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# Society Announcements and News

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## AACC AWARDS NOMINATIONS

The American Automatic Control Council (AACC) has inaugurated an expanded program of awards to recognize outstanding achievements in automatic control. In addition to the established Eckman and Schuck awards, two new awards, the Control Heritage Award and the Education Award, were initiated in 1979. Finally, the Control Heritage Hall of Fame has been established. Nominations for these honors are solicited according to the following criteria:

### Control Heritage Award

This Award will be given for distinguished lifetime career contributions to the technology or application of control, or both. Nominees for this major award must be living at the time of nomination, and must have spent a significant part of their careers in the U.S.A. The award consists of a distinguished medal. The awardee will be invited to give a plenary presentation at the JACC.

### Eckman Award

This Award recognizes outstanding young contributors in automatic control. Nominees are to be less than 30 years old on July 1, 1981. Contributions may include technical or scientific publications, theses, patents, inventions, or a combination of these in the field of automatic control made while the nominee was resident in the U.S.A. The award consists of a certificate and \$300.

### Education Award

This award recognizes outstanding contributions and distinguished leadership in automatic control education. Nominees for this award can be from U.S. industries, universities, or government. This award consists of a certificate and \$200.

### Control Heritage Hall of Fame

The purpose of the Control Heritage Hall of Fame is to memorialize deceased persons who made major career contributions to the control field, and who did their work primarily in the U.S.A.

These awards will be presented at the AACC Awards

Luncheon to be held at the 1981 JACC in Charlottesville, Virginia.

Nominations for these awards should indicate the award sought, a statement of the nominee's qualifications, the nominee's biographical data, publications and patents lists, and any other material documenting the nominee's qualifications. Each nominator should solicit several supporting reference letters, which should be sent directly to the AACC Awards Committee Chairman. Nominations should be sent to

Professor J. B. Pearson, Chairman  
AACC Awards Committee  
Department of Electrical Engineering  
Rice University  
Houston, Texas 77001

Prospective nominators are urged to contact Prof. Pearson for additional information. Telephone (713) 527-8101 X. 3566. *Complete* nominations for *all* awards must be received on or before April 15, 1981.

## Chapter News



Dr. William C. Kelly



Dr. Sherman Seltzer

Gary D. Wylie, past chairman, reports that new officers have been elected to the Huntsville Control Systems Society Chapter. They are William C. Kelly, chairman, Christopher E. Kulas, vice-chairman, Edward Peters, treasurer and Charles W. McKerley, secretary. Dr. Kelly and Dr. Kulas are with the US Army MICOM. Mr. Peters is with M. and S. Computing, and Mr. McKerley is with Computer Science Corporation in Huntsville.

William C. Kelly (see photo) is with the Guidance and Control Directorate of the US Army Missile Laboratory, where he is responsible for basic and applied research on advanced guidance laws for future Army missiles. He received the BS degree in Electrical Engineering from the University of Tennessee and the MS in Electrical Engineering from Purdue University. He received the Ph.D. in Electrical Engineering from the University of Alabama in Huntsville in 1980, where his doctoral dissertation was entitled "Theory of Disturbance-Utilizing Control with Application to Missile Intercept Problems." He may be contacted at the following address:

WILLIAM C. KELLY, Chairman  
Huntsville Section - CSS  
1300 Toney Drive, SE  
Huntsville, Alabama 35802  
(205) 876-2403

At a recent meeting, the Huntsville chapter presented its "Outstanding Controls Engineer" Award. The recipient of the annual Controls Award for 1980 was **Sherman M. Seltzer**. Dr. Seltzer (see photo) is currently President of Control Dynamics Company, which he founded, and for which he acts as a consulting engineer in applied research and teaching. Previous positions for Dr. Seltzer include serving as chief of the Pointing Control System Branch at NASA's Marshall Space Flight Center, and he has also served as the Manager of the Guidance, Control, and Propulsion Engineering for Lockheed's Space Systems Division. Dr. Seltzer has over 20 years of professional experience in systems analysis and design, dynamics and control of large space structures, guidance and control of missiles and launch vehicles, mathematical analysis, computer simulation, and teaching control system theory at the University level. Dr. Seltzer's own educational background includes the BSME from UCLA (1950); MS in Aeronautical Engineering and the MS in Instrumentation Engineering from the University of Michigan (1959); and the Ph.D. in Electrical Engineering from Auburn University (1966).

