Honors and Awards

Spring 1999

Physicists to Be Honored at APS Centennial Meeting

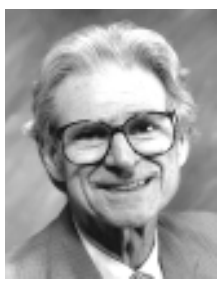
Thirty-one APS prizes and awards will be presented during a special ceremonial session at the APS Centennial Meeting, to be held later this month in Atlanta, Georgia. Citations and biographical information for each recipient follow. Additional biographical information and appropriate Web links can be found at the APS Web site [http://www.aps.org]. Nominations for most of next year's prizes and awards are now being accepted. For details, see pages 7-8 of this insert.

PRIZES

1999 HANS A. BETHE PRIZE

Edwin Ernest Salpeter
Cornell University

Citation: "For wide-ranging contributions to nuclear and atomic physics and astrophysics, including the triple-alpha reaction, electron screening of nuclear reactions, charged-current emission of neutrinos, and the form of the stellar initial mass function."



Salpeter received his Ph.D. in theoretical physics in 1948 from Birmingham University, and the following year joined Cornell University as a research associate under Hans A. Bethe. He remained at Cornell as a professor, eventually becoming the J. G. White Distinguished Professor of Physical Sciences (Emeritus since 1997). In the 1950s, he worked with Bethe on atomic theory and quantum electrodynamics, developing the so-called "Bethe-Salpeter equation" and publishing a book entitled *Quantum Mechanics Of One-And Two Electron Atoms*.

1999 TOM W. BONNER PRIZE IN NUCLEAR PHYSICS

Vijay Raghunath Pandharipande
University of Illinois

Citation: "For fundamental contributions in determining the structure of light nuclei by solving the Schroedinger problem with more than three nucleons using realistic nucleon-nucleon interactions supplemented by three-body forces."

Pandharipande joined the Tata Institute of Fundamental Research in Bombay after receiving a M.Sc. degree from Nagpur University in 1961. He received his Ph.D. from Bombay University in 1969, while at the Tata Institute, and came to the University of Illinois at Urbana-Champaign, his present position, in 1972. He has also held a visiting faculty appointment at the Physics Division of Argonne National Laboratory since 1983. His research interests include nuclear forces, structure and reactions, quantum liquids and their drops, and dense matter and neutron stars.

1999 HERBERT P. BROIDA PRIZE

Terry A. Miller
The Ohio State University

Citation: "For his far-ranging contributions to spectroscopy and chemical physics of diatomics and radicals, his development of methods for plasma diagnostics, and for his stewardship of the Ohio State Spectroscopy Conference."

Miller received his Ph.D. in chemistry in 1968 from Cambridge University, and joined the technical staff at Bell Laboratories in Murray Hill, New Jersey before moving to The Ohio State University in 1984, where he currently holds the Ohio Eminent Scholar Chair of Experimental Physical Chemistry. His research centers around the spectroscopic identification, characterization and monitoring of reactive chemical intermediates. He has developed a number of experimental spectroscopic techniques spanning frequencies from the microwave to the ultraviolet. At present, his laboratory is applying a battery of spectroscopic techniques to the characterization of the structure and dynamics of a number of interesting chemical intermediates.

1999 OLIVER E. BUCKLEY PRIZE

Sidney R. Nagel
University of Chicago

Citation: "For his innovative studies of disordered systems ranging from structural glasses to granular materials."

Nagel received his PhD in physics from Princeton University in 1974 and spent the next two years as a research associate at Brown University. He joined the faculty of the University of Chicago in 1976 serving as director of the Materials Research Laboratory from 1987 to 1991. He is currently the Louis Block Professor in the Physical Sciences. Nagel's research interests focus on disordered, nonlinear and out-of-equilibrium systems, including studies of glass transitions in supercooled liquids, phenomena in granular materials, and singularities occurring in the interface motion of hydrodynamic flows.

1999 DAVISSON-GERMER PRIZE IN ATOMIC OR SURFACE PHYSICS

Steven Gwon Sheng Louie
University of California, Berkeley

Citation: "For his predictive theoretical studies of surfaces and interfaces."

Louie is a professor of physics at the University of California at Berkeley and faculty senior scientist at the Lawrence Berkeley National Laboratory. He received his Ph.D. degree in physics in 1976 from the University of California at Berkeley. After working at the IBM Watson Research Center, the AT&T Bell Laboratories at Murray Hill, and the University of Pennsylvania, he joined the UC Berkeley faculty in 1980. His research interests are on the electronic and structural properties of solids, surfaces, clusters, and nanotubes, and on many-electron effects in the spectroscopic properties of bulk and reduced dimensional materials systems. He was previously awarded the 1996 Rahman Prize in Computational Physics of the APS.

1999 DANNIE HEINEMAN PRIZE

Barry M. McCoy
SUNY at Stony Brook

Tai Tsun Wu
Harvard University

Alexander B. Zamolodchikov
Rutgers University

Citation: "For their groundbreaking and penetrating work on classical statistical mechanics, integrable models, and conformal field theories."

Dr. McCoy received his BS at Cal Tech in 1963 and his PhD from Harvard University in 1967. He joined the Institute for Theoretical Physics at the State University of New York at Stony Brook in 1967 where he is currently a Professor of Physics. He has been visiting professor at the Research Institute of Mathematical Sciences in Kyoto, the Institute Henri Poincare and the Australian National University. Dr. McCoy was awarded the Heineman prize for work done from 1967-1981 on the statistical mechanics of the Ising model including boundary critical phenomena, randomly layered systems which have Griffiths-McCoy singularities, the Painleve representation of the two point function, quadratic difference equations for the n-point functions, and the Ising model in a magnetic field. Dr. McCoy has in addition made contributions to the study of quantum spin chains, and the Fermionic representations of conformal field theory, and has been a co-discoverer of the integrable chiral Potts model. He has also worked extensively in quantum field theory and more recently has become known for his mathematical work in nonlinear differential equations and the theory of Rogers-Ramanujan identities.

