

Awards for Publications and Research and Development

As a leading R&D organization, APL continues to contribute to the advancement of science, technology, and education through excellence in technical publications and support of independent research and development. Good technical writing serves three basic purposes: to inform peers of technological discoveries and insights in both concepts and hardware, to record (the archival function), and to educate the next generation of scientists and engineers. Similarly, advances in basic and applied sciences and in engineering and technological development not only benefit society but also give stature and recognition to those responsible for the achievement and to the institution that provides the support.

To encourage these endeavors, the Laboratory instituted two annual awards programs. In 1985, awards for meritorious writing were established to recognize outstanding publications by the APL professional staff. In 1989, the R. W. Hart Prizes were established to honor those who make signal contributions to science and technology through projects in research and in development.

The Editorial Board of the *Johns Hopkins APL Technical Digest* solicits nominations of outstanding publications from each APL department. The publications are evaluated in six categories of competition according to a selection process developed by the Editorial Board. Publications selected for award or honorable mention are considered to be outstanding because of their significance, professional content, and literary and visual quality.

The entries for the 1996 competition were of great diversity and high merit, dealing with ideas presented to the scientific and engineering community for the first time. Eight technical departments nominated twenty-eight articles, one book, and one book chapter; of those publications, seven won awards and two received honorable mention.

The R. W. Hart Prizes for Excellence in Research and Development were established to recognize high-quality, innovative work at APL. The competition was named for Dr. Robert W. Hart, former Assistant Director for Research and Exploratory Development, to recognize his many contributions in these areas. The Independent Research and Development Advisory Council solicits nominations of projects from each APL department and selects winning projects on the basis of the work's originality and its importance to the Laboratory. Prizes are awarded in two categories—best research project and best development project.

Seven projects were nominated; of those, two won honors in the 1996 program. The R. W. Hart Prize for Research was awarded to Robert B. Givens, Robert Osiander, Thomas J. Kistenmacher, Dennis K. Wickenden, and John C. Murphy for their radically novel approach in developing a new class of magnetometer sensors. The R. W. Hart Prize for Development was awarded to Thomas Thompson, William S. Devereux, James M. Dougherty, and Thomas M. Hattox for their system design and development of a Global Positioning System (GPS)-based instrument to satisfy the need for a precision-scoring capability for interceptor test flights in a highly dynamic environment.

The recipients of the 1996 awards and prizes were recognized at the fall Principal Professional Staff Reception held on 18 November 1997. Their names are listed on the following pages, along with the titles of their publications and projects.

Linda L. Maier-Tyler

AWARDS RECOGNIZING PUBLICATIONS
BY APL STAFF MEMBERS (1996)

OUTSTANDING PAPER IN THE JOHNS HOPKINS
APL TECHNICAL DIGEST

Walter G. Berl Award

Donald J. Williams, "Jupiter—At Last!" *Johns Hopkins APL Technical Digest* 17(4), 338–356 (1996).

Honorable Mention

Paul R. Schuster, Joseph A. Miragliotta, Michael E. Thomas, and David M. Rust, "Development of Optical Filters Based on Photorefractive Materials," *Johns Hopkins APL Technical Digest* 17(3), 270–278 (1996).

William S. Seegar (US Army), Protagoras N. Cutchis (APL), Mark R. Fuller (US Dept. of the Interior), Joseph J. Suter (APL), Vipul Bhatnagar (APL), and Joseph G. Wall (APL), "Fifteen Years of Satellite Tracking Development and Application to Wildlife Research and Conservation," *Johns Hopkins APL Technical Digest* 17(4), 305–315 (1996).

OUTSTANDING RESEARCH PAPER IN AN EXTERNALLY
REFEREED PUBLICATION

Awards

James D. Franson, "Coherent Splitting of Single Photons by an Ideal Beam Splitter," *Physical Review A* 53(6), 3756–3760 (1996).

Scott Murchie (APL) and Stephane Erard (Universite Paris-Sud), "Spectral Properties and Heterogeneity of Phobos from Measurements by *Phobos 2*," *ICARUS* 123, 63–86 (1996).

OUTSTANDING DEVELOPMENT PAPER IN AN
EXTERNALLY REFEREED PUBLICATION

Award

Robert B. Givens, John C. Murphy, Robert Oslander, Thomas J. Kistenmacher, and Dennis K. Wickenden, "A High Sensitivity, Wide Dynamic Range Magnetometer Designed on a Xylophone Resonator," *Applied Physics Letters* 69(18), 2755–2757 (1996).

OUTSTANDING PROFESSIONAL BOOKS

Award

Bruce I. Blum, *Beyond Programming*, Oxford University Press, New York (1996).

SPECIAL PUBLICATIONS AWARD

Awards

Bruce K. Newhall (APL) and Walter S. Allensworth (Applied HydroAcoustics), "Acoustic Performance of a High Resolution TwinLine Surveillance Array," in *Proc. Workshop on Passive SONAR: Fundamental Limits and Future Opportunities for Achieving Undersea Warfare Superiority*, New London, CT (1996).

Madeleine H. Marshall (APL), John A. Landshof (APL), and Jozef C. van der Ha (European Space Operations Centre), "Reducing Mission Operations Cost," Chap. 6, in *Reducing Space Mission Cost*, James R. Wertz and Wiley J. Larson (eds.), Microcosm Press, Torrance, California, and Kluwer Academic Publishers, Dordrecht/Boston/London, pp. 193–227 (1996).

R. W. HART PRIZES HONORING EXCELLENCE IN INDEPENDENT RESEARCH AND DEVELOPMENT (1996)

Prize Winner—Research

Developing a New Class of Magnetometer Sensors

Robert B. Givens
Robert Osiander
Thomas J. Kistenmacher
Dennis K. Wickenden
John C. Murphy

Prize Winner—Development

Two-Centimeter GPS Measurement System for Missile Intercept Test and Evaluation

Thomas Thompson
William S. Devereux
James M. Dougherty
Thomas M. Hattox