discovered by the three recipients and their collaborators.

Leon Van Speybroeck was presented with the Bruno Rossi Prize for his "singular contribution to high-energy astrophysics leading to the exquisite image quality produced by the x-ray optics and telescope of the Chandra X-ray Observatory." He is a senior astrophysicist at the Harvard–Smithsonian Center for Astrophysics.

The inaugural Joseph Weber Award for Astronomical Instrumentation went to **James E. Gunn**, Eugene Higgins Professor of Astronomy at Princeton University. He was cited for his "outstanding contributions to astronomical instrumentation which have influenced the development of instruments on major telescopes worldwide."

Adam Riess was the recipient of the Helen B. Warner Prize for his "significant contribution toward measuring cosmological distances unimaginable a decade ago through the study of Sne Ia and for the astonishing discovery of the acceleration of the universe and a nonzero cosmological constant." He is an associate astronomer at the Space Telescope Science Institute and an adjunct associate professor of astronomy at Johns Hopkins University, both located in Baltimore, Maryland.

Amy J. Barger, assistant professor of astronomy at the University of Wisconsin–Madison, received the Newton Lacy Pierce Prize for her "outstanding achievement in observational cosmology using data from x-ray through radio wavelengths to explore previously unknown populations of distant galaxies, giving a view of galaxies early in the history of the universe and showing that they are major contributors to the extragalactic background."

Michael Zeilik, professor of physics and astronomy at the University of New Mexico, received AAS's Education Prize for his work as an innovator in the field of astronomy education. Zeilik was cited for, among other things, his tireless championing of teaching strategies that go beyond the usual lecture. The citation also stated that the "research which he has done on the success of, or challenges faced by, these strategies has provided a major contribution to our understanding of student learning."

The Gerard P. Kuiper Prize went to **Eberhard Gruen** for his "discovery of interstellar grains passing through the solar system; the discovery of Jovian dust streams in interplanetary space; and major insights into the time evolution of the meteoritic complex by combining impact microcrater data from lunar rocks, spacecraft meteoroid penetration and impact ionization data, and photographic and radar meteor data." He is a senior scientist at the Max Planck Institute for Nuclear Physics in Heidelberg, Germany, and a researcher at the University of Hawaii's Institute of Geophysics and Planetology.

Heidi Hammel, senior research scientist at the Space Science Institute in Boulder, Colorado, received the Carl Sagan Medal. According to the citation, her "dedication to communicating the excitement of planetary science is evident in the large number of lectures to children and the general public that have complemented her scientific career."

The Harold C. Urey Prize went to **Brett J. Gladman** for his "studies of orbital evolution combining numerical and analytical results to elucidate the dynamical structure of the solar system." The citation added that his "extensive simulations of the orbital evolution of meteorites from the Moon, Mars, and the main asteroid belt have fundamentally altered our understanding of the delivery paths of these objects." He is an associate professor of physics and astronomy at the University of British Columbia in Canada and a research scientist at CNRS.

AAS also presented two popular science writing awards. This year's journalist award was shared by **Ron Cowen** and **Sid Perkins**, both writers for *Science News*. Cowen wrote "Stormy Weather" and Perkins wrote "Pinning Down the Sun–Climate Connection" as a two-part series that appeared in the January 2001 *Science News*, volume 159, on pages 26 and 45, respectively.

The corecipients of the scientist writing award were **Carolus J. Schrijver** and **Alan M. Title**. They were recognized for their two-part article "Today's Science of the Sun," which appeared in the February and March 2001 issues of *Sky and Telescope*. Schrijver is a staff physicist and Title is a principal scientist at Lockheed Martin's Advanced Technology Center in Palo Alto, California.

Optical Society Presents Prizes at Annual Meeting

The Optical Society of America announced the winners of its awards, medals, and prizes for 2002 at the society's annual meeting held in Orlando, Florida, in October.