Tai Tsun Wu,
Harvard
University

Alexander Zamolodchikov was born on the 18th of September of 1952 in Dubna, USSR. He received his education from Moscow Institute of Physics and Technology, which he graduated in 1975 as Nuclear Physics Engineer. In 1978 he received PhD in Physics from Institute of Experimental and Theoretical Physics in Moscow, USSR. From 1978 he is a member of L.D.Landau Institute in Chernogolovka, and from 1990, a Professor of Physics at Rutgers University. Research interests of A. Zamolodchikov are in Quantum Field Theory and Statistical Physics, in particular in Conformal and Integrable Field Theories.

1999 HIGH POLYMER PHYSICS PRIZE

Charles C. Han
National Institute of Standards and Technology

Citation: "For outstanding contributions in the application of light and neutron scattering to the physics of polymer phase separation."

Han graduated from National Taiwan University with a B.S. in chemical engineering in 1966 and from the University of Wisconsin, Madison, with a Ph.D. in physical chemistry in 1973. He joined the Polymers Division of the National Institute of Standards and Technology (formerly the National Bureau of Standards) in 1974. He has been staff scientist, group leader and recently a NIST fellow. His areas of interest and research have been related to polymer dynamics in dilute, semidilute and concentrated solutions. His recent research includes the phase behavior of polymer blends under shear field and phase decomposition on the surface. He is a past recipient of the Dillon Medal of the APS.

Table of Contents

1999 IRVING LANGMUIR PRIZE IN CHEMICAL PHYSICS

Daniel Kivelson
University of California, Los Angeles

Citation: "For his influential studies, theoretical and experimental, probing stability, structure and molecular motion in liquids, supercooled liquids and glasses."

Kivelson received his Ph.D. from Harvard in 1953 and subsequently served as an instructor in Physics at M.I.T. He has been on the faculty at the University of California at Los Angeles in the Chemistry Department since 1953. Kivelson's areas of research, both experimental and theoretical, have included microwave spectroscopy; electron spin resonance spectrscopy; nuclear magnetic resonance; low-energy electron-molecule scattering; dynamic light scattering; relaxation phenomena in liquids and viscoelastic fluids; supercooled liquids and glasses; and polyamorphism.

1999 JULIUS E. LILIENFELD PRIZE

Stephen William Hawking
University of Cambridge

Citation: "For boldness and creativity in gravitational physics, best illustrated by the prediction that black holes should emit black body radiation and evaporate, and for the special gift of making abstract ideas accessible and exciting to experts, generalists, and the public alike."

Hawking is an English theoretical physicist whose theory of exploding black holes drew upon both relativity theory and quantum mechanics. He also worked with space-time singularities. Hawking earned his PhD in mathematics and physics at Trinity in 1966, and he was elected a research fellow at Gonville and Caius College at Cambridge. In the early 1960s Hawking contracted amyotrophic lateral sclerosis, an incurable degenerative neuromuscular disease. He continued to work despite the disease's progressively disabling effects, becoming professor of gravitational physics at Cambridge in 1977. In 1979 he was appointed to Cambridge's Lucasian professorship of mathematics, a post once held by Isaac Newton. He has published two popular books: the bestselling *A Brief History of Time* and *Black Holes and Baby Universes and Other Essays*.

1999 JAMES C. McGRODDY PRIZE IN NEW MATERIALS (Formerly the International Prize for New Materials)

Thomas Richard Anthony
General Electric Research & Development Center

Eugene E. Haller
University of California, Berkeley

Citation: "For innovations in growing diamond and germanium crystals with unprecedented control of chemical and isotopic purity and perfection, and for creative leadership and active participation in worldwide collaborations based on these extraordinary materials resulting in both fundamental discoveries and new technological applications."

Anthony received his Ph.D. in applied physics from Harvard in 1967. He joined the General Electric Research and Development Center in 1967 where he has worked in the areas of interstitial diffusion, radiation damage, solute segregation in solids, thermomigration, electromigration, amorphous metals and semiconductor processing, laser material processing, anodic bonding, high-pressure, high-temperature diamond nucleation and growth and low-pressure chemical-vapor-deposition diamond nucleation and growth.

Haller is a professor of materials science at the University of California at Berkeley and jointly holds a faculty senior scientist position at the Lawrence Berkeley National Laboratory. He received his doctorate in solid state physics from the University of Basel, Switzerlandin 1970, and joined LBNL to perform research in ultra-pure semiconductors the following year. In 1980 he joined the UC Berkeley faculty. His research focuses on semiconductor crystal growth, advanced doping and defect problems, the metal-insulator transition, and far-infrared detectors and coherent sources. In 1990 he initiated research with isotopically enriched semiconductors.

1999 LARS ONSAGER PRIZE

Chen Ning Yang
State University of New York at Stony Brook

Citation: "For fundamental contributions to statistical mechanics and the theory of quantum fluids, including: the circle theorem, off-diagonal long-range order and flux quantization, Bose-Einstein condensation, and one- and two-dimensional statistical mechanical models."

A native of China, Yang received his Ph.D. in 1948 from the University of Chicago. In 1949 he joined the Institute for Advanced Study in Princeton where he was a Professor from 1955 to 1966. In 1966 he joined the State University of New York at Stony Brook where he is Albert Einstein Professor of Physics. He is also Director of the Institute of Theoretical Physics at SUNY- Stony Brook. Other honors include the Nobel Prize in 1957 and the National Medal of Science in 1986.

1999 GEORGE E. PAKE PRIZE

Hendrik Brugt Gerhard Casimir
Philips Research Laboratories

Citation: "For excellence as a leader of industrial research at Royal Philips Electronics and for fundamental contributions to the foundations of quantum mechanics and solid state physics."

