

# Women in Control Newsletter

## March 1999

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**Newsletter Editor:** Fahmida Chowdhury  
**Database Coordinator:** Eunjeong Lee  
**Mailing List Coordinator:** Dawn Tilbury **Advisor:** Bozena Pasik-Duncan

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1. Editor's Note

Dear Friends and Colleagues,

I hope everyone is doing well. It seems that finally we have spring here in Louisiana. Before you know it, summer will come and many of us (the ones in academia) will be able to relax for a while after the spring semester final exams are over. I hope to see many of you at the ACC in San Diego. In today's newsletter, there are messages from Cheryl and Bozena: both of the messages are very informative, so please read on.

Wishing you a wonderful springtime,

Fahmida Chowdhury  
fnchowdh@usl.edu

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2. Message from the Chair

Greetings to All!

I am hoping that this newsletter finds all of you healthy, happy, and receptive, because what you will find in the chair's message is a Call for People.

The IEEE Control Systems Society has always prided itself on the commitment of its members to rigorous review and high-quality publications, journals, and conferences. The society must have well-qualified and diverse reviewers, editors, program committees, and conference editorial board. Here is my Call for People.

If you are interested in being active in any or some of these roles

program committee  
conference editorial board  
reviewer  
editor  
technical program organization  
session chair

please send email to

[schrader@ieee.org](mailto:schrader@ieee.org)

Include your name and contact information as well as your technical interests, areas of expertise, and preferred activities. I will sort and disseminate this information to the appropriate individuals.

There are many reasons why I am requesting this information. As some of you may recall from our last meeting, the society requests names of interested people to help with technical activities. One of the main purposes of WiC is to encourage women in the society to take an active role in the technical review process and in the formation of technical programs and special interest publications. Many women currently hold leadership positions. This past year the Program Chair for the American Control Conference was a women. In the next few years we will see other women in this capacity. Since the last WiC newsletter I have been elected Program Chair for the 39th IEEE Conference on Decision and Control (CDC) to be held in Sydney, Australia, in December 2000.

Hence, my Call for People is immediate! I am forming the 2000 CDC program committee and working with the General Chair in firming up the organizing committee. Please consider what you might contribute to this process. We welcome suggestions for plenary sessions, speakers, workshops, and special interest sessions. Above all plan on contributing papers to the conference or organizing invited sessions. We anticipate a high-quality conference and a successful meeting. Remember THIS WILL BE THE FIRST CDC IN SUMMER!

Just one other note. I have agreed to spearhead a column in the Control Systems Magazine devoted to Women in Control. If you have any suggestions of what message you would like to see in this article, please contact me. I will be taking pictures at the June 2nd, noon meeting of WiC at the ACC to include with the article. Please put this on your calendar and join us.

Lastly, some announcements that may be of interest follow.

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We are in the process of listing some member information on the web site. Primarily, for each member we would like to include the following:

3. name, address (affiliation) and telephone/fax numbers,
4. email (possibly with link), and
5. home page URL (possibly with link).

If you would like to have any of your information included in this listing please send it to me at [schrader@ieee.org](mailto:schrader@ieee.org)

Also, specify if you only want portions of your information listed. Additional information (areas of interest, etc.) may be incorporated upon member request (time and effort permitting).

See the web site for the latest listing.

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We are looking for a volunteer to coordinate a child care sharing service for people that attend the Conference on Decision and Control and the American Control Conference with their children. Those that bring their children can be made aware of others in similar situations and possibly can work out agreements or share costs among themselves. It is envisioned that this would work in much the same way as the current room sharing system. Please let me know if you would be interested in coordinating this activity.

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Welcome our new webmaster, Dawn Roberson, from the Sensory Motor Performance Program at Northwestern University in Chicago, Illinois. Thank you Dawn for volunteering!

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WiC members who are interested in upgrading to Senior Member status read on (those who have at least ten years active professional practice, with five or more years of significant performance, accomplishments in engineering, publications, management, education or professional contributions). We highly recommend that all qualified IEEE members apply for senior membership. To obtain senior member application forms, please contact:

IEEE Operations Center  
Admission and Advancement Committee  
445 Hoes Lane  
P.O. Box 1331  
Piscataway, NJ 08855-1331  
tel.: 732-562-5502  
fax: 732-981-0225  
e-mail: [rab.aa@ieee.org](mailto:rab.aa@ieee.org).

