

## PUBLICATIONS

- T. P. Armstrong, M. T. Paonessa, and E. V. Bell II (Univ. Kansas) and S. M. Krimigis (APL), "Voyager Observations of Saturnian Ion and Electron Phase Space Densities," *J. Geophys. Res.* **88**, 8893-8904 (1983).
- W. H. Avery and D. Richards (APL) and W. G. Niemeyer and J. D. Shoemaker (Brown and Root Dev. Inc.), "OTEC Energy via Methanol Production," in *18th Intersociety Energy Conversion Engineering Conf. Record*, pp. 346-354 (1983).
- P. M. Bischoff and S. D. Wajer (Wilmer Ophthalmological Inst.), and R. W. Flower (APL), "Scanning Electron Microscopic Studies of the Hyaloid Vascular System in Newborn Mice Exposed to O<sub>2</sub> and CO<sub>2</sub>," *Graefes Arch. Clin. Exp. Ophthalmol.* **220**, 257-263 (1983).
- J. F. Carbary and S. M. Krimigis (APL) and W.-H. Ip (Max-Planck Inst. Aeronomie), "Energetic Particle Microsignatures of Saturn's Satellites," *J. Geophys. Res.* **88**, 8947-8958 (1983).
- J. F. Carbary, B. H. Mauk, and S. M. Krimigis, "Corotation Anisotropies in Saturn's Magnetosphere," *J. Geophys. Res.* **88**, 8937-8946 (1983).
- G. L. Dugger, L. L. Perini, D. Richards, and F. C. Paddison, "The Potential for a Hybrid Geothermal-Ocean Thermal Energy Conversion (GEOTEC) Power Plant Installation at Adak Island, Alaska," in *18th Intersociety Energy Conversion Engineering Conf. Record*, pp. 355-363 (1983).
- D. W. Fox and J. R. Kuttler, "Sloshing Frequencies," *J. Appl. Math. Phys. (ZAMP)* **34**, 668-696 (1983).
- J. Goldhirsh, "Rain Cell Size Statistics as a Function of Rain Rate for Attenuation Modeling," *IEEE Trans. Antennas Propag.* **AP-31**, 799-801 (1983).
- W. L. Goodfellow, Jr., and D. T. Burton (APL) and K. E. Cooper (Rutgers Univ.), "Effect of Picric and Picramic Acids on Growth of Rainbow Trout (*Salmo gairdneri*) and American Oysters (*Crassostrea virginica*)," *Chemosphere* **12**, 1259-1268 (1983).
- E. P. Gray, R. W. Hart, and R. A. Farrell, "The Structure of the Internal Wave Mach Front Generated by a Point Source Moving in a Stratified Fluid," *Phys. Fluids* **26**, 2919-2931 (1983).
- R. A. Greenwald and K. B. Baker (APL) and J. P. Villain (Univ. Toulon), "Initial Studies of Small-Scale F Region Irregularities at Very High Latitudes," *Radio Sci.* **18**, 1122-1132 (1983).
- L. W. Hall, Jr., S. L. Margrey, D. T. Burton, and W. C. Graves, "Avoidance Behavior of Juvenile Striped Bass, *Morone saxatilis*, Subjected to Simultaneous Chlorine and Elevated Temperature Conditions," *Arch. Environ. Contam. Toxicol.* **12**, 715-720 (1983).
- R. F. Henrick (APL) and J. R. Brannan, D. B. Warner, and G. P. Forney (Clemson Univ.), "The Uniform WKB Modal Approach to Pulsed and Broadband Propagation," *J. Acoust. Soc. Am.* **74**, 1464-1473 (1983).
- E. D. Holm and E. E. Westerfield, "A GPS Fast Acquisition Receiver," in *NTC '83 - IEEE National Telesystems Conf. Record*, pp. 214-218 (1983).
- S. C. Jones (APL) and V. J. DiLosa (NASA/Goddard), "Computer Model for a Waveguide Replay Link," in *NTC '83 - National Telesystems Conf. Record*, pp. 30-31 (1983).
- W. C. Keller (NRL) and B. L. Gotwols (APL), "Two-Dimensional Optical Measurement of Wave Slope," *Appl. Opt.* **22**, 3476-3478 (1983).
- S. M. Krimigis, J. F. Carbary, and E. P. Keath (APL), T. P. Armstrong (Univ. Kansas), L. J. Lanzerotti (Bell Labs), and G. Gloeckler (Univ. Maryland), "General Characteristics of Hot Plasma and Energetic Particles in the Saturnian Magnetosphere: Results from the Voyager Spacecraft," *J. Geophys. Res.* **88**, 8871-8892 (1983).
- C. G. MacLennan and L. J. Lanzerotti (Bell Labs), S. M. Krimigis (APL), and R. P. Lepping (NASA/Goddard), "Low-Energy Particles at the Bow Shock, Magnetopause, and Outer Magnetosphere of Saturn," *J. Geophys. Res.* **88**, 8817-8830 (1983).
- B. H. Mauk, Review of *Magnetospheric Plasma Physics*, A. Nishida, ed., *EOS* **64**, 617 (1983).
- D. G. Mitchell and E. C. Roelof (APL) and S. J. Bame (Los Alamos Nat. Lab.), "Solar Wind Iron Abundance Variations at Speeds >600 km s<sup>-1</sup>, 1972-1976," *J. Geophys. Res.* **88**, 9059-9068 (1983).
- R. S. Potember, R. C. Hoffman, R. C. Benson, and T. O. Poehler, "Erasable Optical Switching in Semiconductor Organic Charge-Transfer Complexes," *J. Phys. (Paris)* **44**, C3-1597 - C3-1604 (1983).
- J. P. Reilly and W. D. Larkin, "Electrocuteaneous Stimulation with High Voltage Capacitive Discharges," *IEEE Trans. Biomed. Eng.* **BME-30**, 631-641 (1983).
- T. D. Taylor, R. S. Hirsch, and M. M. Nadworny, "Comparison of FFT, Direct Inversion, and Conjugate Gradient Methods for Use in Pseudo-Spectral Methods," *Comput. Fluids* **12**, 1-9 (1984).
- L. L. Warnke and E. E. Westerfield, "Use of GPS for Determining Position of Drifting Buoys," in *NTC '83 - IEEE National Telesystems Conf. Record*, pp. 209-213 (1983).

