

Awards for Publications and Research and Development

The Laboratory presents annual awards for publications and Independent Research and Development (IR&D) projects to recognize outstanding performance by the APL professional staff. The Editorial Board of the *Johns Hopkins APL Technical Digest* is responsible for selecting publications for awards and honorable mention on the basis of technical content, significance of scientific and engineering contributions, and literary style. Established in 1985 to encourage professional publication, this competition is open to all technical staff. Departments may submit up to two nominations in each of six categories. Forty-five publications were submitted by eight departments for the 1995 competition; of these, nine publications from five departments were selected for honors.

Since its establishment in 1989, the R. W. Hart Prizes for Excellence in Independent Research and Development have honored those who make signal contributions to science and technology through projects in basic and applied research and exploratory and advanced engineering. The IR&D Advisory Council awards prizes in two categories: one for the best research project and the other for the best development project. For 1995, the R. W. Hart Prize for Excellence in Development was awarded to the members of the Telemedicine Team for their work in developing concepts and assessments for telemedicine systems. Honorable Mention was given to Gary A. Sullins for his work in measuring the time required for the jet interaction flow field to be established for missile terminal maneuvers. No prize for research was awarded.

Unlike the annual awards, the prestigious Lifetime Achievement Award is conferred only when an individual's achievements and publishing accomplishments span a productive and distinguished career at APL. Louis Monchick was so recognized at the Fall Principal Professional Staff Reception held on 19 November 1996. Dr. Monchick's research in kinetic theory, gas transport properties, and molecular processes spans a 40-year career and includes nearly 100 publications. One of his most significant papers, "Transport Properties of Polar Gases," reported the first computer calculation of the transport property of a gas of anisotropic polar molecules. This paper received a Citations Classic award in 1981.

Linda L. Maier-Tyler

LIFETIME ACHIEVEMENT AWARD

Louis Monchick, in recognition of his seminal theoretical research in kinetic theory, gas transport, and molecular dynamics spanning transport properties of polar molecules, thermal diffusion, intermolecular interaction, collision-induced molecular processes, diffusion-controlled reactions, and the development of mathematical formulae.

AWARDS RECOGNIZING PUBLICATIONS BY APL STAFF MEMBERS (1995)

OUTSTANDING FIRST PAPER IN A CLASSIFIED OR UNCLASSIFIED PUBLICATION

Award

Steven M. Biemer, "Force-Level Effectiveness Modeling for the Tomahawk Land Attack Cruise Missile," *Johns Hopkins APL Technical Digest* **16**(1), 59–68 (1995).

OUTSTANDING PAPER IN THE JOHNS HOPKINS APL TECHNICAL DIGEST

Walter G. Berl Award

Christopher J. Chase and Edmond C. Roelof, "Extracting Evolving Structures from Global Magnetospheric Images via Model Fitting and Video Visualization," *Johns Hopkins APL Technical Digest* **16**(2), 111–122 (1995).

OUTSTANDING RESEARCH PAPER IN A REFEREED PUBLICATION

Awards

James D. Franson, "Dynamic Phase of the Electromagnetic Field," *Physical Review A* **51**(3), 2371–2380 (1995).

Ralph L. McNutt, Jr., "Correlated Variations in the Solar Neutrino Flux and the Solar Wind and the Relation to the Solar Neutrino Problem," *Science* **270**, 1635–1739 (1995).

OUTSTANDING DEVELOPMENT PAPER IN A REFEREED PUBLICATION

Award

Marion L. Edwards (APL), Sheng Cheng (JHU), and Jeffrey H. Sinsky (APL), "A Deterministic Approach for Designing Conditionally Stable Amplifiers," *IEEE Transactions on Microwave Theory and Techniques* **43**(7), 1567–1575 (1995).

OUTSTANDING PROFESSIONAL BOOKS

Awards

Robert M. Fristrom, *Flame Structure and Processes*, JHU/APL Series in Science and Engineering, Oxford University Press, New York (1995).

Robert N. McDonough (APL) and Anthony D. Whalen (AT&T Bell Laboratories), *Detection of Signals in Noise*, 2nd Ed., Academic Press, San Diego (1995).

Honorable Mention

Alan Brandt (APL) and H. J. S. Fernando (Arizona State University) (eds.), *Double-Diffusive Convection*, Geophysical Monograph 94, American Geophysical Union, Washington, D.C. (1995).

SPECIAL PUBLICATIONS AWARD

Award

Stamatios M. Krimigis (APL), Joseph Veverka (Cornell University), Robert W. Farquhar, David W. Dunham, James V. McAdams, Andrew G. Santo, Susan C. Lee, Robert E. Gold (APL), Ann P. Harch (Cornell University), Bobby G. Williams, Donald K. Yeomans, Daniel J. Scheeres, James K. Miller, Willard E. Bollman, Robert P. Davis, Clifford E. Helfrich, Stephen P. Synnott, Tseng-Chan Wang (JPL), John A. Landshof, Andrew F. Cheng (APL), "Special Issue on the Near-Earth Asteroid Rendezvous Mission," *The Journal of the Astronautical Sciences* 43(4), 345-491 (1995).

R. W. HART PRIZES HONORING EXCELLENCE IN INDEPENDENT
RESEARCH AND DEVELOPMENT (1995)

Prize Winner—Development

Navy Battlegroup Telemedicine Project

CAPT L. Edward Antosek, M.D. (USN)
William M. Antosek (APL)
LCDR Miguel A. Cubano, M.D. (USN)
Quentin E. Dolecek (APL)
Richard A. Henle (APL)
Mark A. Scoville (APL)
Robert L. Stewart (APL)
Mark A. Talamini, M.D. (JHU School of Medicine)
Stephen P. Yanek (APL)

Honorable Mention

Jet Interactions for Missile Terminal Maneuvers

Gary A. Sullins