Casimir received his Ph.D. at Leiden University in 1931. He worked as an assistant to Wolfgang Pauli at Zurich, but returned to Leiden until 1942 when he joined the Research Laboratories of the Philips Company. He became a co-director of these laboratories in 1946 and a member of the board of directors of the company in 1956. He retired from Philips in 1972. Casimir made many contributions to science during his years in research from 1931 to 1950, including long range van der Waals forces, the so-called "Casimir effect." In 1966, Casimir became co-founder and first president of the (European Industrial Research Management Association (EIRMA).

1999 W. H. K. PANOFSKY PRIZE IN EXPERIMENTAL PARTICLE PHYSICS

Edward H. Thorndike
University of Rochester

Citation: "For a leading role in milestone advances in the study of the b quark with the CLEO collaboration; particularly the discovery and measurement of b semileptonic decay, the b to s Penguin decay process, and the b to u weak transition. In addition, his contributions led to substantial improvements in understanding the flavor sector of the Standard Model and the Cabibbo-Kobayashi-Maskawa matrix of weak quark couplings."

Thorndike received his Ph.D. in physics from Harvard University in 1960, where he worked with Richard Wilson on nucleon-nucleon scattering at the Harvard Cyclotron Laboratory. After a postdoctoral position at Harvard, he joined the University of Rochester faculty as assistant professor of physics in 1961, attaining a full professorship in 1972. His research interests are in the general area of experimental high energy physics. His current research interest is in b quark decay, with emphasis on rare decays and on CKM matrix determination.

1999 EARL K. PLYLER PRIZE FOR MOLECULAR SPECTROSCOPY

David Wixon Pratt
University of Pittsburgh

Citation: "For pioneering work in ultrahigh resolution ultraviolet spectroscopy of cold molecules in beams that elucidated the structure and isomerization dynamics of a wide range of large molecules, molecular vibrational dynamics, and hydrogen bonding."

Pratt received his Ph.D. in 1967 from the University of California at Berkeley and then moved to the University of California at Santa Barbara. In 1968, he joined the University of Pittsburgh, where he is currently a professor of chemistry. Pratt's research in high resolution electronic spectroscopy uses lasers, molecular beams, and high speed data acquisition systems to study the structures and dynamical behaviors of a wide range of isolated large molecules and their clusters at unparalleled spectral resolution. Currently, his research group is focusing on chemical reaction dynamics, and on the eigenstates that participate in the light-induced transformations of reactants into products.

1999 I. I. RABI PRIZE IN ATOMIC, MOLECULAR, AND OPTICAL PHYSICS

Mark George Raizen
University of Texas at Austin

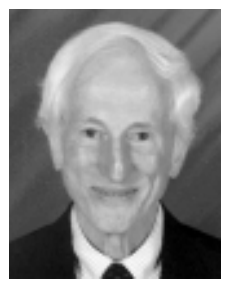
Citation: "For his pioneering advances in the experimental study of atom optics, and especially for the insightful connections he has developed between this discipline and studies of chaotic dynamics, condensed matter physics, and dissipative quantum systems."

Raizen received a Ph.D. in physics from the University of Texas at Austin in 1989, and spent the next few years as a postdoctoral fellow at the National Institute of Standards and Technology in Boulder, Colorado. He moved to the University of Texas at Austin in 1991, where he is currently a tenured associate professor. Raizen has been working in the field of atom optics. The main focus of his research has been to study how quantum mechanics suppresses classical chaos, by a mechanism known as dynamical localization. Recent work in his group has studied the effects of dissipation in going from quantum to classical behavior.

1999 PRIZE TO A FACULTY MEMBER FOR RESEARCH IN AN UNDERGRADUATE INSTITUTION

Robert Edson Warner
Oberlin College

Citation: "For his research contributions in experimental nuclear physics, including the precise measurement of reaction cross sections for exotic light nuclei, and for his active and enthusiastic collaboration with Oberlin students."



Warner is the Donald R. Longman Professor of Natural Science at Oberlin College. He received his Ph.D. from the University of Rochester in 1959, and held faculty appointments at the University of Rochester, Antioch, and the University of Manitoba before joining the Oberlin faculty in 1965. Warner and two Manitoba undergraduates were the second group to observe bremsstrahlung production in p-p collisions. Since coming to Oberlin, he and his students have done experimental nuclear physics using accelerators at NASA-Lewis, Chalk River, IUCF, NSCL, Notre Dame, KVI, Osaka (Japan), and Uppsala (Sweden). For many years he studied the cluster structure of light nuclei through knockout reactions. He now concentrates on measuring total reaction cross sections of radioactive nuclei and interpreting them with microscopic models.

1999 J. J. SAKURAI PRIZE FOR THEORETICAL PARTICLE PHYSICS

Mikhail Shifman
University of Minnesota

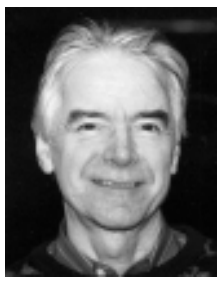
Arkady Vainshtein
University of Minnesota

Valentin Invanovich Zakharov
Max-Planck Institut fur Physik

Citation: "For fundamental contributions to the understanding of non-perturbative QCD, non-leptonic weak decays, and the analytic properties of supersymmetric gauge theories."

Shifman received his Ph.D. in 1976 at the Institute of Theoretical and Experimental Physics. He remained at the Institute until 1989. That year, he was allowed to travel to the West, spending a year at Bern University in Switzerland before opting to relocate to the U.S. He has been a professor of physics at the University of Minnesota since 1990. His scientific interests are focused around his self-proclaimed "first love," quantum chromodynamics.

Vainshtein completed his Ph.D. in 1968 at the Brudker Institute of Nuclear Physics. He remained at the Institute for several years in various research positions. His interest in physics from his earliest days of research have been concentrated on the gauge theories of fundamental interactions and remain his main area of his research. In 1990, Vainshtein came to the U.S. as a professor at the University of Minnesota. He is now the Gloria Lubkin Professor and a member of the Theoretical Physics Institute at the University of Minnesota, and became a U.S. citizen in 1998.