## PRESENTATIONS

- W. H. Avery, "Ocean Thermal Energy Conversion (OTEC): A Major New Source of Fuels and Power," Resources for the Future Colloquium, Washington, D.C. (30 Mar 1983).
- W. H. Avery and D. Richards, "Design of a 160 MW OTEC Plantship for Production of Methanol," Oceans '83, San Francisco (29 Aug -1 Sep 1983).
- G. L. Dugger, L. L. Perini, and D. Richards, "Hybrid Geothermal-Ocean Thermal Energy Conversion (GEOTEC) Power Plant Analysis and Cost Estimates," 5th Miami Conf. on Alternative Energy Sources, Miami Beach (13-15 Dec 1983).
- C. L. Johnson, "Towed Observation on Free Convection in a Winter Mixed Layer," AGU Fall Meeting, San Francisco (5-10 Dec 1983).
- W. D. Larkin and J. P. Reilly, "Cutaneous Sensitivity to Very Brief Electrical Stimulation," 23rd Meeting, Psychonomic Soc., Minneapolis (11-13 Nov 1982).
- D. Richards, G. L. Dugger, and F. P. Weiskopf, Jr., "Ocean Energy Systems," International Symp. Workshop on Renewable Energy Sources, Lahore, Pakistan (17-22 Mar 1983).
- J. H. Smart, "Diurnal Variability of Fine-structure Shear and Temperature in the Mixed Layer," AGU Ocean Science Meeting, New Orleans (23-27 Jan 1984).
- R. J. Taylor, "Hazard Analysis for Magnetic Induction from Electric Transmission Lines," 1983 IEEE/EMC Symp., Washington, D.C. (23-25 Aug 1983).
- R. J. Taylor and L. B. Richardson, "The Use of Ultrasound for the Prevention of Biofouling," Ultrasonics International 83, Halifax (12-14 Jul 1983).
- The following papers were presented at the Symp. on Electric Shock Safety Criteria, Toronto, 7-9 Sep 1983:
- J. P. Reilly, "Body Impedance;"
- J. P. Reilly and W. D. Larkin, "Mechanisms for Human Sensitivity to Transient Electric Currents;"
- R. J. Taylor, "Body Impedance for Currents of Short Duration."