Usually IEEE Press booths at major conferences stock application packets. WiC will work on having packets available at our meetings as well. Senior membership is a necessary condition to becoming an IEEE Fellow. <P

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In order to encourage participation in technical activities, WiC will be bringing a form to the WWW

<http://voyager1.utsa.edu/~schrader/women-in-control/>

so that members can indicate their various research interest areas. This information will then be made available to program chairs, associate editors, and the conference editorial board.

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Spring is a time of new growth, vigor, and opportunities. I wish you luck in your endeavors.

Cheryl B. Schrader  
Chair, Women in Control  
schrader@ieee.org

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6. Message from Advisor (Pasik-Duncan)

Dear Friends ,

It is not too late to wish you and your families a Very Happy and Successful Year.

Time is passing very fast! It has been almost three months since I saw many of you in Tampa at the CDC.

As Vice President for Membership Activities I would like to share with you some observations, thoughts and plans for the future activities. I believe each of you and all of you can join me to achieve some goals.

We had decided to work hard this year focusing on participation of international members, in particular women and students.

Recent statistics released by the IEEE office shows that our membership decreased slightly, while women's memberships increased significantly.

Our plan is to put together a mailing list of 57 chapters around the world and previously identified control groups in needy countries. This will enable us to inform those on the list about the many benefits of our programs which include: reduction of registration fees to our major conferences; waivers of registration fees in exceptional cases; partial travel funds to our major conferences; Distinguished Lecture Program; LASS Program; Outstanding Chapter Award; chapter activities; and many more of the advantages connected with being a CSS Member or a CSS Affiliate.

By working together we can attract more people to join our Society. We can also be thinking about ideas for new programs. Any ideas will be highly appreciated. We will need help from the Public Relations Committee. Our goal for 1999 is to increase our focus on international memberships.

In this spirit, I have just submitted the invited session, "Identification and Stochastic Control Around the World," with Ljung (Sweden), Gevers (Belgium), Biltanti (Italy), Deistler (Austria), Guo (China) and Kumar (USA), to bring more international members together. I encourage these speakers to find ways to bring their students to the 1999 CDC. Maybe we can find some support for them too. Maybe this is the starting point. . . . . The Students Committee will come with great ideas on how we can increase the participation of international students.

I want to encourage the Women in Control Committee to think along the same lines. The growth of women in the CSS is very impressive. Now we need to focus on retention of our members since that is where the real problem has occurred. We are losing our "old" members. We also need to find the easiest way to upgrade memberships, including fellows.

I would appreciate if each of you, for the next 2 months, would send in your comments on how we can be more effective in reaching our goals. Please write your ideas, plans, comments, suggestions, etc., and share them with all of us. I believe in working together. I also believe that by doing so, each of us can contribute to the whole.

I have just come back from Newark, NJ from 1999 IEEE Membership Development Retreat/Meeting About 45 people from around the world attended the meeting.

I loved the meeting. It was beyond my expectations. I wish I were at the 1998 meeting ...

This was the fourth time the IEEE had a similar retreat and each year, "it seems to get better and better." From a personal standpoint, I have found the weekend extremely stimulating and informative. I had returned home with MANY new ideas for programs that I want to try in our Society that I believe will strengthen both our ability to recruit and retain our Society members.

I understand better the depth and breadth of IEEE member benefits and services. I feel that the meeting has provided me with the tools to achieve some important from the IEEE point of view goals

Among many IEEE goals two are the most important for this year :

- increase membership to 350,000 members

(It was interesting for me to hear that 50,000 members for the IEEE =0) and

- double the percentage of senior members!

It was obvious from the meeting that students are among most important members to focus on.