At the October Huntsville CSS meeting, **Maurice Belrose** of the Systems Simulation and Development Directorate of the US Army Missile Laboratory spoke on "Validation of R.F. Environmental Models in Missile Simulations." Verification and validation of the underlying models in a formal program is a necessary ingredient of a successful missile simulation effort, and lays the foundation for interpretation of results and effective decision-making during weapon system development. The presentation discussed important features of the Radio Frequency Simulation System (RFSS) program for verifying and validating the RF environment models utilized in simulations. Mr. Belrose has been intimately associated with the Advanced Simulation Center since the 1960's. He has directed the development and operation of the RFSS

since 1971 and currently is also directing the development of a simulator for millimeter wave seekers. He has been active in environmental modeling of electromagnetic phenomena for over 15 years. Mr. Belrose holds the BSEE from the University of Alabama.

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**Fred Goldstein**, chairman of the Boston area CSS Chapter reports that the September 23rd CS/AES Society meeting was held at the Raytheon Corporation in Bedford, Mass. The speaker was **Irwin Tanzer**, a consulting engineer with Raytheon, who discussed "Tracking Multiple Targets Simultaneously with a Phased Array Radar." Mr. Tanzer, discussed a tracking procedure that applies to high resolution, pencil beam, phased array radars and introduces differential tracking of each formation member with respect to the computed centroid. He presented a new technique which copes with missing reports and with reports that do not associate, while avoiding excessive computational demands.

The author pointed out that the benefits of the procedure are: (a) radar and computer resources are conserved by devoting only a single radar action to a whole formation, (b) the tracking procedure is self-correcting in that the adverse effects of occasional miscorrelations or of extremely large measurement errors are removed in subsequent processing, and (c) the same logic is applied to tracking a single target as to a formation.

The meeting was attended by approximately 50 people, followed by a dinner at a nearby popular restaurant. The next Boston area CSS meeting was scheduled for November 19 with **Sam Chauduri** scheduled to speak on a "Classical Approach to Auto-Pilot Design." The meeting was to be held at the Dynamics Research Corporation in Wilmington, Massachusetts.

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The organizational meeting for a new Control Systems Society Chapter to serve Northern Virginia was held in late October. **Vernon E. Gardner** was elected chairman, **John H. Jacobsmeier, Jr.** is vice chairman, **Spiros A. Vrachnas** is secretary and **Steven B. Berger** is treasurer. Mr. Gardner may be reached at the following address:

Vernon E. Gardner  
6624 Kirby Court  
Falls Church, VA 22043  
(703) 533-0999

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IEEE and Control System Society records presently list Society Chapters in the following areas:

Ann Arbor, Michigan (serving southeastern Michigan)  
Baltimore, Maryland

Blacksburg, Virginia (serving the Virginia Mountain area)  
Boston, Massachusetts  
Buffalo, New York  
Cherry Hill, New Jersey (covering northeastern New Jersey)  
Cleveland, Ohio  
Columbus, Ohio  
Dallas, Texas  
Dayton, Ohio  
Denver, Colorado  
Falls Church, Virginia (covering northern VA)  
Fort Worth, Texas  
Huntsville, Alabama  
Kitchner-Waterloo, Ontario, Canada  
Lafayette, Indiana  
Los Angeles, California  
Milwaukee, Wisconsin  
New Delhi, India  
Philadelphia, Pennsylvania  
San Diego, California  
San Francisco, California  
Schenectady, New York  
Scottsdale, Arizona  
Seattle, Washington  
Toledo, Ohio  
Toronto, Canada  
United Kingdom and Republic of Ireland  
Vancouver, Canada  
Wichita, Kansas

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The Chapter News is compiled by:

Gene H. Hostetter  
Associate Editor, Chapter News  
IEEE Control Systems Magazine  
Electrical Engineering Department  
California State University  
Long Beach, CA 90840

Items may be mailed to the above address or telephoned to his secretary, Marie Harvey, at (213) 498-5102.