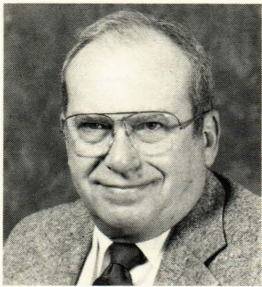
## COLLOQUIA

Dec 2, 1983 - "Venus in the Maya World," J. B. Carlson, University of Maryland.  
Dec 9 - "Sea Monster and Cigar Sharks," E. Clark, University of Maryland.  
Jan 6, 1984 - "The Rainbow Bridge," A. Fraser, Pennsylvania State University.

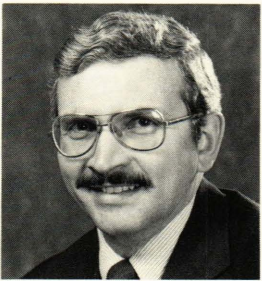
Jan 13 - "Progressing and Oscillatory Formulation of Wave Propagation and Scattering," L. B. Felsen, Polytechnic Institute of New York.  
Jan 20 - "Magnetic Monopoles," R. A.

Carrigan, Jr., Fermi National Accelerator Laboratory.  
Jan 27 - Three Puzzles with One Solution: Anomalous Transport, Reaction and Relaxation in Condensed Matter," M. F. Shlesinger, Office of Naval Research.

## THE AUTHORS



**JOHN W. NEWLAND, Jr.**, is a native of Waterford, N.Y., and graduated from the U. S. Naval Academy in 1942. He completed the communications engineering course at the Naval Postgraduate School and Harvard University in 1945 and the three-year electronics design engineering curriculum in 1951. During his Naval career, he was assigned four commands at sea and one ashore, and served nine tours of duty in C<sup>3</sup> assignments. His awards include two Legions of Merit. Mr. Newland taught at the University of Hawaii before joining APL in 1970. He served at APL as a group supervisor and Project Office supervisor in the areas of command, control, and communications. He retired at the end of 1983.



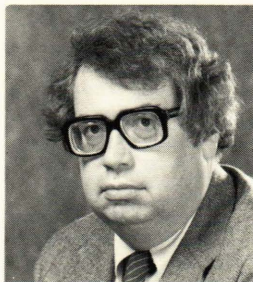
**H. GREGORY TORNATORE** was born in Clearfield, Pa., in 1939. He received his M.S. degree in physics from Pennsylvania State University in 1964 and joined the ITT-Electro-Physics Laboratories as a research physicist, working in advanced high frequency communication and radar programs for the Air Force and Navy. Mr. Tornatore joined APL in 1977 and served as a project coordinator for several Command, Control, and Communications (C<sup>3</sup>) Project Office programs, including the Over-the-Horizon Detection, Classification, and Tracking Engineering Analysis Program, the C<sup>3</sup> System Engineering Development Program, and the Navy Command and Control Planning Program. In 1982, the C<sup>3</sup> Branch was formed in the Fleet Systems Department with Mr. Tornatore as supervisor. He is now program manager of the C<sup>3</sup> Program Office.



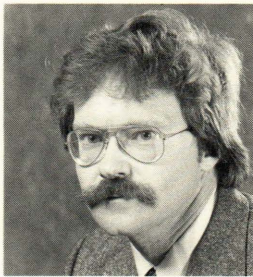
**GEORGE D. HALUSHYNSKY** was born in Lviv, Ukraine, in 1935 and received an M.E.A. degree from The George Washington University in 1970. He worked at RCA, Bunker-Ramo, and Vitro Laboratories in systems engineering and analysis of radar, missile, and countermeasures systems. Since joining APL in 1977, he has been engaged in requirements analyses and conceptual development of the over-the-horizon detection, classification, and targeting system for anti-ship cruise missiles, and Navy C<sup>3</sup> engineering development. Mr. Halushynsky was responsible for developing the tactical and strategic functional architectures for the Navy Command and Control Plan and has contributed to the C<sup>2</sup> architecture for the space-based laser weapon system. He is currently participating in the development of C<sup>2</sup> requirements and architecture for amphibious warfare.



