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The following two lectures were presented at the SIAM National Meeting, Denver, Colorado, July 1, 1970:

D. W. Fox and L. M. Ehrlich, "Computer Animation" were made in Washington, D.C. by S. E. Anderson:

Office of Civil Defense, August 10, 1970;
Naval Research Laboratory, August 19, 1970;

The following two lectures were presented at the AIAA Guidance, Control, and Flight Mechanics Conference, Santa Barbara, California, August 17–20, 1970:

C. E. Williams, B. E. Tossman, and N. K. Brown, "Interactive Hybrid Computer Simulation of Magnetically Damped Spacecraft";
B. E. Tossman, "Variable Parameter Nutation Damper for SAS-A."

PUBLICATIONS

Compilation of principal recently published books and technical articles written by APL staff members.


The following four presentations of "Computer Animation" were made in Washington, D.C. by S. E. Anderson:

Office of Civil Defense, August 10, 1970;
Naval Research Laboratory, August 19, 1970;

The following two lectures were presented at the SIAM National Meeting, Denver, Colorado, July 1, 1970:

D. W. Fox and V. G. Sigillito, "Lower Bounds for the Radial Lithium Atom's Lowest Eigenvalue";
HONORS AND AWARDS

The Applied Physics Laboratory was the recipient of an I-R 100 Award, sponsored by Industrial Research, Inc., for its work in developing a rechargeable cardiac pacemaker, in collaboration with The Johns Hopkins Medical Institutions.

G. L. Dugger, Supervisor of the Hypersonic Propulsion Group, and F. S. Billig, Supervisor of the Ramjet Project, received in August 1970 the Silver Medal of the Combustion Institute for their paper entitled "Interaction of Shock Waves and Heat Addition in Design of Supersonic Combustors." The presentation was made at the 13th Symposium on Combustion, held at the University of Utah.

Certificates of Commendation were awarded by the Navy in a June 4 ceremony to nine APL staff members for their contributions to the Ship's Anti-Missile Integrated Defense (SAMID) program. Those honored were J. M. Aitchison, B. K. Carter, R. N. Cauble, E. R. Chatham, C. E. Dorsett, W. P. Reese, R. O. Robinson, T. W. Sheppard, and E. K. Wharton. Letters of Appreciation were distributed to 24 additional staff members.

On July 2, 1970, the Institute of Navigation awarded to R. B. Kershner, Supervisor of the Space Development Department, the 1969 Norman P. Hays Award for "providing outstanding encouragement, inspiration, and support contributing to the advancement of navigation."

WITH THE AUTHORS

F. E. Nathanson, co-author of "Frequency Agility for Radar Target Detection and Tracking," was born in Baltimore, Maryland. After receiving the B.E. degree in electrical engineering from The Johns Hopkins University, he attended Columbia University on a Higgins Fellowship and was awarded an M.S. degree in electrical engineering in 1956. Mr. Nathanson joined the staff of the Applied Physics Laboratory in 1956 as a specialist in radar search techniques, radar map matching, and electronic-optical devices. At APL he designed an optical map-matcher, worked on search and detection techniques for the AWS radar, and was responsible for laboratory and prototype search, ECM, and track-while-scan systems. In 1965 he was appointed Assistant Group Supervisor of the Advanced Radar Techniques Group. He is the author of the reference book, *Radar Design Principles—Signal Processing and the Environment*, published by McGraw-Hill Book Company in 1969. In June 1970 Mr. Nathanson joined the Technology Service Corporation as Manager of their Washington Division.

J. Patrick Reilly, co-author of "Frequency Agility for Radar Target Detection and Tracking," is a native of Detroit, Michigan. He received the B.E.E. degree from the University of Detroit in 1962 and the M.S. degree in Applied Science from George Washington University in 1967. Mr. Reilly joined the Applied Physics Laboratory in 1962. He participated in the Navy's Typhon Radar Program in the design and conduction of reliability acceptance testing. As a member of the Laboratory's Advanced Radar Techniques Group, he has worked in the areas of signal processing, clutter problems, and target characteristics, both from the theoretical and experimental viewpoints. He has also participated in radar developmental programs, and has worked on a number of problems involving existing Fleet radars. Recently Mr. Reilly has worked in developing signal-processing techniques for acoustic signatures in battlefield surveillance. He is the author of a chapter on MTI systems and has contributed other portions to a reference book authored by F. E. Nathanson: *Radar Design Principles—Signal Processing and the Environment*, published by McGraw-Hill Book Company in 1969.