My dream is that this year the Women in Control Group will be most creative, most effective and most successful. I ask for your help and assistance so my dream, which I believe is "our" dream, will come true. Let us try to reach the following THREE goals. Let us show that we can double senior membership very easily, Cheryl and I can be your references. If each of us will bring one or two students to the Society we can show the number of students increase and this is the group that we need to focus on! We need to identify women who are qualified to be nominated for a Fellow and we can make an effort to nominate them.

I decided to share with you the information about the role of the Membership Activity Board. Look at it please. This should give you a better picture of different activities. If you find that you would like to join one of committees because you can contribute to it with your ideas please let me know and I will be more than happy to involve you in our activities.

Finally I would like to share with you good news

Cheryl Schrader was elected as the Program Chair of the 2000 CDC IN AUSTRALIA .

SHE IS THE FIRST WOMAN IN THIS POSITION. CONGRATULATIONS TO CHERYL!

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### Role of Member Activity Board (MAB) in the IEEE Control Systems Society

The general goals of the MAB committees are to increase membership and to recognize significant accomplishments of our members. Three new chapters were formed in Croatia, Italy, and Poland in 1998 and work is under way for three more. Several of the chapters were very active (some hold meetings each month, plus tutorials and workshops). We also offer a Distinguished Lecturer program through which we help provide speakers for local chapter meetings. Another service is to provide extra copies of the Control System Magazine for distribution at chapter meetings or to student branches. We provide assistance with the reduction or waiver of the registration fee at our major conferences for our members from "needy" countries. We have several subcommittees involved in the nomination, review, and selection of awards. The awards include Distinguished Member Award and Outstanding Chapter Award.

We also have a Human Rights Committee which seeks to assist engineers who may be victims of abuse; a History Committee responsible for recording significant events within our technology; and a Public Information Committee which promotes public awareness of Control Systems Technology.

The following are additional activities of MAB committee/subcommittee members:

Distribution of the Student Brochure.

Distribution of Conference Proceedings and CSS Journals to identified groups in "needy" countries.

Women-in-Control electronic newsletter.

Increasing "Affiliate" membership in our Society.

Increased focus on international members (outside the U.S.)

Increasing the participation level of members, in particular women and students.

Identifying and helping to prepare nominations for promotion of appropriate members to senior member and fellow grade.

Promoting women in the Society.

The following is information about 1998 Activities, and 1999 Plans for Operations, by MAB Committees and Chairs.

- ASSISTANCE TO ENGINEERING AT RISK (Fahmida Chowdhury)

The Assistance to Engineering at Risk Committee is in the process of being merged with the International Committee, since it has served its purpose and is no longer necessary.

Together, they will work to develop new ways of serving our international community.

Traditionally the At Risk Committee has involved people from the "needy" countries. Here are some possible activities that have the potential to generate interest among the members:

- Travel grants for conferences. Three travel grants were approved for the 1998 CDC.
- Assist in opening local chapters of CSS.
- Facilitate joint research programs to take advantage of NSF's International Program.

- Help arrange sabbatical visits (for some U.S. members to go overseas, and for some international members to find sabbatical positions in the U.S.).
  - Start joint projects (for example, A Survey on Controls Education Worldwide; this could be done jointly with CSS's Education Committee).
  - Compile a mailing list for all the members so that announcements can be made by email.
  - Explore the possibilities of setting up a fund to help these members with the costs of attending conferences.
  - Assist with getting a waiver of the registration fee for our major conferences. We approved 4 waivers of the registration fee for the 1998 CDC.
  - Distribution of the Magazine on Control Systems and Proceedings of the ACC and CDC.
- AWARDS AND FELLOW NOMINATIONS (William Perkins)

The Awards and Fellow Nominations Committee consists of the following subcommittees:

- CSS Technology Award
  - The Axelby Award Committee
  - The Transaction of Control System Technology Outstanding Paper Award Subcommittee
  - The Control System Magazine Outstanding Paper Award Subcommittee
  - Fellows Evaluation (Derek Atherton)
  - Fellows Solicitation (Edward Kamen)
- CHAPTER ACTIVITIES (Ed Bristol).

There are 57 chapters around the world. Three new chapters were formed in Croatia, Italy, and Poland in 1998.

The Committee is in the process of opening new chapters in Hungary, Mexico, and Russia.