James P. Gordon received the Frederic Ives Medal/Jarus W. Quinn Endowment for his "numerous seminal contributions and fundamental insights into quantum electronics, including construction of the first maser, the concepts of confocal laser resonators, optical solitons, and quantum effects in communications systems." Gordon retired from Bell Laboratories, Lucent Technologies, but is still active as a technical consultant.

The Esther Hoffman Beller Award was presented to **Emil Wolf** for his "numerous outstanding contributions as an educator, but especially for the influence of his books, which have been educating optical scientists and engineers for more than forty years." He is the Wilson Professor of Optical Physics at the University of Rochester in New York and Provost's Distinguished Research Professor at the University of Central Florida's School of Optics/CREOL.

The Distinguished Service Award went this year to **Boris Stoicheff** for his "exceptional volunteer service to OSA over three decades, including the presidency, the board of directors, the publications council, the society objectives and planning committee, and various other committees." He is a professor emeritus of physics at the University of Toronto.

Benny Landa was the recipient of the Edwin H. Land Medal, which is cosponsored by OSA and the Society for Imaging Science and Technology. Landa, founder of Indigo, which was recently acquired by Hewlett-Packard, is a strategic adviser to the CEO of HP. He was honored for his "pioneering work in the invention, development, and commercialization of liquid toner electrophotography" and for "outstanding creativity that has had a major public impact."

The OSA Leadership Award/New Focus Prize went this year to **Ellen Ochoa**, a NASA astronaut, in recognition of her "pioneering status as the first Hispanic woman astronaut, her unstinting efforts to serve as a positive role model for women in general, and Hispanic women in particular, and her generous contributions of time to the optics community."

Susana Marcos Celestino received the Adolph Lomb Medal for her "contributions to our knowledge of the optics of the eye and the interactions of light with the retina." Celestino is a faculty research scientist at the Instituto de Óptica in Madrid, Spain.

The Archie Mahan Prize was shared by **Edward W. Hagley**, **Lu Deng**, **William D. Phillips**, **Keith Burnett**, and **Charles W. Clark** for their article "The Atom Laser," which appeared in the May 2001 issue of *Optics and Photonics News*. The coauthors were honored for a "focused and well-organized article that succinctly connects recent observations in the field of phase coherent matter waves with early 20th century research on Bose–Einstein condensation." Hagley is a cofounder of Acadia Optronics; Deng is a research physicist at NIST in Gaithersburg, Maryland; Phillips, who was a cowinner of the 1997 Nobel Prize in Physics, is a physicist and fellow at NIST in Gaithersburg and a Distinguished University Professor at the University of Maryland, College Park; Burnett is a professor of physics at the University of Oxford; and Clark is chief of the electron and optical physics division at NIST in Gaithersburg.

The David Richardson Medal was awarded to **Arthur H. Guenther** for his "pioneering contributions and continued leadership in the study of laser-induced damage of optical materials, and for exemplary guidance in enabling the infrastructure for technical optics development." He is president of the International Commission for Optics and the Center for High Technology Materials at the University of New Mexico in Albuquerque.

Pierre Meystre, Regents Professor of Optical Sciences and Physics and chair of quantum optics at the University of Arizona, Tucson, received this year's R. W. Wood Prize for his "seminal contributions to free-electron laser, cavity QED [quantum electrodynamics], and micromaser; and most recently, the 'invention' of the new field of nonlinear atom optics."

The Allen Prize went to **Iain Fletcher Howieson** for his "design, development, and fabrication of a novel, lightweight, near-infrared tunable diode laser spectrometer that made immediate and valuable contributions to balloon and aircraft-borne characterizations of trace atmospheric gases." He is an optical systems engineer at quantumBEAM Ltd in Cambridge, UK.

The Max Born Award was presented to **John L. Hall**, senior scientist at NIST and JILA, both in Boulder, Colorado, for "pioneering the field of stable lasers, including their applications in fundamental physics and, most recently, in the stabilization of femtosecond lasers to provide dramatic advances in optical-frequency metrology."