Zakharov received his Ph.D. in 1966 from the Institute of Theoretical and Experimental Physics (ITEP) in Moscow. He was a researcher at ITEP in Moscow from 1966 to 1990, when he became a staff member at the Max-Planck Institute for Physics in Munich, Germany. In 1993 he became a professor of physics at the University of Michigan in Ann Arbor, returning to the Max-Planck Institute in 1998. Zakharov has conducted extensive research in particle theory, particularly quantum chromodynamics, supersymetric theories. His current research is in the area of non-perturbative effects at short distances.

1999 ROBERT R. WILSON PRIZE

Robert Brian Palmer
Brookhaven National Laboratory

Citation: "For his many diverse contributions and innovations in particle accelerator and detector technologies, including superconducting magnets, longitudinal stochastic cooling, bubble chambers and neutrino beam lines, crab crossing in lepton colliders, laser acceleration, and for leadership of the muon collider concept."

Palmer received his Ph.D. from Imperial College in London in 1960 where he built the first European hydrogen bubble chamber. He then began his work at the Brookhaven National Laboratory and worked in the high energy physics bubble chamber group. With Samios and Schutt he received the APS W.H.K. Panofsky prize for the discovery of the w- particle. From 1983 to 1986, Palmer was the Associate Director for High Energy Physics, establishing the rare K decay program, and from 1986-1991, he held a joint appointment with SLAC. Since 1991, Palmer has been head of the Brookhaven National Laboratory Center for Accelerator Physics, and is also an Adjunct Professor at the State University of New York at Stonybrook.

AWARDS

1999 JOSEPH A. BURTON FORUM AWARD

Freeman John Dyson
Institute for Advanced Study

Citation: "For his thoughtful, elegant and widely published writings regarding the impact of diverse science and technology developments on critical societal issues and on fundamental questions for humankind."

Dyson is now retired, having been for most of his life a professor of physics at the Institute of Advanced Study in Princeton. He was born in England and worked as a civilian scientist for the Royal Air Force in World War II, graduating from Cambridge University in 1945 with a B.A. degree in mathematics. He went to Cornell University as a graduate student in 1947 where he worked with Hans Bethe and Richard Feynman. Cornell University made him a professor without bothering about his lack of a Ph.D. He subsequently worked on nuclear reactors, solid-state physics, ferromagnetism, astrophysics and biology. Dyson has written a number of books about science for the general public, beginning with *Disturbing the Universe* in 1979. The most recent is *The Sun, the Genome and the Internet*, which will be published in 1999.

1999 MARIA GOEPPERT-MAYER AWARD

Andrea Mia Ghez
University of California, Los Angeles

Citation: "For her use of speckle interferometry to obtain very high-resolution images with the Keck telescope and for her presentations to astronomers and the general public that sparkle with enthusiasm. Her research has shed new light on how stars form and on the nature of the massive black hole at the center of the Milky Way."

Ghez received her Ph.D. in physics from Caltech in 1992, and was a Hubble Postdoctoral Research Fellow at the Steward Observatory of the University of Arizona. Her primary research interests are the development and application of high spatial resolution infrared imaging techniques to basic research in astronomy. In particular, she has focused on the origin and early life of stars and more recently an investigation of the distribution and nature of the matter at the center of our Galaxy. Before taking up teaching and research, Ghez worked at UCLA in 1994.

1999 JOSEPH F. KEITHLEY AWARD

Simon Foner
Massachusetts Institute of Technology

Citation: "For the invention and development of the vibrating sample magnetometer and many of its successful applications, and for the innovative development of very high field pulsed magnets."

Foner received his D.Sc. in physics from the Carnegie Mellon University in 1952, where he also held a postdoctoral appointment. He then joined Lincoln Laboratory at MIT in 1953 and the Francis Bitter National Magnet Laboratory at MIT when it was organized in 1961. He retired as Associate Director and Chief Scientist in 1995 and is currently a visiting scientist. His condensed matter physics research is in magnetism, basic and applied high field superconductivity, materials science, magnetometry and high field physics and technology.

1999 FRANCIS M. PIPKIN AWARD

Steven Keith Lamoreaux
Los Alamos National Laboratory

Citation: "For extensive contributions to precision measurements science, especially searches for a permanent electric dipole moment of the neutron and atoms, measurements of atomic parity violation, and tests of spatial symmetries and quantum mechanics, including observation of the vacuum Casimir Effect."

Lamoreaux received his Ph.D. in physics from the University of Washington in 1986, where he remained until 1996 as a research associate professor. In December 1996 he moved to Los Alamos National Laboratory, where he currently is a staff member. He has many areas of interest including the theory of neutron matter interactions; lasers and optoelectronics, and radiofrequency spectroscopy. His current work includes classical and quantum cryptography, quantum computing, and tests of fundamental interactions using ultracold neutrons. He is the co-author of two books, *Ultracold Neutrons* and *CP Violations Without Strangeness: The Electric Dipole Moments of Particles, Atoms and Molecules*.

1999 LEO SZILARD AWARD

John Alexander Simpson
University of Chicago

Citation: "For his leading role in educating scientists, members of Congress and the public on the importance of civilian control of nuclear policy and his critical efforts in the planning and execution of the International Geophysical Year, which established in 1957, a successful model for today's global scale scientific endeavors."

Simpson received his Ph.D. from New York University in 1943 and then served as a scientific group leader in the Metallurgical Laboratory of the Manhattan Project until 1946. He joined the University of Chicago in 1945, and in 1974 he became the A.H. Compton Distinguished Service Professor (emeritus since 1987). Simpson's personal concern for the use of nuclear weapons began in 1944 and led to the organization and Chairmanship of the Atomic Scientists of Chicago in 1945. His current research includes experiments on the Ulysses Spacecraft to measure the isotopic and elemental composition of the galactic cosmic radiation in order to determine their nucleosynthetic origins and their lifetime in galactic magnetic fields.