Outstanding Chapter Award -- The members of the Member Activity Board vote for the Outstanding Chapter Award. The 1998 winner was selected from four chapters nominated for the Award. The nominees were: Alabama Chapter, Japan Chapter, Ohio Chapter, and Vancouver. The winner of the 1998 Outstanding Chapter Award was Vancouver Chapter.

- HISTORY (Linda Bushnell)

The CSS History Committee event for the 1998 CDC in Tampa was a debate on Fuzzy vs. Conventional Control with Lotfi Zadeh and Michael Athans. This was the plenary session on Thursday, December 17, 1998.

Danny Abramovitch and Linda Bushness have set up the web site for the CSS History Committee: . This site described the debate, in which the committee asked the potential conference attendees to submit questions to ask the debaters. There is a link to a listing of control history resources that is under development by Danny. This link contains a list of text books, articles, video tapes and video-taped interviews related to the history of controls.

Linda Bushnell and Danny Abramovitch met with Professor Gene Franklin in October 1997 to discuss future activities of the History Committee. It was here that they came up with the idea of the controls history resources web page.

The History Committee consists of Linda Bushnell (Chair, ARO), Mark Nagurka (Marquette University), Stuart Bennett (Sheffield University), Peter Dorato (University of New Mexico), Shahram Shahruz (UC Berkeley) and Daniel Abramovitch (Hewlett-Packard Laboratories). They welcome new members. Any interested individuals can contact Linda Bushnell at .

- HUMAN RIGHTS (Laszlo Gerencser)

The committee members would like to see a Human Rights Committee which is well accepted by the professionals of our society to express their social concerns. It is proposed to continue the well-established practices used in the early years of its existence, and work on a case-by-case basis. The Committee asks our members to monitor and report verified human rights violations around the world, primarily in areas that are visible for professionals. Depending on the extent of the activity of the members, these cases will be recorded and publicized within the Society annually, and actions will be proposed in a few selected cases.

- INTERNATIONAL AFFAIRS (Michel Gevers)

There are three recurrent discussion item which are raised at every meeting.

The first item is how to get more IEEE support for the activities of local chapters. This committee has been a strong advocate of giving more substantial financial support to activities organized by local chapters, such as the invitation of outside speakers.

The second item is how to make it easier for Ph.D. students and scientists from outside North America, and in particular those from economically weaker countries, to have access to IEEE activities such as conferences, conference proceedings, etc. At their last meeting, at CDC97, a consensus was reached in the committee to request the IEEE-CSS to set up a fund (or a foundation?) to help students participate in CSS-sponsored conferences. Latin American members have also been encouraged to organize a conference in their region. It was suggested that a good strategy would be to first organize a moderate size conference, such as the Conference on Control Applications (CCA).

Thirdly, the Committee continues to work toward making the IEEE Control System Society more international in its various way of operation and to make activities sponsored by the IEEE more interesting for members from outside North America. One of the products of this line of thinking has been the proposal to turn to a four-day CDC. At the San Diego meeting they discussed the objective of obtaining more involvement of international members in the various bodies of the Control Society. The ideal of regional representation on the board of Governors was also discussed. At present, about 50% of the members of IEEE-CSS are from outside the United States, but the organization of the IEEE overall is in 10 regions. However, 7 out of the 10 regions cover the North American continent. Various possibilities have been offered concerning the representation of regions 8, 9 and 10 in the structure of the Control System Society. A consensus was reached to request that a representative of each of the 3 regions 8, 9 and 10 be a member of the Board of Governors.

