

Columns: Officers Speak

President's Corner

The year 2004 brings several very significant changes to the American Automatic Control Council (AACC or A²C²). As you probably know, the key people in the operation of the council have been Abe Haddad, its Secretary, and Mal Beaverstock, its Treasurer. Both Abe and Mal have done their jobs with great verve and enthusiasm as well as skill for many years. This year Pradeep Misra replaces Abe Haddad as Secretary and R. Russell Rhinehart replaces Mal Beaverstock as Treasurer. This change has been gradual. Pradeep and Russ have been working with their predecessors for several years and have already shown that they can perform in their new roles. I hereby offer Abe and Mal my personal thanks for the many things they have done for the council and for me. And, I wish Pradeep and Russ every success in their new jobs.

In addition, I have replaced Christos Georgakis as President and A. Galip Ulsoy is replacing me as Vice President. It was a pleasure for me to serve as Christos' Vice President. I hope that Galip can honestly say the same thing about me in two years.

I hope that you are all planning to attend the 2004 American Control Conference from June 30-July 2 this summer. The conference will be held at the Boston Sheraton Hotel in Boston, Massachusetts, one of my favorite cities. Jason Speyer, the General Chair, and Lucy Pao, the Program Chair, have put together almost all that is needed for a great conference. All that remains is for you to come to the meeting. You can find all the information you may need about the conference at <http://www.mie.uiuc.edu/acc2004/>.

I would like you to know about an unhappy situation involving the IEEE and the US government. I do not have the space or the knowledge to provide the details here. Briefly, an agency of the US government has informed IEEE that providing services to IEEE members from one of the countries on the government's list of embargoed countries would constitute trading with the enemy. As a result, the IEEE has apparently adopted an embargo of their own against dealing with such members. I strongly urge you to inform yourselves about this issue, to decide where you stand on it, and to let IEEE and the government know what you believe. The issue is important to other societies as well. I also urge you to investigate the position of any society you belong to on this issue and to let its leaders know how you feel. To get you started, here are links to web sites that contain relevant information. The first gets you to an article that appeared in IEEE Spectrum <http://www.spectrum.ieee.org/WEBONLY/wonews/oct03/1003ofac.html>. The second is a web site containing a petition against the IEEE position. I am told this petition was written by Michel Gevers, Bob Bitmead and Brian Anderson and can be found at http://www.csam.ucl.ac.be/IEEE_Petition.pl. You might also want to read Mike Masten's article in this newsletter.

I would like to hear your suggestions about how we might improve the AACC and its conferences.

William S. Levine
President, AACC 2004-2005



Global Concerns XXX

Global terrorism has become a serious concern for much of the world. As a result, most countries have upgraded and strengthened their security procedures to hopefully better protect their citizens. Inevitably, some of these precautions result in restrictions for organizations - and citizens - that operate within the country.



As I am writing this note, the Institute of Electrical and Electronics Engineers (IEEE) is currently facing such restrictions. Last fall (2003), the U.S. Treasury Department informed the IEEE that it must continue to limit member's rights in countries that have been embargoed by the USA. The ruling prevents the IEEE from editing articles submitted by authors from the embargoed countries; although *publication* of articles is not prohibited *per se*, the restriction against editing greatly diminishes the likelihood that work of authors from the embargoed countries will appear in IEEE publications. In addition, members in the embargoed countries are prohibited from election to higher-grade IEEE membership, using IEEE e-mail aliases & web accounts, or conducting conferences under the IEEE name. (Members still receive printed journals and other publications.) It is not surprising that IEEE has received protests from members within the embargoed countries as well as other IEEE members concerned about fairness and free speech. Although the IEEE has received adverse press coverage, the fact is that the rules apply to any USA professional society having exchange with the embargoed countries. Some organizations have taken even stronger measures and are refusing to even send their publications to the sanctioned countries.

The IEEE is obviously unhappy about its situation, and has been working with the Treasury Department over two years in an attempt to achieve a satisfactory resolution. We certainly fault *neither* the IEEE nor the U.S. Treasury Department. Indeed, we applaud the efforts of both organizations as they struggle with this challenge, and we hope that a satisfactory resolution may soon be realized.

The IFAC Model

The International Federation of Automatic Control (IFAC) is organized and operates in different circumstances. As a *federation*, IFAC is a voluntary association, or alliance of otherwise autonomous organizations that affiliate with each other in support of common objectives. Each IFAC National Member Organization (NMO) represents engineering societies concerned with automatic control within its own country, yet each NMO has *agreed* to abide by well defined IFAC procedures for organizing & conducting technical meetings, for developing publications (publishing journals), and conducting other activities that promote the global advancement of automatic control. This

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is a two-way street: IFAC, as the central association, reviews and approves the activities *which* each NMO will undertake in the name of IFAC, but does not dictate detailed policies regarding *how* the NMOs conduct their operations nor any other activity that is outside the areas of agreement central to the IFAC federation. Each NMO is obviously subject to the laws and regulations of their own country, but each NMO is totally independent of every other NMO in the specific manner by which it conducts its operations, which have been “approved” by IFAC.

