published numerous papers and consults with industry. Under his direction, the CIMS Program has been named to receive the 1986 University LEAD Award presented by the Society of Manufacturing Engineers for excellence in education in integrated manufacturing. Dr. Book is active in ASME, serving on the Executive Committee of the Dynamic Systems and Control Division and in IEEE, where he is an Associate Editor of the IEEE Transactions on Automatic Control. He is General Chairman of the 1988 American Control Conference. Dr. Book earned the B.S. degree from the University of Texas in 1969 and the Ph.D. degree from the Massachusetts Institute of Technology in 1974, both in mechanical engineering.

Conference Calendar

1987 New Listings

**Optimization Days 1987**, May 13–15, 1987, Montreal, Quebec, Canada. Contact: Professor Efnim Galperin, Dpt. de Mathématiques et d'Informatique, Université du Québec à Montréal, P.O. Box 8888, Station “A”, Montréal, Quebec, Canada H3C 3P8, phone: (514) 282-3229.


**3rd Intl. IFIP/IFAC Conference on Advances in Production Management Systems (APMS '87)**, Aug. 11–14, 1987, Winnipeg, Manitoba, Canada. Contact: Prof. A. Kusiak, Dept. of Mechanical & Industrial Engineering, University of Manitoba, Winnipeg, Manitoba, R3T 2N2, Canada.


**1987 International Conference on Systems, Man, and Cybernetics**, Oct. 20–23, 1987, Radisson Mark Plaza Hotel, Alexandria, Virginia. For further information, contact General Chairman: Andrew P. Sage, George Mason University, 4400 University Drive, Fairfax, VA 22030, USA.

**1988 New Listings**


1987 Previous Listings


**1987 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)**, April 6–9, 1987, Registry Hotel, Dallas, Texas. Technical Program Chairman: Dr. Masud M. Arjmand, Texas Instruments, Inc., P.O. Box 226015, MS 238, Dallas, TX 75266, phone: (214) 995-0395.


**First International Conference on Computer Vision**, June 8–11, 1987, London, Continued on p. 75
Attitude command is applied to the station ACS. The closed-loop frequency-response sensitivity results and time-response results indicate a system with good sensitivity and performance.

Conclusions

A servo system bandwidth of 0.03 Hz with 0.71 damping and sun-sensor feedback for the alpha drive can provide soft coupling to attenuate the transverse boom torsional modes. The closure of the sun-sensor loop through the position integral controller of the alpha drive reduces the pointing error in the presence of disturbances.

References


Eric T. Falangas was born in Athens, Greece. He received the B.S. degree in electronics from the University of London in 1972, and the M.S. degree in control systems from the University of Manchester Institute of Science and Technology, Manchester, England, in 1974. He has also completed additional graduate work toward a Ph.D. degree from the University of Southern California. He has worked for Rockwell International since 1978. He performed simulations and stability analysis for the Space Shuttle’s ascent phase and is presently involved with the space station proposal.

Henry H. Woo was born in Canton, China. He received the B.S. and M.S. degrees in aerospace engineering from the University of Southern California. Since 1975, Mr. Woo has worked at Rockwell International on flight dynamics and control of the Shuttle during launch to orbit, dynamics and control of the Orbiter during on-orbit operations, and dynamics and control of the Shuttle’s remote manipulator system integrated with the Orbiter. He is currently the Technical Lead Engineer for flight control and remote device pointing for the space station proposal.

1987 American Control Conference
June 10–12, 1987
Minneapolis, Minnesota
General Chairman:
Dr. Thomas F. Edgar
Dept. of Chemical Engineering
University of Texas
Austin, TX 78712
Phone: (512) 471-3080


1987 IFAC World Congress
July 26–31, 1987
Munich, Federal Republic of Germany
For further information contact:
VDI/VDE-Gesellschaft
Messe- und Regelungstechnik
GMR
D-4000 Dusseldorf 1
Federal Republic of Germany
Phone: 0211/6214-224
Telex: 08586525

Sixth International Conference on Mathematical Modeling, Aug. 10–13, 1987, Washington University, St. Louis, Missouri. Contact: Professor Ervin Y. Rodin, Dept. of Systems Science and Mathematics, Washington University, Box 1040, St. Louis, Missouri 63130, phone: (314) 889-5806.

