OSA PRIZE WINNERS REFLECT A WIDE RANGE OF ACHIEVEMENTS

The Optical Society of America has announced the recipients of its medals, prizes and awards for this year.

The Frederic Ives Medal, OSA's highest honor, is being given to **Hermann A. Haus** of MIT. OSA cites Haus for "his fundamental and seminal contributions to the understanding of quantum noise in optical systems and for a lifetime of dedication to science and engineering education." Haus is an Institute Professor in the electrical engineering and computer science department at MIT.

The 1994 Allen Prize, given for contributions to atmospheric remote sensing by a graduate student, will be presented to **Jirong Yu,** a PhD candidate at Colorado State University. Yu is cited for his work on "the world's first use of a two-frequency sodium lidar to observe the thermal structure of the midlatitude mesopause."

Valerian Tatarskii is receiving the 1994 Max Born Award for "his outstanding seminal contributions to the theory of wave propagation through random media, particularly optical propagation through atmospheric turbulence, as well as for his fundamental contributions to the fields of statistical and quantum optics." Tatarskii is a senior research associate at the University of Colorado and the National Oceanic and Atmospheric Administration's Wave Propagation Laboratory in Boulder.

OSA's Distinguished Service Award is being given to **F. Dow Smith** for "his contributions to the health of the optics community as a member of numerous committees, chair of the Technical Council, treasurer and president of the society." Smith, who is retired, spent most of his career at Boston University and Itek Corp; most recently he served as president of the New England College of Optometry.

Isaak Ya. Barsky and **Garry V. Papayan** will share the Joseph Fraunhofer Award for their "outstanding work in the field of quantitative microscopy—specifically, for the creation of new optical instruments for medicine and biology, thereby advancing the field of optical engineering." Barsky and Papayan are both researchers at the S. I. Vavilov State Optical Institute in Saint Petersburg, Russia.

Hermann A. Haus

William E. Humphrey will be given the Edwin H. Land Medal in recognition of his "outstanding work in the fields of ophthalmic and stabilized optics as an entrepreneur, an inventor and an innovator." Humphrey is the cofounder of Humphrey Instruments in San Leandro, California, a maker of automated ophthalmic instrumentation.

The Ellis R. Lippincott Award winner is **Herbert L. Strauss,** a professor of chemistry and assistant dean of the college of chemistry at the University of California, Berkeley. OSA is honoring Strauss for "30 years of distinguished work to elucidate the complex dynamics of large molecules in condensed phases. His innovative and skillfully performed experiments and application of theory demonstrate the consequences of molecular motion in vibrational spectra."

OSA is presenting the Adolph Lomb Medal to **Robert W. Schoenlein,** a staff scientist at Lawrence Berkeley Laboratory. Schoenlein was chosen for his "development of elegant femtosecond spectroscopic methods and their application to fundamental studies of metals, semiconductors and molecules."

The Archie Mahan Prize, which recognizes the best feature article published in *Optics & Photonics News*, goes this year to **Robert Q. Fugate** for his article "Laser Beacon Adaptive Optics," which appeared in the June 1993 issue. Fugate is the technical director of the Air Force Phillips Laboratory's Starfire Optical Range in New Mexico.

Steven Chu is this year's recipient of the William F. Meggers Award. Chu, the Theodore and Francis Geballe Professor of Physics and Applied Physics at Stanford University, is being recognized for "pioneering work in manipulation, cooling and trapping of neutral particles by laser light, and for the first optical spectroscopy of the short-lived leptonic atoms, positronium and muonium."

The recipient of the David Richardson Medal is **David A. Markle** of Ultratech Stepper of Santa Clara, California, which makes semiconductor manufacturing equipment. Markle is cited for "his leadership in the development of several generations of 1× projection systems for photolithography."

The Edgar D. Tillyer Award will be given to **Jacob Nachmias,** a professor of psychology at the University of Pennsylvania. Nachmias was chosen for "his theoretical and empirical contributions to our understanding of spatial vision."

The Charles Hard Townes Award was presented to **Joseph H. Eberly** for "his contributions to theoretical optical physics, in particular, his work on coherent pulse propagation and superradiance, atomic radiation theory, cavity quantum electrodynamics and multiphoton intense field phenomena." Eberly is a professor of physics and optics at the University of Rochester.

Elias Snitzer received the John Tyndall Award for "pioneering contributions to optical propagation in fiber and rare-earth-doped lasers and amplifiers." Snitzer is a professor of ceramic science and engineering at Rutgers University.

OSA will present the R. W. Wood Prize to **Dana Z. Anderson** for "pioneering work on photorefractive gain in ring resonators." Anderson is a professor of physics at the University of Colorado, Boulder, and a fellow at the Joint Institute for Laboratory Astrophysics there.

Most of the 1994 awards will be presented at OSA's annual meeting, to be held in October in Dallas. The Tyndall Award was presented in February at the Optical Fiber Communication Conference in San Jose, California; the Townes Award was presented in May at the Conference on Lasers and Electro-Optics in Anaheim, California.