## News Items

### IEEE Special Issues

The following is a selected list of forthcoming special issues of IEEE Transactions:

*Acoustics, Speech, and Signal Processing*

February 1981: Adaptive Signal Processing (Joint Issue with Circuits & Systems)

June 1981: Part I: Regular Issue; Part II: Time Delay Estimation

*Automatic Control*

February 1981: Multivariable Control Systems

*Circuits and Systems*

November 1980: Nonlinear Circuits and Systems

*Computers*

Fall 1980: Distributed Computing

April 1981: Interconnection Network for Parallel and Distributed Processing

*Professional Communication*

March 1980: Public Speaking for Engineers and Scientists

March 1981: Making Information Usable (The Application of Human Factors to Information Transfer)

*Systems, Man, and Cybernetics*

January 1981: Systems Engineering Metaphors for Problem Solving in Distributed Processing

February 1981: User Assistance and Human Factors in Interactive Systems

## Professional Communication Society Plans Spring Conference

The Professional Communication Society will hold a conference in the Washington, D.C. area during the Spring of 1981. Its theme will be the "Engineer as Communicator." Among the sessions being planned are communicating with the public, communicating with supervisors and regulators, intraorganization communication, interviewing techniques, proposal writing, and word processing. Information on location, registration, and paper submittal may be obtained by contacting Prof. Dan Rosich, MBA Program, University of Connecticut, Stamford, CT 06903, telephone (203) 322-1673.

## Professional Communication Society Again Has Second Largest Membership Growth Rate for IEEE Societies

The membership of the Professional Communication Society increased at a rate of 16.2 percent for the first half of 1980, the second best rate for any society in the Institute. Only the Computer Society realized a better growth rate. The PCS membership reached 1,956 at the end of June, a jump of about 270 over the corresponding time in 1979. This dramatic increase in membership was attributed principally to the improved publications and services being offered by PCS, coupled with an aggressive recruiting campaign. A membership brochure and other information regarding PCS may be obtained by writing to the IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854.

## **IEEE Industry Applications Society Announces Meeting for 1982**

The 1982 International Semiconductor Power Converter Conference will be held May 24-27 in Orlando, Florida. Some 40 technical papers will be presented on subjects of static power converters, motor drives, and power semiconductor devices. This conference is held once every five years and brings together leading experts from all countries to assess technical progress and to identify future trends in the technology of using solid state devices in power conversion and control.

For further information contact J. E. Mungenast, Publicity Chairman, 1982 International Semiconductor Power Converter Conference, c/o Power Semiconductors, Inc., P.O. Box 2-248, Devon, CT 06460.

## **IEEE Field Award for Control Science and Engineering**

The July 1980 issue of the Newsletter carried a letter from me describing the above Award. Here are some additional comments for all potential nominators:

1. You should contact: Mrs. Una Lennon, The Institute of Electrical and Electronics, Inc., 345 East 47th Street, New York, NY 10017, for nomination forms for this Award which should be available about January 1981.

2. With the exception of myself, the Evaluation Committee consists of distinguished members from different but related IEEE groups and society. It is thus **IMPORTANT** for you to document your case in ways that are meaningful to these members. Don't be limited by what the nomination form looks like.

3. Your nomination must be at IEEE Headquarters no later than April 1, 1981.

4. The first Award, if any, will be given at the 1981 CDC.

*Y. C. Ho*  
Chairman  
Subcommittee on CSE Awards  
IEEE Field Awards Committee

## **Professional Communication Society Awards Scholarship to Canadian College Student**

Brian Lundeen of Winnipeg, Manitoba, Canada, was the first recipient of the \$1,000 scholarship sponsored by the Professional Communication Society of the Institute of Electrical and Electronics Engineers (IEEE). Lundeen, a first-year computer technology student at Red River Community College in Winnipeg, won the scholarship in competition with engineering

and engineering technology students at universities and colleges throughout Canada and the United States. He was recognized by the society for the quality of his scholarship and his communication skills during 2 years of study at the University of Winnipeg and his first year at Red River Community College.