1999 WHEATLEY AWARD

Ivan K. Schuller
University of California

Citation: "For his dedication to the development of physics at the frontier level in Latin America, China and India; for his efforts in organizing international events and building strong bridges to connect people, ideas, and resources from around the world; and for his results as an imaginative physicist and a close collaborator with young physicists in developing countries."

After completing his undergraduate education at the University of Chile in 1970, Schuller pursued graduate studies at Northwestern University in the U.S., receiving his PhD in physics in 1976. He spent the ensuing years as an adjunct professor at UCLA and a senior physicist at Argonne National Laboratory, before joining the faculty of the University of California in 1987. He also holds faculty appointments at the Universidad del Valle in Cali, Colombia, and the Catholic University in Santiago, Chile. His research interests center around the physics of length scales and novel materials in condensed matter physics. This includes experimental studies of magnetism, superconductivity, magnetotransport, optical and mechanical properties of thin films and complex materials, as well as numerical simulation and theoretical studies in related areas.

MEDALS AND LECTURESHIPS

1999 JOHN H. DILLON MEDAL

Anne M. Mayes
Massachusetts Institute of Technology

Citation: "For her unique combination of theoretical and experimental insight into polymer self-organization."

Mayes is currently associate professor of polymer physics at M.I.T. She received her Ph.D. from Northwestern University in 1991 in the field of Materials Science and Engineering. Following a two-year appointment as visiting scientist at IBM Almaden Research Center, she joined the M.I.T. faculty in 1993. In 1995 she was named Class of '48 Assistant Professor of Polymer Physics, and was promoted to Associate Professor in 1997. Her research program consists of integrated theoretical and experimental studies of polymeric materials, with special emphasis on block copolymers and polymer surfaces and interfaces. Mayes is author or co-author of over 50 publications.

1999 EDWARD A. BOUCHET AWARD

Alfred Z. Msezane
Clark Atlanta University

Citation: "For continuing outstanding contributions to theoretical atomic physics and leadership in the creation and administration of a highly regarded research center of excellence."

Msezane, professor of physics and director of the NSF-funded CTSPS at Clark Atlanta University, received his Ph.D. in physics from the University of Western Ontario in 1973. Naturalized in 1985, he immigrated to the U.S. from South Africa via Canada for postdoctoral research. He has worked at Witwatersrand University (South Africa), Georgia State University, the University of New Brunswick, Louisiana State University, Morehouse College, and Atlanta University, joining Clark's faculty in 1989. Msezane's current research includes electron / photon interactions, particularly non-dipole effects in atoms and the elucidation of small-angle electron scattering through innovative theoretical approaches.

1999 DAVID ADLER LECTURESHIP AWARD

Leonard C. Feldman
Vanderbilt University

Citation: "For distinguished research and lecturing on ion beam analysis, semiconductor surfaces and thin film growth."

Feldman received his Ph.D. from Rutgers State University in 1967. He then joined AT&T Bell Laboratories, serving as a member of the staff and department head in departments associated with semiconductor materials physics. In 1996 he assumed the position of Stevenson Professor of Physics at Vanderbilt University and Distinguished Visiting Scientist at Oak Ridge National Laboratory. Feldman's scientific contributions have centered about the use of ion beams for the study and modification of solids. This work addressed question of surface structure of solids, mostly semiconductors, at the monolayer level. Current scientific endeavors include ion beam applications to nanostructures and organic materials.

DISSERTATION AWARDS

1999 OUTSTANDING DOCTORAL THESIS RESEARCH IN BEAM PHYSICS

Zhirong Huang
Stanford University

Citation: "For his analysis of radiation damping and quantum excitation in novel accelerator configurations."

Huang was born and raised in China. He received his B.S. in physics from Caltech in 1992, receiving his Ph.D. in physics in 1998 from Stanford University. His thesis research was on radiative cooling of relativistic electron beams. This research centered on both fundamental aspects and innovative methods of generating ultra-low emittance electron beams and has generated three published papers in *Physical Review*. In May 1998, Huang joined the Advanced Photon Source at Argonne National Laboratory as a staff physicist. His current research is in the interaction of photons and electrons, with emphasis towards free-electron laser development.

1999 NICHOLAS METROPOLIS AWARD FOR OUTSTANDING DOCTORAL THESIS WORK IN COMPUTATIONAL PHYSICS

Luis Lehner
University of Pittsburgh

Citation: "For developing a method that significantly advances the capability for modeling gravitational radiation by making possible the stable numerical solution of Einstein's equation near moving black holes."

Lehner received his "Licenciatura en Fisica" from the National University of Cordoba in Argentina in 1993, where he continued holding a Research Fellowship. In August 1994 he moved to the University of Pittsburgh, where he received his Ph.D. in January 1998, remaining there as a postdoctoral fellow until August 1998. He is currently a postdoctoral fellow at the University of Texas at Austin. His main field of research is numerical relativity, studying the modeling of binary black hole collisions, critical phenomena and the evolution of matter in black hole spacetimes. He is also interested in non-perturbative quantum gravity.

1999 OUTSTANDING DOCTORAL THESIS RESEARCH IN NUCLEAR PHYSICS

Eric A. Hawker
Texas A&M University

Citation: "For his major contributions to the measurement and analysis of the Drell-Yan cross section that made possible the first determinations of ratio and difference of anti-up quark and anti-down quark densities in the nucleon as functions of the anti-quark momentum fraction. The results will help elucidate the roles played by perturbative and non-perturbative Quantum Chromodynamics in the structure of the nucleon."

Hawker graduated from the University of Illinois in 1991 with a B.S. in engineering physics, and proceeded to pursue graduate studies in physics at Texas A&M University, completing his PhD in 1998.

His thesis was based on his work as part of a Texas A&M group collaborating on the Fermilab E866 (NuSea) experiment.