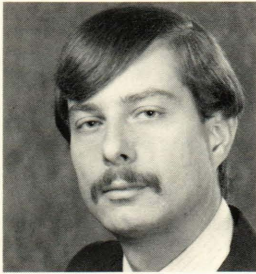
**JAY K. BEAM** obtained his M.A. degree from The George Washington University and is a Graduate in Communications Engineering of the U.S. Naval Postgraduate School. During his naval service (1946-66), Mr. Beam commanded the submarine USS *Harder*, served as a professor in naval science at the Naval War College, and assisted in the development of Polaris communications systems. He was later employed by Vitro Laboratories. After joining APL in 1969, Mr. Beam assisted in assessing the performance of the TACAMO communications system. He has also been active in the test and evaluation of VLF/LF systems supporting strategic submarines, development of an over-the-horizon targeting system specification to support Tomahawk cruise missiles, development of a system specification for a Navy command and control (C<sup>2</sup>) system, and development of a Naval C<sup>2</sup> plan. He is currently Technical Agent for development of an Army Battlefield Interface Concept for Echelons Above Corps.



**RAYMOND R. GUENTHER** was born in Boone, Iowa, in 1939 and received the Ph.D in mathematics from Iowa State University in 1966. As assistant professor at Auburn University during 1966-72, his main research interest was the application of modern algebra to engineering disciplines. In 1972, he joined Vitro Laboratories where he specialized in simulation modeling of anti-air warfare and antisubmarine warfare naval engagements. Since joining APL in 1979, Dr. Guenther has worked primarily on the design of interactive war games. His other professional interests include computer graphics and artificial intelligence.

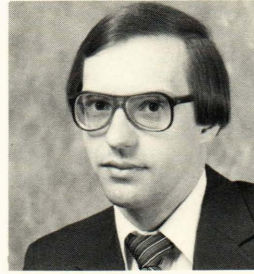


**NELSON K. BROWN** works in the Systems Engineering Group of the Command, Control, and Communications Branch. Born in Quantico, Va., in 1942, he received the B.S.E.E. degree from the Virginia Polytechnic Institute in 1965 and joined APL the same year. As a member of the McClure Computing Center staff, he worked in the areas of hybrid computer systems engineering and real-time operating system software design. On joining the Fleet Systems Department, Mr. Brown participated in the development of graphic display and simulation control software. He is currently involved in the planning, specification, design, and implementation of an automated telecommunications and information distribution system.



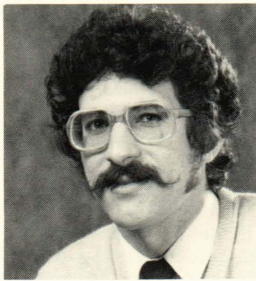
STANLEY F. CZAJKOWSKI was born in Baltimore in 1954. He attended the University of Maryland (Baltimore County), receiving an M.S. degree in applied mathematics in 1977. Since joining APL in 1977, he has served as a senior systems analyst on various programs in the area of strategic communications to SSBN's. In 1982, he was appointed supervisor of the Strategic Systems Section of the Command, Control, and Communications Systems Engineering Group.

He is the lead engineer for the Strategic Communications Continuing Assessment Program, providing the Navy with assessments of submarine communications systems performance in a nuclear attack environment.

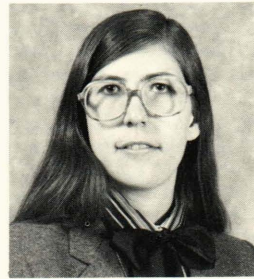


BRUCE E. KUEHNE was born in Lancaster, Pa., in 1952 and received an M.S. degree in engineering from Purdue University in 1975. Since joining APL in 1975, he has been a member of the Guidance and Control System Analysis Group in the Fleet Systems Department, where much of his work has concentrated on the modeling and analysis of interactions that occur in homing missile guidance systems.

Other work has involved evaluation of servo control and tracking techniques proposed for a Navy high-energy laser precision pointer/director. Recently, he has participated in the development of a ship correlation/tracking algorithm for the Navy.



JOSEPH S. J. PERI was born in Palermo, Italy, in 1948. He received the Ph.D. in physics at The Catholic University of America in 1978. From 1978 until 1981, he served on the technical staff of Computer Sciences Corp. and was a programmer/analyst at Andruldis Research Corp. Since joining the Fleet Systems Department of APL in 1981, Dr. Peri has been a senior analyst for the Strategic Communications Continuing Assessment Program.