Daniel Malacara garnered the Joseph Fraunhofer Award/Robert M. Burley Prize for his "outstanding contributions to the art of interferometry and the science of optical testing passed on to posterity through his many publications and the education of his students." Malacara, professor of optical engineering at the Centro de Investigaciones en Óptica in León, Mexico, was also cited for establishing several scientific institutions in that country.

The Nick Holonyak Jr Award was presented to **Pallab Bhattacharya**, James R. Mellor Professor of Engineering and a professor of electrical engineering and computer science at the University of Michigan, Ann Arbor. He was recognized for his "fundamental contributions to the development and understanding of quantum-dot lasers and other quantum-confined photonic devices."

The Ellis R. Lippincott Award, cosponsored by the Coblentz Society and the Society for Applied Spectroscopy, was awarded to **Sanford A. Asher** for "pioneering the development of ultraviolet Raman methods and demonstrating their applications to vibrational spectroscopy in analytical, biophysical, and materials chemistry." He is a professor of chemistry at the University of Pittsburgh in Pennsylvania.

James C. Bergquist received the William F. Meggers Award for his "seminal contributions to high-resolution, high-accuracy laser spectroscopy with applications to fundamental metrology and clocks." He is a research physicist with NIST in Boulder, Colorado.

George Sperling was presented with the Edgar D. Tillyer Award for his "innovative research in human visual information processing, specifically in: flicker perception; spatial vision; binocular vision; masking; visual memory; visual attention; and motion perception." He is a UCI Distinguished Professor in the department of cognitive sciences, the department of neurobiology and behavior, and the Institute for Mathematical Behavioral Sciences, all at the University of California, Irvine.

The John Tyndall Award, sponsored by the Institute of Electrical and Electronics Engineers/Lasers & Electro-Optics Society, was awarded to **Neal S. Bergano** for his "outstanding technical contributions and leadership in the advancement of global undersea fiber-optic communication systems." He is the managing director of system research at TyCom Laboratories in Eatontown, New Jersey.

OSA also recognized achievements in optical engineering by presenting its Engineering Excellence Awards to **Timothy Day**, **Christopher Doerr**,

and **David Peckham**. Day, chief technology officer and founder of New Focus Inc in San Jose, California, was honored for his "pioneering work on the development, production, and widespread commercial deployment of tunable external cavity diode lasers." Doerr, a distinguished member of the technical staff at Bell Laboratories, Lucent Technologies, was recognized for "groundbreaking research on photonic integrated circuits and its impact on the telecommunications industry." And Peckham, a consulting member of the technical staff at OFS Optics, in Norcross, Georgia, was cited for his "contributions to the design of dispersion compensating fibers for terrestrial and submarine optical transmission systems, which enable higher capacity and lower cost undersea networks."

APS Announces Award Recipients

Over the course of several months, the American Physical Society has recognized a number of individuals for their contributions to physics.

The recipient of the Will Allis Prize was **Alan Garscadden**, chief scientist of the propulsion directorate at the Air Force Research Laboratory, Wright-Patterson Air Force Base, in Ohio. He was recognized for his "distinguished career in gaseous electronics, marked by a sustained creativity in linking fundamental processes to the macroscopic properties of gas discharges and plasmas, and for his dedicated role as an advocate for the field of gaseous electronics."

Gerald Gabrielse, chair of Harvard University's physics department, received the society's Davisson–Germer Prize for his "pioneering work in trapping, cooling, and precision measurements of the properties of matter and antimatter in ion traps."

The Fluid Dynamics Prize went to **Gary Leal** for his "extensive use of a blend of modern analysis, innovative numerical computation, and experiments to elucidate phenomena in classical and polymer fluid dynamics." He is a professor of chemical engineering and materials at the University of California, Santa Barbara.

APS presented its James Clerk Maxwell Prize to **Edward A. Frieman** in honor of his "contributions to the theory of magnetically confined plasmas, including fundamental work on the formulation of the MHD [magnetohydrodynamic] energy principle and on the foundations of linear and nonlinear gyrokinetic theory essential to the analysis of microinstabilities and transport." Frieman is director emeritus at the Scripps Institution of Oceanography in La Jolla, California, and senior vice-president of science and technology at Science Applications International Corp in San Diego.