He currently holds a postdoctoral position with Los Alamos National Laboratory, and is a collaborator on the BooNE experiment at Fermilab.

Editor's Note: The recipients of the 1998 Apker Award will also be honored during the ceremonial session at the Centennial Meeting. Names, citations and biographical information were published in the December 1998 issue of APS News. The recipient of the 1999 Outstanding Doctoral Thesis Research in Atomic, Molecular and Optical Physics will be selected at the Centennial Meeting.

APS Council Announces 1998 APS Fellows

The APS Council elected 204 members as Fellows of the Society at its November 1998 meeting. The names and citations of new APS fellows are listed below. Nominations for fellowship are received by the APS headquarters throughout the year, and are forwarded for review to the appropriate division and topical group fellowship committees. These in turn forward their recommendations to the APS Fellowship Committee, chaired in 1998 by APS Vice President James S. Langer (University of California, Santa Barbara).

Fellowship nomination forms may be obtained by writing to the APS Fellowship Office, One Physics Ellipse, College Park, MD 20740- 3844, by accessing the APS URL: http://www.aps.org, or sending an email message to honors@aps.org.

Adkins, Gregory Scott
Franklin & Marshall College
Fundamental Const. Topical Group
For numerous contributions to the theory of the hyperfine splitting and decay rate of positronium.

Alascio, Blas Rafael
Centro Atomic
Forum on International Physics
For important contributions to the theory of correlated electrons and intermediate valence, and developing the Instituto Balseiro to its current international importance.

Anisimov, Mikhail Alexeevich
University of Maryland
Chemical Physics
For his outstanding contributions towards a fundamental understanding of critical phenomena in fluids and fluid mixtures including complex fluids and liquid crystals.

Baer, Howard Arthur
Florida State University
Particles & Fields
For contributions to the search for new states of matter and for elucidating the observable consequences of weak-scale supersymmetry.

Baragiola, Raúl Antonio
University of Virginia
DAMOP (Atomic, Molecular, Optical)
For broad contributions to our understanding of interactions of energetic particles with solids, especially regarding mechanisms of electron emission and desorption and astronomical applications.

Bartschat, Klaus Richard
Drake University
DAMOP (Atomic, Molecular, Optical)
For his contributions to the theory and numerical treatment of atomic collisions through advancing the density matrix description and developing the R-matrix with pseudo-states approach.

Basov, Nicolay G.
Lebedev Physics Institute
For fundamental work in the field of quantum electronics, which has led to the construction of oscillators and amplifiers based on the maser-laser principles.

Bednorz, J. Georg
IBM Research, Zurich Research Lab.
For an important breakthrough in the discovery of superconductivity in ceramic materials.

Bedzyk, Michael J.
Northwestern Univ. & Argonne Nat. Lab.
DCMP (Condensed Matter)
For the development of variable-period x-ray standing wave experiments.

Bennett, Charles Henry
IBM Watson Research Center
For inventing reversible computation, for his analysis of Maxwell's demon, and for co-inventing quantum cryptography and quantum teleportation.

Berger, Beverly K.
Oakland University
Gravitational Topical Group
For her pioneering contributions to global issues in classical general relativity, particularly the analysis of the nature of cosmological singularities, and for founding the Topical Group on Gravitation of the APS.

Bernard, Peter Simon
University of Maryland
Fluid Dynamics
For elucidating the physics of turbulent transport and incorporating this knowledge in original closure models and for unraveling knotty problems in isotropic turbulence decay.

Bernard, Claude
Washington University
Computational Physics
For his many contributions to the numerical study of quantum chromodynamics, particularly of the weak decays of strongly interacting particles.

Berz, Martin
Michigan State University
Physics of Beams
For pioneering the application of computational differential algebra to modeling and analysis of beam dynamics.

Bokor, Jeffrey
University of California, Berkeley
Laser Science
For contributions to laser science, including short-wavelength lasers and non-linear optics, development of time-resolved, two-photon photoemission, and contributions to extreme ultraviolet lithography and sub-micron MOSFET device development.

Bond, J. Richard
University of Toronto
Astrophysics
For fundamental contributions to astrophysics and cosmology; in particular for developing the understanding of fluctuations in the cosmic background radiation.

Boswell, Roderick William
Australian National University
Forum on International Physics
For the invention, development, theory and applications of the helicon plasma source.

Bozovic, Ivan
Varian Research Center
Materials Physics
For his outstanding contributions to atomic-layer engineering of cuprate superconductors and other complex oxides, fabriction of delicate multilayers and superlattices, and their innovative spectroscopic characterization.

Braun, Hans Albert
University of Marburg
Biological Physics
For the discovery of noise mediated neuronal oscillators and for elucidating their nonlinear dynamical properties.

Buck, III Warren Wesley
Hampton University
Forum on Education
For creating a Ph.D. program in physics at Hampton University, pioneering several model programs to attract diverse students into physics, and involving minority educational institutions in physics research.

Buckman, Stephen John
Australian National University
DAMOP (Atomic, Molecular, Optical)
For benchmark experiments in low-energy electron-atom and electron-molecular scattering.

Burns, Jack O'Neal
University of Missouri - Columbia
Astrophysics
For fundamental contributions to the observation and numerical modeling of extragalactic jets and clusters of galaxies.

Camp, William J.
Sandia National Laboratories
Computational Physics
For contributions to computational methods in the theory of phase transition and in reactor safety physics, and for seminal efforts in high performance computing for science and engineering.

Car, Roberto
Universite de Geneve
Materials Physics
For outstanding contributions to physics, especially the combination of molecular dynamics with density functional theory which has proven to be a powerful method to study atomic-scale dynamics in molecules and solids.

Carlson Joseph Allen
Los Alamos National Laboratory
Nuclear Physics
For the development of novel Green's Function Monte Carlo algorithms and their pioneering application to exact calculations of the structure and response of light nuclei using contemporary, realistic nuclear interactions.