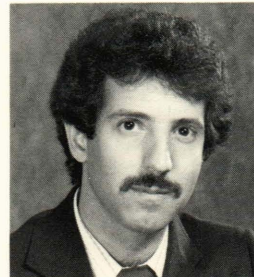
SUZETTE SOMMERER was born in Providence, R.I., in 1957 and received a B.S. degree in chemical engineering in 1979 from Washington University in St. Louis. She did research and development for Monsanto Corp., including both computer and laboratory simulations of proposed processes, and also spent two years doing applied research for the Atlantic Research Corp. In 1982 Ms. Sommerer came to APL,

where she developed a quick and inexpensive program to analyze missile tracking data for the Flight Accuracy Group of the Strategic Systems Department. After completing the Associate Staff Training Program, she joined the Systems Analysis Group of the Command, Control, and Communications Branch where she is working on correlation and tracking of surface ships.

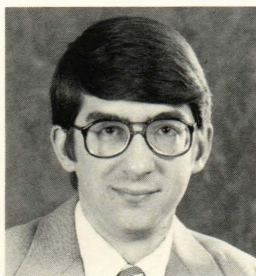


GLENN E. MITZEL was born in Annapolis, Md., in 1951. He received his Ph.D. in electrical engineering at The Johns Hopkins University in 1978. Since joining APL in 1979, he has worked on various problems in Navy command, control, and communications and specialized techniques in missile guidance. In 1981-82, he was a Parsons Fellow in the Johns Hopkins Department of Electrical Engineering,

where he was engaged in basic research in mathematical modeling of nonlinear systems. During 1983-84, Dr. Mitzel is a visiting professor of electrical engineering at Chung-yuan Christian University in Chung-li, Taiwan. He has taught courses at The Johns Hopkins University APL Education Center and at the G.W.C. Whiting School of Engineering.



GERARD R. PREZIOTTI was born in New York City in 1955. He received an M.S. degree in electrical engineering from The Johns Hopkins University in 1981. From 1977 until 1979, he worked as a radar systems engineer at the Westinghouse Electric Co. in Baltimore. Since joining APL in 1979, he has been a member of the Test and Evaluation Group of the Command, Control, and Communications Branch and has been involved in the test and evaluation of both strategic and tactical Naval communications systems.



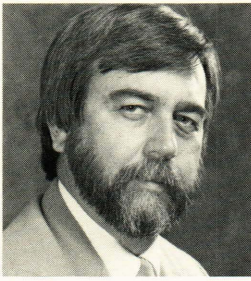
PAUL G. BARNETT III was born in Martinsville, Va., in 1956. He received an M.S. degree in mathematics from the University of Michigan in 1980, specializing in complex analysis. Since joining APL in 1980 and completing the Associate Staff Training Program, he has worked in what is now the Systems Analysis Group of the Fleet Systems Department. He has applied mathematical modeling

techniques to solve problems in submarine communications, missile guidance, and surface ship correlation and tracking. In addition, he teaches at The Johns Hopkins University APL Education Center.



IRVING J. SHEPPERD was born in Montana in 1917. He received a B.S.E.E. degree from the University of Idaho in 1941, after which he worked at the Federal Communications Commission as an engineer from 1941 until 1943. He joined APL's Radar Development Group in 1943. He has worked on various projects at the Laboratory in the fields of long range missile guidance and servo system testing and

evaluation and, for the last several years before retiring from the Laboratory, actively engaged in the FBM Communications Continuing Evaluation Program.



MICKEY D. SULLIVAN was born in Borger, Tex., in 1938. He entered the Navy in 1956 and completed 22 years of active service. He received an A.A. degree in electronics engineering technology from Anne Arundel Community College, Md., in 1978 and is continuing his studies at the University of Maryland. Since joining APL in 1978, Mr. Sullivan has worked on the evaluation of a High Frequency

Mobile Communications Network and other strategic Naval communications systems. In 1981, he was appointed lead engineer of the FBM Communications Continuing Evaluation Program and, upon the establishment of the Test and Evaluation Group, was also named supervisor of the Planning Section.



