role. In addition, the International Affairs Committee is planning to establish the Excellence in Control Community Outreach Ambassador Program. It has been planned to form the group of Ambassadors that are nominated by all countries around the world.

Our other plans and new ideas for the year 2000 are:

We need to have more non US BOG members and officers.

We need to focus more on student members. Sharing educational materials, especially online web courses/experiments would be very useful for teachers throughout the world. Although it might be hard for some members to travel, it probably is not impossible for them to share knowledge and materials over the internet. We could arrange a worldwide contest for the best web page based educational materials. The prize could be a free trip to CDC to chair or participate in sessions on web based education in control.

We do book reviews - we could do web based material reviews.

Students love contests. We could organize contests which do not require travel but take advantage of electronic communications. The prize could be a trip to CDC.

We do need a complete CDC ROM based index of all CSS publications from the beginning, at least for all our journals. Maybe it should even be online and free to members only.

We are quite excited about our efforts, and hope we have a lot to show for you within the coming year.

We include the text of an address which Steve Yurkovich, president of CSS, gave at the European Control Conference in Karlsruhe, Germany last September. It gives a hint of what is happening in CSS with respect to globalization.

Acknowledgement. The Task Force members thank Steve Yurkovich and Tamar Basar for their strong support of these international activities.

******* European Control Conference Opening Ceremony Remarks*******

by Steve Yurkovich, President of THE IEEE CSS

It is truly a pleasure to be here in Karlsruhe for the ECC99. The ECC has a special meaning to me personally, since I was invited to deliver one of the plenary lectures at the ECC97 in Brussels. I am sure that many of you were there for that enjoyable venue. All that I see to this point, leading up to this conference opening, indicates to me that ECC99 is following in the tradition of technically outstanding control engineering conferences.

With all I see going on in the European Community, I'm afraid that (politically speaking) things in the US aren't as exciting --- the antics of our White House notwithstanding. On the other hand, I'd like to think that things in the worldwide control community are coming together more and more, in the spirit of the evolving EC, with the EUCA, IEEE, VDI/VDE, and IFAC represented here today. Three years ago the IEEE Control Systems Society and the EUCA signed an historical agreement which, among other things, promotes increased cooperation between the two bodies, and has led to me standing before you today.

[NOTE: EUCA STANDS FOR "EUROPEAN UNION CONTROL ASSOCIATION"]

In my one year as President of the IEEE CSS, one of my main goals has been to expand the service and effectiveness of our society worldwide. Of our nearly 12,000 members, it is now the case that more than half reside outside North America. Thus, in 1999 I have set in motion two new initiatives toward this goal.

The first initiative, which is just beginning, is the establishment of a special task force on globalization. The CSS Board of Governors has voted to put funds behind this effort, and my hope is that it will continue well into next year and beyond my term as President. A good reason to hope that this will happen is that my good friend Michel Gevers, who follows me at this podium as the current EUCA President, will next year become a member of the IEEE CSS Executive Committee as the Vice-President for Membership Activities.

The second new initiative of the IEEE CSS is the establishment of a special task force on worldwide chapter revitalization. In a real way it is at the local chapter level ---the "grassroots," so to speak---that worldwide membership activities takes place, and therefore benefits and services flow down from the main organization.

So, it seems we all have the same goal: to move toward more broad-based cooperation and collaboration in the control community. I'm very happy to be a part of these exciting times. Thank you.

With my very best wishes to you - Bozenna

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