Carter, Emily Ann
U.C.L.A.
Chemical Physics
For her pioneering development and applications of ab-initio methods to energetics, kinetics and dynamics studies of surface reactions.

Casperson, Lee Wendel
Portland State University
Laser Science
For his pioneering contributions to the field of laser instabilities, the discovery of the laser instability that bears his name, and his numerous advances in laser and resonator design.

Centrella, Joan Mary
Drexel University
Astrophysics
For her original contributions to numerical relativity, cosmology, and astrophysics, in particular for her studies of large-scale structure in the universe and sources of gravitational radiation.

Chen, James
Naval Research Laboratory
Plasma Physics
For innovative and unique research in chaos and nonlinear dynamics, and in the evolution of large-scale solar plasma eruptions and their impact on the magnetosphere.

Chivukula, R. Sekhar
Boston University
Particles & Fields
For contributions to the understanding of electroweak symmetry breaking and flavor symmetry.

Cieplak, Marek
Polish Academy of Sciences
Computational Physics
For his insightful contributions to the numerical studies of disordered systems.

Cohen, Yachin
Technion
High Polymer Physics
For his insightful microstructural studies of polymer-solvent complexes of rigid polymers and their role in phase transformations from solution to the gel and to the solid state.

Colby, Ralph H.
Pennsylvania State University
High Polymer Physics
For advancing the understanding of the dynamics of macromolecular liquids.

Cotanch, Stephen Robert
North Carolina State University
Few Body Systems Topical Group
For sustained contributions to hadronic and electromagnetic studies of strangeness and theoretical advancements in nuclear and photonuclear reactions and hadron structure.

Cowley, Steven Charles
University of California, Los Angeles
Plasma Physics
For the discovery of explosive energy release mechanisms in MHD and numerous important contributions to the theory of fusion and astrophysical plasmas.

Curtright, Thomas Lynn
University of Miami
Particles & Fields
For applications of relativistic quantum field theories to supersymmetry and to the theory of strings and membranes.

Cushing, James T.
University of Notre Dame
Forum on History of Physics
For his deep analyses of the interpretation of quantum mechanics in an historical and philosophical context.

Da Silva, Luiz Barroca
Lawrence Livermore National Laboratory
Plasma Physics
For his pioneering use of x-ray lasers and laser generated shock waves to study high density plasmas.

Dagotto, Elbio
Florida State University
DCMP (Condensed Matter)
For the development and use of computational methods to study strongly correlated electron materials.

Dahm, Werner J.A.
University of Michigan
Fluid Dynamics
For his many insightful studies of small-scale turbulence, and for the development of novel experimental techniques, including "scalar image velocimetry".

Deleplanque, Marie-Agnes D.
Lawrence Berkeley National Laboratory
Nuclear Physics
For her groundbreaking work in the studies of nuclear structure at the highest angular momenta and important contributions to the developments of gamma-ray detector arrays.

Della, Torre Edward
The George Washington University
Magnetism & Its Application
For his contribution to the understanding of magnetizing processes through numerical micromagnetic and Preisach modeling.

Detar, Carleton Edward
University of Utah
Computational Physics
For wide ranging contributions to hadronic and computational physics from the MIT bag model, to lattice studies of the spectrum, and especially for study of the quark-gluon plasma.

Dewey, Thomas Gregory
University of Denver
Biological Physics
For applications of fractals and complexity theory to biological systems with emphasis on sequence: structure relationships in proteins.

Dimonte, Guy
Lawrence Livermore National Laboratory
Plasma Physics
For outstanding contributions to understanding turbulence and mixing in high energy density fluids by novel experimental techniques and facilities.

Dobaczewski, Jacek
Warsaw University
Nuclear Physics
For his pioneering contributions to our understanding of the nuclear many-body problem, especially the development of mean-field techniques and boson expansion methods.

Drever, Ronald W. P.
California Institute of Technology
Gravitational Topical Group
For his fundamental experiment to test the isotropy of space, and for his pioneering contributions to laser interferometry as a tool for gravitational-wave detection.

Dutto, Gerardo Giovanni
TRIUMF
Physics of Beams
For contributions to the development of high-intensity H^- cyclotrons both as meson facilities and for production of proton-rich radioisotopes.

Eaton, William A.
National Institute of Health
Biological Physics
For his contributions towards the understanding of physical mechanisms of protein folding, and the function of heme proteins.

Edelstein, Norman Marvin
Lawrence Berkeley Laboratory
DCMP (Condensed Matter)
For optical and magnetic studies of the electronic structure of actinide ions.

Ellis, Paul John
University of Minnesota
Nuclear Physics
For his diverse contributions to the study of light nuclei using nuclear shell model methods; and to the study of pion-nucleon scattering using chiral Lagrangians.

Farrow, Robin F. C.
IBM Almaden Research Center
Materials Physics
For pioneering the development of molecular beam epitaxy to grow and study epitaxial semiconductors, metastable phases, dielectrics, magnetic elements and alloys.

Fauchet, Philippe M.
University of Rochester
DCMP (Condensed Matter)
For experimental contributions to understanding properties of porous silicon.

Feagin, James Marshall
Calif. State University - Fullerton
DAMOP (Atomic, Molecular, Optical)
For advancements towards understanding the dynamical symmetries of the few-body Coulomb problem, particularly of low-energy bound and continuum electron pairs.

Felker, Peter Mark
UCLA
Chemical Physics
For the development of rotational coherence spectroscopy and ion-detected Raman spectroscopy and major contributions in the study of molecular clusters and intermolecular interactions.

Fisher, Matthew P. A.
University of California, Santa Barbara
DCMP (Condensed Matter)
For contributions to theories of vortex states, superconductor-insulator transitions, and edge states in the quantum Hall effect.

Foster, George William
Fermilab
Particles & Fields
For contributions to development of large scale particle physics electronics, and for a leading role in the design of the permanent magnetic-based Fermilab Antiproton Recycler ring.