JOSEPH S. QUINN was born in Philadelphia in 1927 and served 30 years in the U.S. Navy. In 1976, he joined APL where he has been active in the FBM Communications Continuing Evaluation Program. He specialized in field engineering support and is currently supervisor of the Field Support Section of the Test and Evaluation Group. Mr. Quinn has been involved in the development, testing, and deployment

of the instrumentation used for data collection in Navy communications facilities, vessels, and aircraft. He is responsible for providing support to the APL field engineers at FBM sites in the form of training, installation, maintenance and consultation.



HAROLD L. COX was born in Laurens, S.C., in 1938 and studied engineering at Hagerstown Junior College. He worked for Page Communications Engineers for 21 years as a field engineer in all phases of communications, the last seven years as a contract engineer for APL at Guam for the FBM Communications Continuing Evaluation Program. In 1979, Mr. Cox joined APL, where he has been

responsible for the design and development of the Airborne Transmitter Monitoring and Recording System, steady improvement of the Modular Data Collection and Recording System, and design of specialized modules for use in the Verdin Receiver Test Program.



JOHN G. PARKER was born in Providence, R. I., in 1926. After receiving his Ph.D. in physics from Brown University in 1952, he joined the Naval Research Laboratory. There, he conducted research on sound propagation in oceanic isothermal layers and the related problem of reflection from irregular surfaces. Since joining APL in 1956, Dr. Parker's efforts and interests at the Eisenhower Research

Center have revolved mainly around the problem of molecular energy transfer. He has studied the dynamical physical and chemical events accompanying pulsed laser generation of various molecular species, the effectiveness of laser-excited singlet oxygen in water sterilization, and the ability of a system to detect underground pipeline leaks by using an acoustic diagnostic.



C. BRENT BARGERON is a member of the Research Center's Electronic Physics Group. Born in Provo, Utah in 1943, he earned the Ph.D. in physics at the University of Illinois (1971), where he held an NSF Graduate Fellowship during 1967-71. His thesis was done in the laboratory of Prof. H. G. Drickamer, a well-known researcher in super-high-pressure physics and chemistry.

Since joining APL in 1971, Dr. Barger has been involved in problems in solid state physics, light scattering, chemical lasers, fluid flow in casts of arteries, cornea damage from infrared radiation, spectrometry of several types, and surface science.



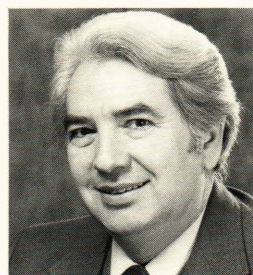
A. NORMAN JETTE was born in Portland, Ore., in 1934 and received the Ph.D. degree in physics from the University of California, Riverside, in 1965. Before joining APL that year, he was a research associate at the Columbia Radiation Laboratory of Columbia University in New York City. At APL, Dr. Jette has worked in the Research Center on theoretical problems in atomic, molecular, and

solid state physics. He provided theoretical support to the program to detect leaks in underground natural gas distribution lines. In 1972 he was visiting professor of physics at the Catholic University of Rio de Janeiro, and in 1980 he was visiting scientist at the Center for Interdisciplinary Research at the University of Bielefeld, West Germany.



BERRY H. NALL has been a member of the Electron Physics Group in the Research Center since 1950. Born near Mobile, Ala., in 1918, he came to APL in the summer of 1948. He obtained an M.S. degree in mechanics (acoustics) from The Catholic University of America in 1970. Mr. Nall has been involved with the measurement of the threshold ionization of gases, the acoustic response of burning

and nonburning solid propellants, particulate attenuation in acoustic cavities, spurious signals in acoustic surface wave devices, and, more recently, with Auger electron spectroscopy, a technique for surface compositional analysis. He is a member of the newly created Materials Science Group in the Research Center.



THOMAS D. TAYLOR was born in Oklahoma City in 1935. He received his Ph.D. in chemical engineering from the University of California at Berkeley (1962). From 1962 to 1968, he was supervisor of theoretical aerodynamics at Ford Aeronutronics. In 1968, he became assistant director of the Continuum Mechanics Laboratory at Northrop Corp. and, in 1972, joined the Aerospace Corp. as director of

fluid mechanics. Dr. Taylor joined APL in 1980, and now is special assistant to the head of the Submarine Technology Department. He is renowned for his work in computational fluid mechanics and recently published a book on the subject.