The “local” laws under which one NMO must operate within its own country are not obligations of any other NMO in another country. As a result, when an IFAC meeting is organized and conducted within the USA by the USA NMO, the *American Automatic Control Council* (AACC), we obviously must comply with USA laws and regulations, but these regulations do not necessarily apply to IFAC meetings organized by other NMOs and held in Europe, Asia, nor anywhere else. Clearly, USA regulations may restrict the entrance into the USA by citizens from selected countries, and we as USA citizens may sometimes face similar restrictions when we seek to attend IFAC events in another country. But these regulations apply only to each specific situation, and the IFAC *federation* is not affected by these local regulations.

IFAC was in fact organized and initiated (in 1956-1957) in this de-centralized structure partly in response to situations similar to what we have today. Those were the days of the “cold war” following World War II when certain interactions between the East and the West were generally prohibited. However, the IFAC pioneers believed that political situations should not unnecessarily prevent sharing and cooperation regarding basic control system technology. This cooperative spirit is evident in the IFAC Constitution, which identifies the primary objective, “to serve *all* those concerned with the theory and application of automatic control and systems engineering, *wherever situated ...*” (italics used to emphasize IFAC’s global perspective.) The constitution further states that IFAC will “provide a framework for collaboration between those working in automatic control and systems engineering, irrespective of race, creed, or colour or of *geographic location ...*”. The constitution charges the NMOs with “responsibility for furthering the aims and objectives of IFAC within their respective countries” and notes that IFAC meetings are to be hosted and sponsored within the countries of each NMO who “take financial and administrative responsibility for the organization and conduct of the meeting.”

Almost 50 years of IFAC history now shows the success of the IFAC model. A West German university underwrote the operating expenses of the first IFAC Secretariat, while Switzerland hosted the Treasurer & bank accounts, and the first two IFAC Presidents were from the USA and the Soviet Union respectively. Over subsequent years, IFAC meetings have been held in virtually the entire world in countries with drastically different types of national governments & cultures. Some of these meetings have been held during especially turbulent political times. IFAC’s past presidents have come from the USA, Soviet Union, China, Japan, Australia, and several Eastern and Western European nations. Likewise, a review of past IFAC officers clearly shows that IFAC has been able to remain subject to local regulations and at the same time, to actively promote the advancement of our technology by using the services of citizens from every nation. Over the years, many USA citizens have attended IFAC meetings behind the Iron

Curtain of the Soviet Union (and its satellite nations) as well as other nations without interference. Similar visits to the USA have been made from citizens of many other nations. Clearly, IFAC has been able to support and foster international cooperation in spite of sometimes conflicting political situations.

Mike Masten
IFAC Council Member

[Editorial comment: Since the submission of two above articles, there have been positive developments on this issue, for further information, please visit: www.ieee.org/ofac]

Conferences

2003 American Control Conference: Report

Denver, Colorado, was the site of the 2003 American Control Conference, which was held at the Adams Mark Hotel from 4-6 June. There were 159 technical sessions organized in 18 parallel tracks. The 932 registered conference participants were from 34 countries (with 65% from the US); 60 of these participants did not attend the conference due to SARS and Visa problems. Many of the conference details were highlighted in the December 2003 issue of the IEEE Control Systems Magazine.

Conference Highlights

947 invited and contributed technical papers from over 1400 submissions; 3 tutorial sessions

4 one-day workshops and one two-day workshop before the conference; 3 plenary speakers; Industrial and publisher exhibits; Special sessions on the History of Important US Centers of Control, Advances in Smart Structures and Sensor Technologies; and an NSF CAREER program; Interactive sessions, including a Roboflag competition; Workshop for High School Teachers; an optional dinner at The Fort in the foothills overlooking Denver (preceded by a stop at the Red Rocks amphitheatre.

On Wednesday morning a number of presentations were given in a more interactive format (with Internet-enabled control, for example) than a typical conference presentation. One of the interactive sessions was a Roboflag competition, organized by Raffaello D’Andrea, the Wednesday Plenary Speaker. Also on Wednesday a workshop for High School Teachers was held. Roughly 25 teachers attended the plenary lecture, the interactive sessions, the History of Control Centers session, and a special afternoon session with lectures and discussions on various control topics.