- MEMBERSHIP AND ADMISSION (Molly Shor)



The Membership and Admissions Committee is interested in hearing of any new ideas that people have for this committee. Committee members activities include the following:

- Participation in email discussions on issues which are important to the membership of IEEE. Issues are presented by Jill Levy, IEEE, when they come up at IEEE Headquarters. or at the Board of Directors meetings. These issues are debated at length on the Membership Development Committee email alias.
  - Keep IEEE CSS Exec. Comm., Division X Director, Board of Governors, and Membership Activity Board informed of the issues that come up in (1) above.
  - Track the IEEE CSS membership numbers, and informs anyone who inquires of the current members. Contacts IEEE for specialized information that is not contained in the standard IEEE reports. Maintains databases.
  - Maintain a web page on IEEE CSS membership, forms, how to find sponsoring member, what is required, how to add a publication, etc.
  - Respond to email inquiries about membership problems, mainly informing them on how to contact to get help. Occasionally providing follow-up on problems.
  - Participating in discussions at the regular meetings of the Membership Activities Board to find additional ways to promote Society membership.
- PUBLIC INFORMATION (Peter Crouch)

The Public Information Committee (PIC) has been active in promoting information on funding possibilities for professionals in the CSS. In the past this reflected the interest of the previous chair of the committee. Perhaps now is good time to reevaluate the role of the committee. The following is a review of possible function of the PIC:

- Develop and/or distribute marketing materials, such as brochures, videos, CD's, Electronic Information.
- Place CSS publicity in popular journals/newspapers.
- Work with industries and universities to provide suitable marketing material.
- Assist the CSS in developing a public identity.
- Convince members of the CSS with a high "public image" to author "popular" articles on Control/Systems. Develop short-term goals of placing control-centric articles in the New York Times and Scientific American amongst others.
- Help market the activities/interests and social relevance of the CSS.
- Develop white papers on the CSS stance on issues of public importance, such as: Affirmative Action/Equal Opportunity and work force development in the high-tech society.
- CSS needs to be able to answer, and market the answer, to the question, "Why is systems and control theory important to society and high-tech industry?" CSS has been trying to convince the mathematical community of the relevance and importance of control/systems theory. However, for the continued survival of the discipline the former question is at least of equal importance.
- Develop links with other IEEE societies on educational issues, such as K-12.
- Help market the professional/commercial relevance of CSS/IEEE.
- Assist in developing links with AMS/SIAM/IFAC and other professional societies.
- Expand the exposure of CSS in communities hosting CSS sponsored conferences, such as the CDC and the ACC.
- Provide an opportunity for local industry to attend events at CSS sponsored conferences such as the CDCs and ACCs. Issue invitations to special events/dinners

held during the conferences. Requires participation with the conference organizing committees, and probably tapping into the Industry Advisory Boards of local universities.

- Make the case for more professional visibility of control/systems in the engineering profession. Push the stance "controller design is still viewed as a secondary design consideration, while controller effectiveness is most easily enhanced during initial design."
  - Assist the CSS community become familiar with control/systems oriented organizations throughout the world.
  - Help members of the CSS develop their own careers.
  - Help researchers in CSS obtain access to funding.
  - Help researchers obtain introductions to others in the CSS community.
  - Help publicize the activities of the other committees in the MAB, particularly those involving: Women in Control, Student Activities, International Affairs, Chapter Activities and Assistant to Engineers at Risk.
  - Providing advice/opinions from experts in the CSS.
  - Link with the Electronic Information Committee. Provide a clearing house for public and professional queries to the CSS membership. The IEEE CSS has been contacted by IEEE Corporate Communications to approve Web publication of the Technical Experts Guide maintained by IEEE. PIC has volunteered to be the point of contact. It should be useful to journalists and others who are looking for authorities in the CSS on specific technical areas.
- STUDENT ACTIVITIES (Gary G. Yen)

The Committee would like to solicit your inputs to better serve our student members at large. The following are the proposed activities to be implemented:

- Recruit three to five student members from active CSS Chapters to serve as committee members; a joint project to be pursued with Chapter Activities Standing Committee; students who recently received best paper awards from ACC/CDC will be outreached first.
  - Establish a homepage for Student Activities Standing Committee; a depository for all IEEE student-related services; a depository for Ph.D/M.S. thesis; a depository for control-related software tool/info; a depository for job openings at academe, industry, government and postdoc.
  - Consider initiating a small-sized job fair at CDC; companies in control-related industry will be solicited for their input; different society organizers (including SPIE, SIAM) will be consulted.
  - Continue traditional newcomer reception at CDC; distribute CSS brochure; invite speakers from Control History Standing Committee.
  - Assist in proposal development for student travel grants to ACC/CDC from NSF/DoD/DoE Foundation and industry.
- WOMEN IN CONTROL (Cheryl Schrader)