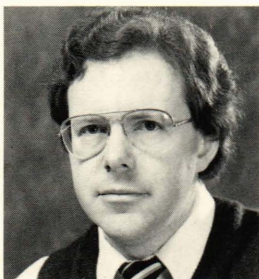
DAVID A. HURDIS was born in Providence in 1941. He received the Ph.D. degree in fluid mechanics from The Catholic University of America (1973). After a short period with Grumman Aerospace Corp., he worked from 1967 to 1974 at NASA's Goddard Space Flight Center on the thermal design of spacecraft, including the Orbiting Astronomical Observatory. From 1974 to 1977, he was assistant

professor of mechanical engineering at the University of Maryland. After joining APL in 1977, Dr. Hurdis worked on the SSBN Security Technology Program in the area of hydrodynamics research. He managed the APL Hydrodynamics Research Laboratory from 1979 to 1983. Since 1983, he has been assigned to the Office of Naval Research as experiments engineer for the ACSAS Project.



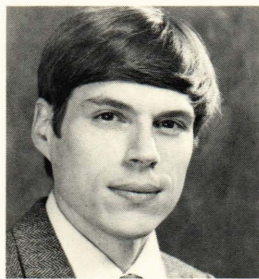
DAVID G. TILLEY was born in Binghamton, N.Y., in 1947. He received the Ph.D. degree in nuclear engineering from the Pennsylvania State University (1976), where his doctoral research in medical imaging was followed by a fellowship in radiology at the Milton S. Hershey Medical School. He returned to Penn State in 1978 to pursue graduate studies and research in spacecraft charging technology for

which he received the M.S. degree in electrical engineering. Since joining the Data Processing Branch at APL in 1979, Dr. Tilley has coordinated image processing applications in oceanography, missile guidance, sonar acoustics, radiography, and aerial photography with research interests in spaceborne remote sensors and the surface scattering of electromagnetic radiation.



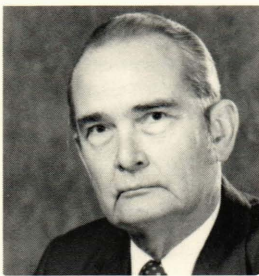
JOHN O. JENKINS was born in New Haven, Conn., in 1940 and received the Ph.D. in physics from Carnegie-Mellon University in 1970. After six years with Bell Telephone Laboratories working on the physical design of switching systems, he joined APL in 1977. Dr. Jenkins' current activities include planning and software development for applications in image processing and computer graphics

in the Data Processing Branch.



CARL A. WATERS was born in Cincinnati in 1951 and received M.S. degrees in mathematics (1975) and computer science (1980) from the Ohio State University. In 1980, he joined APL as an associate mathematician in the McClure Computing Center. His special interests are in the areas of image processing, computer graphics, and artificial intelligence. Mr. Waters is an instructor at The Johns Hopkins

University APL Education Center.



J. PEYTON RANDOLPH was born in Hot Springs, Ark., in 1920. He received an M.S. degree in electrical engineering from the University of Maryland in 1954. He served as an Army officer during 1942-46, and later worked with the General Electric Co. and a radio broadcast consulting firm. After joining APL in 1948, Mr. Randolph participated in the early development of the FM/FM radio telemetry system used in

guided missile development. Since 1957, he has been supervisor of the Instrumentation Development Group. He established the central Data Processing Facility that serves the Laboratory as a whole. A specialist in data acquisition and data processing, his current major interest is in the area of image processing.



S. JAMES GOLDSTEIN is managing partner of James Goldstein and Partners, an architectural, engineering, planning, and consulting firm in New Jersey. He received the B.S. degree in architecture and the M.S. degree in building engineering and construction from the Massachusetts Institute of Technology. During the Korean War, he was in charge of the original comprehensive master planning activities for

the Navy's R&D establishments in the Washington area. In that capacity, he supervised construction of the building to house the Navy's first computer and its staff, and designed and built a major transonic wind tunnel, for which he received a Navy letter of commendation. In addition to the Kossiakoff Conference and Education Center, Mr. Goldstein also designed the R. E. Gibson Library; Buildings 4, 6, 7, 8, 9, and 40; and served as a consultant on the design of the R. E. Kershner Space Science Building.