The Professional Communication Society established the scholarship to recognize the importance of good communication among engineers and engineering technologists. This scholarship is open to all Student Members of the IEEE who are full-time students pursuing undergraduate or graduate course programs and have completed at least one year at a two-year or four-year college or university. One award of \$1,000 is granted annually based on demonstrated proficiency in written and oral communication plus a successful academic record. Any Student Member interested in applying for this scholarship should contact Dr. Della A. Whittaker, 10804 Ashfield Road, Adelphi, MD 20783 (telephone 301/394-1507).

## **New Control Systems Chapter**

The Control Systems Chapter of the Northern Virginia Section was formed on Sept. 29, 1980. At an Organizational Meeting held on Oct. 15, 1980 the following interim officers were elected:

Chairman: Vernon E. Gardner.  
Vice Chairman: Maj. Gen. J. Jacobsmeyer, Jr.  
Treasurer: Dr. Steven B. Berger.  
Secretary: Spyros A. Vrachnas.

Dr. Stephen Kahne, then President-Elect of the Control Systems Society and now with the National Science Foundation, attended the meeting.

## **Report on the Activities of EDCOM/CSS**

During the last eight months the following events were planned and organized by the EDCOM/CSS and reported at the ADCOM/CSS at the San Francisco meeting on August 12, 1980.

1. The two Pre-JACC workshops on "Maximum Likelihood Identification" organized by Prof. J. M. Mendel with himself, Dr. R. Mehra and Dr. D. McLaughlin as speakers and on "Computer Control of Urban Traffic Systems" organized by Prof. W. Levine with himself, Dr. E. Lieberman and Dr. B. Marrus as speakers, presented on August 12 in San Francisco, were a great success. There were a total of 57 registered attendees.

2. Two more workshops are planned for the 1981 JACC in Charlottesville, VA. Their tentative titles are "Decentralized Control of Large Scale Systems" and "Microcomputer Process Control."

3. The budget of \$6300.00 for the publication in a book form of a collection of "Control Laboratory Experiments" has been approved by the ADCOM/CSS. Prof. Don Pierre will be sending out the forms to be filled by about 300 control professors in more than 100 universities in the U.S. and Canada. A selection of about 200 experiments is then going to be made by the EDCOM officials to be included in the final volume. McGregor and Werner have given us an acceptable bid and will publish the book. We hope to have the book out by next summer. Your cooperation will be greatly appreciated.

4. The EDCOM/CSS will like to especially commend Dr. J. M. Mendel for his organization of the material distributed to the participants of the workshop on Identification at the 1980 JACC. Future organizers of workshops are advised to follow his example.

*George N. Saridis*  
Chairman  
EDCOM/CSS

## IFAC Congress—Kyoto 1981

The Triannual Congress of the International Federation of Automatic Control is being held in Kyoto, August 24–28, 1981. This promises to be a fine technical meeting and is taking place in an extraordinarily interesting part of the world. Japan, of course, has become one of the premier industrialized nations and has exploited, in the most positive sense, automatic control for the benefit of society.

The Kyoto Congress will include several hundred technical papers on a wide variety of control topics and will also provide the opportunity for industrial visits and interaction with people from Japanese industry.

Japan has developed a reputation as being a very lovely but expensive country. It is not nearly as expensive as some people believe. Hotel accommodations are being arranged in Japan for as little as \$10 per person per night. Good quality accommodations may be obtained for that price. Inexpensive Japanese accommodations are usually characterized by being rather small but always you will find clean, efficient accommodations even at the very low prices. First-class rates in Japan are quite expensive and food costs can be expensive unless restaurants are carefully selected. It is quite easy to live in Kyoto as a conference attendee for \$35 per day or less. For people who want first-class accommodations, hotel rates can be as high as \$80 per day with \$50 spent on food. This, however, is unnecessary and more than adequate hotel and food facilities are available at the much lower prices. We certainly look forward to many members of the Control Systems Society attending and participating.

## IFAC TRAVEL SUPPORT

The Society recognizes that high travel costs may restrict attendance of its membership at the 1981 IFAC Congress. To provide some assistance for Society members, a request for Block Travel Funds has been submitted to the National Science Foundation. If NSF agrees to the proposal, the Society will be able to provide individual grants to defray the cost of airfare for some of its members. According to NSF dictates, only U.S. citizens or permanent residents are eligible for an award.