David P. Landau, Distinguished Research Professor of Physics and director of the Center for Simulational Physics at the University of Georgia at Athens, was this year's recipient of the Aneesur Rahman Prize for Computational Physics. He was cited for the "development of accurate Monte Carlo sampling and renormalization group techniques, the study of the kinetics of aggregation and gelation in polymer systems, and for numerous contributions to the development and application of molecular dynamics and kinetic Monte Carlo methods."

Stephen E. Harris garnered the Arthur L. Schawlow Prize for his "outstanding contributions to fundamental and applied research into laser sources, nonlinear optics, extreme ultraviolet laser sources, and laser physics, including electromagnetically induced transparency and its application to lasing without inversion and to nonlinear optics at maximal coherence." Harris is a professor of electrical engineering and applied physics at Stanford University.

APS bestowed the Otto LaPorte Award on **Andrea Prosperetti** for his "breakthroughs in the theory of multiphase flows, the dynamics of bubble oscillations, underwater sound, and free-surface flows and for providing elegant explanations of paradoxical phenomena in these fields." Prosperetti is the Charles A. Miller Jr Distinguished Professor of Mechanical Engineering at Johns Hopkins University.

Ramon Lopez, C. Sharp Cook Distinguished Professor of Physics at the University of Texas at El Paso, received the Nicholson Medal for Humanitarian Service. APS honored Lopez for his "accomplishments in improving the quality of science education for all Americans, . . . for contributions as founder of the Teacher–Scientist Alliance Institutes which introduced K–12 students to the excitement of scientific discovery, . . . [and] for increasing participation of underrepresented minorities in physics."

The Award for Excellence in Plasma Physics Research was shared by **Troy Carter**, **Scott Hsu**, **Hantao Ji**, and **Masaaki Yamada** for their "experimental investigation of driven magnetic reconnection in a laboratory plasma. In this work, careful diagnostic studies of the current sheet structure, dynamics and associated wave activity provide a comprehensive picture of the reconnection process." Carter is an assistant professor of physics at UCLA. Hsu is a Frederick Reines Fellow in Experimental Sciences at Los Alamos National Laboratory. Both Ji and Yamada work at the Princeton Plasma Physics Laboratory: Ji is a research physicist and Yamada is a Distinguished Laboratory Research Fellow.

The first Katherine E. Weimer Award, given to recognize achievements in plasma physics research by a woman in the early years of her career, went to **Yu Lin**, associate professor of physics at Auburn University. She was recognized for her "outstanding theoretical contributions in the nonlinear dynamics and structures of plasma boundary layers associated with magnetic reconnection and the solar wind–magnetosphere interaction."

The recipient of the Andreas Acrivos Dissertation Award was **Wade Schoppa**, senior research engineer at Shell Global Solutions in Houston, Texas. He was recognized for his "studies on the generation of coherent structures in near-wall turbulence." His thesis adviser was Fazle Hussain at the University of Houston.

The Outstanding Doctoral Thesis Research in Beam Physics Award went to **Boris Podobedov**, associate physicist at the National Synchrotron Light Source at Brookhaven National Laboratory. He was recognized for an "experimental study of the microwave instability in the Stanford Linear Collider damping rings using a streak camera to correlate each event to the radio frequency. The development of this sophisticated technique provides a powerful tool for the study of nonlinear instabilities above threshold." Podobedov's thesis work was completed under the guidance of Robert Siemann of SLAC.

Nadia Lapusta received the Nicholas Metropolis Award for Outstanding Doctoral Thesis Work in Computational Physics for her "work on an innovative computational algorithm to simulate sequences of earthquake instabilities spanning more than ten orders of magnitude in time with physical representations of friction and rigorous continuum elastodynamics, leading to elucidation of earthquake nucleation, seismic radiation, and small-event clustering processes." She received her doctorate under James Rice at Harvard and is now a postdoctoral fellow in the division of engineering and applied sci-