Fifth International Conference on Systems Engineering, Sept. 9–11, 1987, Wright State University, Dayton, Ohio. Contact: Conference Secretary, Mrs. Ann Isper, College of Engineering and Computer Science, Wright State University, Dayton, OH 45435, phone: (513) 737-2403.


IECON’87, International Conference on Industrial Electronics Control and Instrumentation, Nov. 2–6, 1987, Cambridge, Massachusetts. Five copies of extended summary should be sent by March 30, 1987, to Dr. Victor K. L. Huang, AT&T Information Systems, Room 2K303, Crawford Corners Road, Holmdel, NJ 07733, USA, phone: (201) 949-0069. The General Chairman is Guy O. Beale, Dept. of Electrical & Computer Eng., George Mason University, 4400 University Drive, Fairfax, VA 22030, phone: (703) 323-2302.

1987 Control Systems Society Conference on Decision and Control
Dec. 9–11, 1987
Los Angeles, California
General Chairman:
Prof. William Levine
Dept. of Electrical Engineering
University of Maryland
College Park, MD 20742
Phone: (301) 454-6841

1988 Previous Listings


Continued on p. 84
Yugoslavia, and in 1965 in Moscow, USSR. Hassan Khalil received the B.S. and M.S. degrees from Cairo University, Cairo, Egypt, and the Ph.D. degree from the University of Illinois, Urbana-Champaign, all in electrical engineering. He is currently an Associate Professor at Michigan State University, East Lansing.

**Singular Perturbations in Systems and Control** (Order number PC01966) contains 504 pages and is priced at $55.75 ($41.80 for IEEE members). The book may be ordered postpaid from the IEEE Service Center, 445 Hoes Lane, Piscataway, N.J. 08854-4150. Make check payable to IEEE. A $2.00 billing charge is added to all non-prepaid orders under $100.00. Credit card orders (Master Card, VISA and American Express) are acceptable and considered prepaid.

---

**IEEE Tutorial Books**

**Tutorial: Robotics (2nd Edition)**
by C. S. George Lee, R. C. Gonzalez, and K. S. Fu

The latest edition of this popular tutorial gives an up-to-date summary of the fundamental concepts and theories of robotics. Like the first edition, it includes concepts and theories at a mathematical level that requires a good background in vectors, matrices, kinematics, and dynamics of rigid bodies. Contains reprints.

**Contents:** Introduction; Robot Arm Kinematics; Robot Arm Dynamics; Planning of Manipulator Trajectories; Servo Control for Manipulators; Force Sensing and Control; Robot Vision System; Robot Programming Languages; Machine Intelligence and Robot Planning. Order No. DQ658, ISBN 0-8186-0658-4. April 1986. 744 pages. list price $70.00/member price $39.00.

**Tutorial: Digital Image Processing and Analysis—Volume 1: Digital Image Processing**
by Rama Chellappa and Alexander A. Sawchuk

Recognizing a division of the research activities in the processing and analysis of images, this tutorial is divided into two volumes. Both volumes are concerned primarily with conventional optical images, which are represented as digitized values of gray levels on a discrete lattice. Volume 1 deals with processing of images.


**Tutorial: Digital Image Processing and Analysis—Volume 2: Digital Image Analysis**
by Rama Chellappa and Alexander A. Sawchuk

While Volume 1 of this two-volume set deals with processing of images, Volume 2 concentrates on the analysis of images.


Write to The Computer Society of the IEEE, Order Department, P.O. Box 80452, Worldway Postal Center, Los Angeles, CA 90080. Toll-free telephone orders: You may order Computer Society publications over the phone by charging them to VISA, MasterCard, or American Express. Minimum order please: $50.00. Call 1-800-CS-BOOKS or 1-800-272-6657 8:00 a.m. to 4:30 p.m. Pacific time [California residents dial: (714) 821-8380].

Reader Service #13

---

Continued from p. 75

**IFAC/IFORS Symposium on Identification and System Parameter Estimation**, Aug. 27-31, 1988, Beijing PRChina. Contact: Prof. Chen Han-Fu, Institute of Systems Science, Academia Sinica, Beijing, 10080, P.R. China.