NAS SELECTS NEW MEMBERS

The National Academy of Sciences announced in late April the names of its newly elected US members and foreign associates. Among those joining the ranks of the NAS are the following:

Eric G. Adelberger, professor in the nuclear physics laboratory at the University of Washington, Seattle

Donald L. D. Caspar, professor of physics and research professor of structural biology at Brandeis University

Leroy L. Chang, dean of science at Hong Kong University of Science and Technology

Stanley Deser, Ancell Professor of Physics at Brandeis University

James R. Holton, professor of meteorology at the University of Washington, Seattle

Charles D. Keeling, professor of oceanography at Scripps Institute of Oceanography, La Jolla, California

Sung-Hou Kim, professor of chemistry at the University of California, Berkeley

Herwig Kogelnik, director of the photonics research laboratory at AT&T Bell Laboratories in Holmdel, New Jersey

Robert B. Laughlin, the Anne T. and Robert M. Bass Professor in the physics department at Stanford University

Andrew J. Majda, professor of mathematics at Princeton University

Pamela A. Matson, research scientist in Earth systems science at NASA's Ames Research Center, Moffett Field, California

David R. Nelson, Mallinckrodt Professor of Physics at Harvard University

William H. Press, professor of astronomy and physics, Harvard University

John M. Rowell, vice president and chief technical officer of Conductus, Inc, Sunnyvale, California

Myriam Sarachik, professor of physics at City College of New York

Edward M. Stolper, William E. Leonhard Professor of Geology at Caltech

George Veronis, professor of geophysics and applied science, Henry Barnard Davis Professor of Physics and director of the applied mathematics program at Yale University.

The 15 newly elected foreign associates include:

George K. Batchelor, professor emeritus of applied mathematics and theoretical physics at Cambridge University in England

Alan Carrington, Royal Society Research Professor at the University of Southampton, England

Claude Cohen-Tannoudji, professor of physics at the Collège de France in Paris

Paul J. Crutzen, director of the Max Planck Institute for Chemistry in Mainz, Germany

Sergei P. Novikov, head of the mathematics group at the L. D. Landau Institute of Theoretical Physics in Moscow, Russia

Stuart Ross Taylor, visiting fellow at the Research School of Physical Sciences, Australian National University in Canberra.

IN BRIEF

G. Brent Dalrymple has left the US Geological Survey to become dean of the college of oceanic and atmospheric sciences at Oregon State University, Corvallis.

Alan G. Marshall has moved from Ohio State University, Columbus, to join Florida State University as professor of chemistry and director of the ion cyclotron resonance program at the National High Magnetic Field Laboratory.

Karl A. Stetson has retired from United Technologies Research Center in East Hartford, Connecticut, to found his own company, Karl Stetson Associates, in Coventry, Connecticut.

The European Physical Society has conferred its 1994 Hewlett–Packard Europhysics Prize on four individuals: **Donald R. Huffman** of the University of Arizona, Tucson, **Wolfgang Krätschmer** of the Max Planck Institute for Nuclear Physics in Heidelberg, Germany, **Harold Kroto** of the University of Sussex, England, and **Richard E. Smalley** of Rice University. The four were collectively honored for "the discovery of new molecular forms of carbon and their production in the solid state."

OBITUARIES

G. P. S. Occhialini

Giuseppe Occhialini, universally known to the older generation of physicists as "Beppo," died, after a long illness, on 30 December 1993 in Paris, where he had gone from his home in Italy for medical treatment. With his death the world loses not only a great physicist of exceptional accomplishments, but also a most singular, magnetic personality, one of the last of a rare species: the physicist–adventurer. His modesty, his unorthodox behavior and a number of outside circumstances prevented him from receiving a fair share of the recognition for the fundamental discoveries to which he had contributed so significantly.

Occhialini was born on 5 December 1907 in Fossombrone, Italy. He graduated from Florence University and was a research assistant there from 1932 to 1937. An extraordinary trio of young men were contemporaries at that institution: Gilberto Bernardini, Occhialini and Bruno Rossi. It was in Florence that Rossi invented the coincidence circuit. On an Italian fellowship (1931–34), Occhialini went to Cambridge to work with Patrick Blackett, an authority in cloud chamber physics. Beppo brought the Florentine counter techniques to the Cavendish Laboratory, where Blackett and he developed the controlled cloud chamber, which was triggered by coincidences generated by cosmic rays. One of the first fruits of their collaboration was the discovery of electron–positron *pairs*, an almost immediate confirmation (and extension) of Carl Anderson's discovery of low-mass positive tracks in an untriggered cloud chamber at Caltech. In 1948 Blackett received the Nobel Prize "for the development of the Wilson cloud chamber method."

In 1937 Occhialini left Italy for Brazil, where he worked on cosmic rays at São Paulo University until the end of the war. (His emigration was probably politically motivated, as he was viscerally anti-Fascist and anti-authoritarian.) In 1945 he accepted a research appointment at Bristol, to work with Cecil Powell on the study of cosmic rays by means of nuclear emulsions. Powell had already worked with this technique in nuclear physics, and Walter Heitler had di-