

## Awards for Publications and Research and Development

**A**PL's tradition of excellence began more than 50 years ago with specialized expertise in research, development, and engineering. One way to encourage excellence is to reward staff for work that represents the Laboratory's best in literary and technical achievement. Each year, APL honors members of its professional staff with awards and prizes for both professional publication of innovative work and significant advances in research and development. The 1994 awards for meritorious writing and prizes for outstanding research and development projects were formally announced at the Principal Professional Staff reception on 13 December 1995.

The Editorial Board of the *Johns Hopkins APL Technical Digest* solicits from each APL department nominations of publications from the previous year to compete for awards in six categories. Judges base their decisions on significance, professional content, and literary and visual quality, and outstanding publications are recommended for awards and honorable mention. In the 1994 competition, 39 publications from 8 departments competed; of these, 7 won awards, including 2 books, and 1 paper received honorable mention.

The R. W. Hart Prizes for Excellence in Independent Research and Development recognize significant contributions to the advancement of general science and technology. Named for Robert W. Hart, who led APL's effort in independent research and exploratory development from 1972 until his retirement in 1989, the Hart Prizes signify the importance of the Independent Research and Development (IR&D) Program to the long-term future of the Laboratory. Similar to the process for the writing awards, the IR&D Advisory Council solicits from each APL department nominations of science and engineering projects considered to be outstanding during the previous year. The projects are evaluated by the Advisory Council and prizes are awarded in two categories: one for the best research project and the other for the best development project. Wayne A. Bryden, Richard C. Benson, Scott A. Ecelberger, and Terry E. Phillips of the Milton S. Eisenhower Research Center won the 1994 R. W. Hart Prize for Excellence in Development for their work on the "Tiny Time-of-Flight" mass spectrometer. No prize for research was awarded.

The Lifetime Achievement Award, the Laboratory's most prestigious publishing honor, is presented only when an individual has produced an unusual assemblage of distinguished publications in science and engineering during a professional career at APL. Frank J. Adrian received the Lifetime Achievement Award at the most recent awards presentation. Spanning 38 years at APL, Adrian's work involved theoretical and experimental investigation of the structure of molecules and solids in relation to their physical properties. Adrian has published 139 research articles, many written with colleagues both at APL and at other institutions in the United States, Canada, and Europe. He is also the author of several book chapters, including a chapter on the new high-temperature superconductors for a book on the chemistry of electronic materials, written after his retirement in 1994. In addition, Adrian is the recipient of numerous other awards, including Germany's distinguished Humboldt Fellowship.

Linda L. Maier-Tyler

## LIFETIME ACHIEVEMENT AWARD

Frank J. Adrian, *in recognition of his theoretical and experimental contributions to condensed matter sciences: in particular, his application and interpretation of magnetic resonance experiments to investigate and correlate the structure of molecules and solids with their physical properties.*

## AWARDS RECOGNIZING PUBLICATIONS BY APL STAFF MEMBERS (1994)

### OUTSTANDING FIRST PAPER IN A CLASSIFIED OR UNCLASSIFIED PUBLICATION

#### Award

William A. Bristow (APL), Raymond A. Greenwald (APL), and John C. Samson (University of Alberta, Edmonton), "Identification of High-Latitude Acoustic Gravity Wave Sources Using the Goose Bay HF Radar," *Journal of Geophysical Research* **99**(A1), 319–331 (1994).

### OUTSTANDING PAPER IN THE JOHNS HOPKINS APL TECHNICAL DIGEST

#### Walter G. Berl Award

William J. Geckle and Robin Raul, "Numerical and Experimental Simulation of Coronary Flow Characterization Using Arteriography," *Johns Hopkins APL Technical Digest* **15**(2), 126–136 (1994).

#### Honorable Mention

J. Robert Jensen (APL), Carlos R. Valverde (APL), Christopher C. DeBoy (APL), Victor Veliodis (JHU), Jacob Khurgin (JHU), and Shaozhong Li (JHU), "The Application of Quantum-Well Modulators in Satellite Instrument Design," *Johns Hopkins APL Technical Digest* **15**(1), 7–17 (1994).

### OUTSTANDING RESEARCH PAPER IN A REFEREED PUBLICATION

#### Award

John R. Apel, "An Improved Model of the Ocean Surface Wave Vector Spectrum and Its Effects on Radar Backscatter," *Journal of Geophysical Research* **99**(C8), 16,269–16,291 (1994).

## OUTSTANDING DEVELOPMENT PAPER IN A REFEREED PUBLICATION

### Award

Ralph D. Semmel, "Discovering Context in an Entity-Relationship Conceptual Schema," *Journal of Computer and Software Engineering* 2(1), 47–63 (1994).

## OUTSTANDING PROFESSIONAL BOOKS

### Award

Vincent L. Pisacane and Robert C. Moore (eds.), *Fundamentals of Space Systems*, JHU/APL Series in Science and Engineering, Oxford University Press (1994).

### Award

William H. Avery (APL) and Chih Wu (The U.S. Naval Academy), *Renewable Energy from the Ocean: A Guide to OTEC*, JHU/APL Series in Science and Engineering, Oxford University Press (1994).

## SPECIAL PUBLICATIONS AWARD

### Award

Donald G. Mitchell, "The Space Environment," Chapter 2, in *Fundamentals of Space Systems*, V. L. Pisacane and R. C. Moore (eds.), JHU/APL Series in Science and Engineering, Oxford University Press (1994).

## R. W. HART PRIZES HONORING EXCELLENCE IN INDEPENDENT RESEARCH AND DEVELOPMENT (1994)

### Prize Winner—Development

*Tiny Time-of-Flight Mass Spectrometer*

Wayne A. Bryden  
Richard C. Benson  
Scott A. Ecelberger  
Terry E. Phillips