(WiC) Committee and the following officers:

Chair: Cheryl Schrader

Newsletter Editor: Fahmida Chowdhury

Database Coordinator: Enjeong Lee

Mailing List Coordinator: Dawn Tilbury

Advisor: Bozena Pasik-Duncan

Recent committee activities include luncheon meetings at the 1998 American Control Conference, at the 1998 Mediterranean Conference on Systems and Control and at the 37th IEEE Conference on Decision and Control. These meetings are always productive, inspiring and a great opportunity for networking. In particular, participating students are encouraged to join the control systems society and WiC when they see so many successful women.

WiC has developed an award to recognize individuals who demonstrate distinguished scholarship, exemplary character, and outstanding contributions to the advancement of women in control.

The Women in Control web site has been updated and moved. The new URL is

<http://voyager1.utsa.edu/~schrader/women-in-control/>

The links from the CSS homepage have been updated to reflect this change. Please note our mission statement:

"The Women in Control Committee shall be responsible for, but not limited to, promoting membership, gathering and disseminating appropriate information about women in the IEEE Control Systems Society (CSS) and the profession and facilitating the development of mentoring and programs to promote the retention, recruitment, and growth of women CSS members."

The Committee has proposed to list some member information on the web site. In light of the possibilities offered by electronic media, we are examining related security issues in the Member Activities Board.

WiC responded to the IEEE regarding the number and percentage of women society officers, women participating in technical and administrative program committees, and women society award winners. Our society has increased representation of women in the first two categories, but still has no women award winners. WiC continues to be a high profile and recognized resource for women and organizations that are interested in increased participation by those previously underrepresented. For example, we continue to participate in the development of leadership programs for women in engineering and in outreach programs encouraging girls to pursue careers in engineering. The Committee can proudly announce the WiC increased by 33% last year.

- o **MEMBERSHIP RETENTION (Michael Demetriou)**

Each year since 1994, the membership Retention Committee has been preparing and mailing a letter to student members of IEEE/CSS who are recent graduates. The purpose of the letter is to urge them to continue their membership as regular members. The letter is drafted by the Committee, signed by the VP-Member Activities and mailed out by IEEE. In September 1998, 218 such letters were mailed out. To put this number in perspective, in 1997 a similar letter went out to 349 recent graduates, in 1996 to 263, in 1995 to 355 and in 1994 to 576 (This included some "backlog" from 1993).

This Committee is also responsible for mailing out CSS bulk orders of CSS Brochures. From September 1997 through the end of October 1998, a total of 1555 brochures were mailed.

o YOUNG PROFESSIONAL (Atul Suri)

Atul Suri was nominated to the GOLD (Graduates of the Last Decade) Committee, where he has actively participated in the monthly conference calls to kick-off the GOLD activities. He has expressed an interest in being involved with the Liaison and New Business Initiatives Subcommittee, which is one of the four subcommittees for GOLD. This subcommittee is to define and seek new business areas to expand the scope and image of GOLD among the various IEEE entities. Being a new member, Atul has had the opportunity to familiarize himself with the Goals and Objectives of GOLD through the business plan. He would like to contribute to the success of the goals for GOLD in whatever way that he can.

All committees of the MAB are open for and welcome comments, suggestions and ideas for improvements from all members of the CSS. Everyone is welcome to join us in our activities.

Professor Bozenna Pasik-Duncan  
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7. Reviewers Needed for CDC99

If you would like to review one or two papers for CDC99, send an email to Fahmida Chowdhury (fnchowdh@usl.edu), indicating your areas of interest (e.g. neural networks, parameter estimation, input-output modeling, etc.).

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8. Roommate Needed for ACC99

If you are going to attend ACC99 in San Diego, and would like to share a room with me (Yours Truly, the Editor of this newsletter, Fahmida Chowdhury), please send me an email. I plan to spend June 01-04 at the conference; I don't smoke, and I don't have all-night parties in my room, and I am pretty easy to get along with ;-). Send email to fnchowdh@usl.edu if you are interested.