Travel support will be provided to members based on the nature of their involvement at the meeting. Certainly, inability to attend without some support is a necessary condition for any individual grant. Among speakers needing support, individuals who have been invited to present talks will be given priority. Individual travel grantees will be selected by the Executive Committee of the Society.

Society members who desire to be considered for travel support should contact

Professor Harold W. Sorenson  
Department of AMES, B-010  
University of California, San Diego  
La Jolla, California 92093

no later than April 1, 1981. Requestors should give their reasons for needing the support; describe the nature of their involvement in the activities and program of the IFAC Congress; provide their institutional addresses; and state the amount of support required to permit their attendance at the Congress.

The decision of the selection committee will be transmitted to requestors as soon after April 1 as possible. All grants are contingent upon the favorable response of NSF to our proposal and no awards can be considered until their decision is received.

## 1982 IFAC Symposium on Theory and Application of Digital Control Travel Support

There will be an IFAC sponsored symposium on "Theory and Applications of Digital Control", January 5-7, 1982 in New Delhi, India.

A request for Block Travel cost and modest per diem support will be available for a limited number of U.S. attendees. Grantees will be selected by a selection committee composed of Professors E. I. Jury (University of California, Berkeley), T. Kailath (Stanford University), and P. Dorato (University of New Mexico). Priori-

*Continued on page 42*

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# Theses

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## University of Texas at Austin

Joseph C. Krainak, "Static and Dynamic Team Problems: Sufficient Conditions, Affine Control Laws, and the Exponential of a Quadratic Cost Criterion"

August 1980

Advisors: Steven I. Marcus and Jason L. Speyer

Current Address: Sandia Laboratories  
ORG 5611  
Albuquerque, NM 87115

## Harvard University

Peter Bao-sen Luh, "Incentives and Electricity Pricing"

October 1980

Advisor: Professor Y. C. Ho.

Current Address: Electrical Engr. & Computer Sci. Dept.  
University of Connecticut U-157  
Storrs, CT 06268

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## *Book Reviews, cont. from page 18*

IEEE, Associate Editors of *IFAC J. Automatica* (Pergamon), *J. Large Scale Systems* (North-Holland) and the founding Editor of the *IEEE Control Systems Magazine*. He is a member of IFAC Committees on Economic, Management Systems and Developing Countries.

M. Malek-Zavarei received his Ph.D. from the University of California at Berkeley in 1970. He is presently a Visiting Professor with the Department of Electrical and Computer Engineering of the University of New Mexico. He is a Senior Member of IEEE and a member of IFAC Committee on Systems Engineering.

ty will be given to session chairmen and authors with strong records in Digital Control Systems. Requestors should forward a copy of their resume and an explanation of their role in the conference to

Professor Peter Dorato  
Department of Electrical  
and Computer Engineering  
University of New Mexico  
Albuquerque, New Mexico 87131

no later than April 1, 1981.

The availability of support through this block-grant will be contingent on NSF approval of the proposal submitted.

## AACC Awards Presented

The American Automatic Control Council (AACC) has inaugurated an expanded program of awards to recognize outstanding achievement in automatic control. The 1980 Awards were presented at the 1980 Joint Automatic Control Conference (JACC) in San Francisco, California. The awards and recipients were:

**Control Heritage Award**, for distinguished lifetime career contributions to the technology or application of automatic control, presented to N. B. Nichols of the Aerospace Corporation.

**Education Award**, recognizing outstanding contributions and distinguished leadership in automatic control education, presented to Michael Athans, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology.

**Eckman Award**, recognizing outstanding young contributors in automatic control, presented to Manfred Morari, Department of Chemical Engineering, University of Wisconsin, Madison, Wisconsin.

**Schuck Award**, for the best paper presented at the 1979 JACC, presented to William B. Rouse, Department of Mechanical and Industrial Engineering, University of Illinois at Urbana for his paper "Understanding and Aiding the Human in Fault Diagnosis Tasks."