Plenary lectures included “Robust Control of Large Scale Systems” by Raffaello D’Andrea, Cornell University; “Challenges and Opportunities in Control of Automotive Powertrain Systems” by Ilya Kolmanovsky, Ford Motor Company; and “Towards Automating the Scientific Method: Micro- and Nano-Robotic Instrumentation” by Ian Hunter, MIT.

A number of awards were presented at the Awards Luncheon on June 5th, 2003. The Richard E. Bellman Control Heritage Award was awarded to Kumpati Narendra, Yale University, for pioneering contributions to stability theory, adaptive and learning systems theory, and for inspiring leadership as mentor, advisor and teacher over a period spanning four decades. The Donald P. Eckman Award was presented to Clair Tomlin, Stanford University, for pioneering contributions to hybrid control systems and embedded software for real-time control, with application to air traffic control, avionics and computational biology. The John R. Ragazzini Award was given to

Stephen Boyd, Stanford University, for excellence in classroom teaching, textbook and monograph preparation, and undergraduate mentoring of students in the area of systems, control and optimization. The Control Engineering Practice Award was presented to Edgar Bristol, Foxboro Co., for pioneering contributions to the relative gain array, pattern recognition, and adaptive control, and their innovative application to industrial process control.

The Hugo Schuck Best Paper Award (Theory) was given to the paper titled "Disturbance Propagation in Large Interconnected Systems" by Peter Seiler, Aniruddha Pant and Karl Hedrick, University of California, Berkeley.



Edgar Bristol (Control Engineering Practice), Christos Georgakis (AACC President), Kumpati Narendra (Bellman), Stephen Boyd (Ragazzini), Claire Tomlin (Eckman), Peter Seiler (Schuck) and



Kishan Baheti (AACC Awards Chair).

Student Award winners with Mark Balas, Vice Chair for Student Affairs.

There were 38 nominations for the best student paper award. The five finalists were: Cedric Langbort, Iakovos Papadimitriou, Dhiraj Arora, Islam Hussein, and Ying Tan. The best paper award (based on both the paper and presentation) was presented to Iakovos Papadimitriou and Masayoshi Tomizuka, "Fast Lane Changing Computations using Polynomials".

Special surprise awards were given to Abe Haddad and Mal Beaverstock, for their dedication and tenure as AACC Secretary and Treasurer, respectively. Four former AACC Presidents took the stage, along with Christos Georgakis (AACC President) and

Bill Levine (AACC Vice President), to honor Abe and Mal for their service.

B. Wayne Bequette, General Chair 2003 ACC

2004 American Control Conference: Call to Participate

On behalf of the American Automatic Control Council (AACC) and the Program and Operating Committees, I am very pleased to welcome you to the 2004 American Control Conference (ACC). Held under the auspices of AACC, the US National Member Organization of the International Federation of Automatic Control (IFAC), the ACC brings together people working in control, automation, and related areas from the American Institute of Aeronautics and Astronautics (AIAA), American Institute of Chemical Engineers (AIChE), Association of Iron and Steel Engineers (AISE), American Society of Civil Engineers (ASCE), American Society of Mechanical Engineers (ASME), Institute of Electrical and Electronics Engineers (IEEE), the International Society for Measurement and Control (ISA), and the Society for Computer Simulation (SCS).

The 2003 ACC is being held Wednesday through Friday, June 30 to July 2, 2003 at the Boston Sheraton, Boston, MA. This 1100-room conference hotel is in the Back Bay area of Boston near downtown Boston and its many historical sites, Symphony Hall where the Boston Pops will be playing, Newbury St. where there are outdoor cafes, restaurants, and art galleries, the Museum of Fine Arts, and the Boston Public Library.

The Conference ends two days before the Fourth of July. The evening of the Fourth there will be an Esplanade concert by the Boston Pops followed by fireworks display on the Charles River. Conference Highlights include: 1796 papers submitted. Based on peer review there are 1031 papers selected for publication (invited & contributed papers); 10 tutorial sessions; 8 one-day workshops and 2 two-day workshops before the conference; 3 plenary speakers; Industrial & publisher exhibits; 5 Special sessions: Systems Engineering of Systems Biology (Wed. morning 9:30-11:00), Women in Control (Wed. Lunch), NSF Micro- and Nano-scale systems (Wed. afternoon 1:30-2:30), Winning that Academic Job Session (Wed. evening 6:15-7:30), Resume Exchange Session (7:30-8:30), History of Control Session (Thurs. Evening 6:30-8:00), and Writing a Winning NSF CAREER Proposal (Friday 11:30-12:00).

Opening reception Tuesday evening will honor Apollo contributors on 35th anniversary sponsored by MathWorks. Thursday evening with Boston Pops at Symphony Hall Boston, city, capital of Massachusetts and seat of Suffolk County, on Boston Bay (an inlet of Massachusetts Bay), at the mouth of the Charles River, in the eastern part of the state. Boston has attractions and activities for a family on vacation or someone just attending the conference such as historic landmarks, museums, sightseeing, shopping, fine dining, and an exciting nightlife. Boston offers rich history, culture, sophistication, old world charm, and academic and medical excellence. Please plan on spending time in the Boston area, before or after the conference, enjoying the many outdoor or cultural activities.

Jason L. Speyer, General Chair 2004 ACC

2005 American Control Conference: Call for Papers

The American Automatic Control Council will hold the Twenty-fourth American Control Conference (ACC) from June 8-10, 2005 (Wednesday-Friday) at the Portland Hilton in Portland, Oregon. It is time to start thinking about 2005 ACC as an outlet for your research and an opportunity to enjoy Portland, OR.

Note the key dates and the new ACC policy that will go into effect with the 2005 ACC.

2005 ACC topics include, but are not limited to: robotics, manufacturing, guidance and control, power systems, process control, identification and estimation, signal processing, modeling and advanced simulation, model validation, fault detection, multivariable control, adaptive control, robust control, intelligent control, expert systems, neural networks, industrial applications of advanced control, control engineering education, and computer-aided design.

Invited & Contributed Papers: Conference papers will be classified as either *contributed* or *invited*, and as either *regular* or *short*. *Regular* papers are to be a complete description of finished work. *Short* papers are to be an exposition of a novel idea or preliminary results. Invited Sessions are organized around a specific theme with invited authors. Papers in an invited session should present a cohesive and comprehensive focus on a relevant topic.

NEW ACC POLICIES

- **Paper Submission Format:** all papers submitted to the ACC for review and publication after acceptance must be formatted in the standard 2-column Proceedings format. See the Author's Kit at the conference web site for Word and LaTeX style files. Regular and invited papers are limited to 8 pages and short papers to 3 pages. Papers exceeding these limits will NOT be reviewed.
- **Paper Publication:** accepted regular and invited papers are limited to 6 pages and short papers to 2 pages. Papers exceeding these limits will be published in the Proceedings only after payment of a page over-length fee.
- **Registration Fee:** One regular registration fee at the advance registration rates must be paid by one of the authors before uploading the final version of the paper for inclusion in the conference proceedings.

Workshops: Workshops that address topics related to the conference themes are welcome. We encourage state of the art workshops with high level of interest, impact, creativity and innovation.

Industry-Focused Tutorial Sessions: These sessions feature a one-hour tutorial presentation on an industrially proven, but still relatively new technique, followed by a series of short presentations from industrial participants discussing the implementation, application, and benefits of the technique.

The conference will take place during the famous Portland Rose Festival with an opportunity to watch the nation's second-largest all-floral Parade from the hotel. Nestled in the heart of the Willamette Valley, Portland sits squarely between the Pacific Ocean (90 minutes by car) and the 10,000 plus foot tops of the Cascade Mountain Range (Mount Hood is 1 hour by car). A 45 minute drive east from town will get you to the middle of the Columbia Gorge National Scenic Area, a place of breathtaking beauty which includes the 620-foot Multnomah Falls. Portland's downtown area is scaled to human dimensions. The blocks are short, just 200 feet long. Cafes, restaurants, bookstores, galleries and specialty stores are waiting around every corner. Green suited "Portland Guides" walk through downtown streets day and night answering questions and helping with directions. Tri-Met, Portland's mass transit system, and MAX, Tri-Met's light rail system allow free rides in the Fareless Square, a region encompassing much of the downtown area and extending into the Lloyd District, including the Oregon Convention Center and the Rose Quarter. One hundred acre

Washington Park in the west hills above Portland encompasses the International Rose Test Gardens with more than 400 varieties of roses, the peaceful contemplation of the Japanese Gardens and the Oregon Zoo with its world-class elephant exhibit.

Visit www.ee.washington.edu/conf/acc2005/index.htm

KEY DATES

Deadline for all submissions and proposals:	Sept 15, 2004
Notification of Acceptance/Rejection:	Jan 31, 2005
Final manuscript submission deadline:	Mar 15, 2005

for complete conference information. You may also contact the General Chair: Suhada Jayasuriya, 979/845-0271 sjayasuriya@mengr.tamu.edu or the Program Chair, S.N. Balakrishnan, 573/341-4675, bala@umr.edu

Suhada Jayasuriya, General Chair 2005 ACC

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