Fradkin, Eduardo Hector
University of Illinois
DCMP (Condensed Matter)
For the application of quantum field theory methods to condensed matter physics.

Francisco, Joseph S.
Purdue University
Chemical Physics
For his fundamental contributions to the theoretical and spectroscopic elucidation of critical transient species in atmospheric chemical processes.

Frank, Alejandro Hoeflich
Instituto de Ciencias Nucleares
Forum on International Physics
For fundamental contributions to the development and application of algebraic models in nuclear physics, and especially to algebraic scattering theory and the discovery of scissors states in odd-mass nuclei.

Fraser, Gerald Timothy
NIST
Chemical Physics
For major contributions to the understanding of weak intermolecular forces, vibrational couplings, intramolecular vibrational energy redistribution, and the development of the technique of electric-resonance optothermal spectroscopy.

Fredrickson, Glenn H.
University of California, Santa Barbara
High Polymer Physics
For contributions to the theory of block copolymers and polymer blends.

Fullerton, Eric Edward
IBM Almaden Research Center
Magnetism & Its Application
For innovative contributions to understanding the growth, structural characterization, and magnetic properties of metallic thin films and superlattices.

Garito, Anthony F.
University of Pennsylvania
DCMP (Condensed Matter)
For contributions to the understanding of enhancement mechanisms for second and third order nonlinear optical processes in organic and polymer structures.

Garoff, Stephen
Carnegie Mellon University
DCMP (Condensed Matter)
For experimental studies of the dynamics of wetting.

Gharib, Morteza
Caltech
Fluid Dynamics
For his innovative experimental techniques, such as digital particle-image velocimetry and soap film tunnel, and for his fundamental contributions to the study of vorticity dynamics in wakes, free-surface and cardiac flows.

Gilbert, Walter
Harvard University
For fundamental studies of the biochemistry of nucleic acids with particular regard to recombinant-DNA.

Glendinning, Sharon Gail
Lawrence Livermore National Laboratory
Plasma Physics
For clear and illuminating experimental investigations of ablation-front Rayleigh-Taylor instability, laser imprinting, and nonlinear hydrodynamic instabilities relevant to inertial confinement fusion, high energy-density physics and astrophysics.

Gold, Steven Harvey
Naval Research Laboratory
Plasma Physics
For outstanding contributions to research on high power, coherent radiation sources driven by intense, relativistic electron beams, including millimeter-wave free-electron lasers, gyrotron oscillators and amplifiers, and the magnicon.

Goldman, Vladimir Joseph
SUNY
DCMP (Condensed Matter)
For experimental studies of quantum Hall systems.

Goshaw, Alfred T.
Duke University
Particles & Fields
For broad contributions to the study of the strong interactions in high energy hadron collisions, and for his leadership in particle physics.

Gray, Kenneth E.
Argonne National Laboratory
DCMP (Condensed Matter)
For contributions to the understanding of non-equilibrium superconductivity.

Greene, Joseph E.
University of Illinois
Materials Physics
For original contributions to the experimental development, modeling, and understanding of Si, Ge, and Si(1-x)Ge(x) atomic-layer epitaxy and gas-source molecular-beam epitaxy.

Gupta, Arunava
IBM T.J. Watson Research Cntr
Materials Physics
For contributions to the development of pulsed laser deposition techniques, the use of this technique for the production of materials with novel physical properties, and for original contributions to the understanding of nonequilibrium film-growth mechanisms.

Gupta, Rajendra
University of Arkansas
Laser Science
For the first Doppler-free spectroscopy of optically inaccessible states of alkali atoms, for the most complete study of photothermal technique in flowing fluids, and for innovative use of photothermal technique to combustion diagnostics.

Halley, J. Woods
University of Minnesota
DCMP (Condensed Matter)
For contributions to the theory of superfluidity and to the theory of electrode-electrolyte interfaces.

Hammel, Peter C.
Los Alamos National Laboratory
DCMP (Condensed Matter)
For nuclear magnetic resonance studies of superconducting cuprates.

Hauptman, Herbert Aaron
Hauptman-Woodward Medical Research
For outstanding achievements in the development of direct methods for the determination of crystal structures.

Havey, Mark Douglas
Old Dominion University
DAMOP (Atomic, Molecular, Optical)
For development and explication of novel one- and two-photon spectroscopies of bound and dissociative electronic states of diatomic molecules; also for development of precision atomic two-photon polarization spectroscopy for determination of atomic matrix elements and novel sum rule.

Hays, Dan A.
Xerox Corp
Forum on Industrial and Applied Physics
For original contributions to the physics of Xerography.

Hillebrecht, Franz Ulrich
Düsseldorf Universitaet
DCMP (Condensed Matter)
For contributions to the development of spin polarized photoemission.

Hoffmann, Gerald Wayne
University of Texas, Austin
Nuclear Physics
For contributions to precision measurements of intermediate energy proton-nucleus scattering cross sections and polarization observables, development of polarized nuclear targets, and the understanding of nucleon-nucleus scattering dynamics.

Holmes, Neil C.
Lawrence Livermore National Laboratory
Shock Compression Topical Group
For innovative experimental studies to elucidate and understand the response of condensed matter to dynamic high pressures.

Holt, Rush D.
U.S. Congress
For advancing the health of science in the US through important contributions to plasma physics research, public science education reform, and public service.

Huth, John
Harvard University
Particles & Fields
For contributions to the study of quantum chromodynamics in high energy proton-antiproton collisions.

Jackson, Gerald Peter
Fermilab
Physics of Beams
For conceptual and technical innovations in circular colliders, leading to record-breaking luminosities in the Tevatron, and to the Recycler.

Javanainen, Juha M.
University of Connecticut
DAMOP (Atomic, Molecular, Optical)
For fundamental contributions to theoretical quantum optics, especially light pressure, laser cooling and trapping, and optical properties of Bose-Einstein condensates.

Johnson, W. Neil
Naval Research Laboratory
Astrophysics
In recognition of outstanding contributions to observational gamma-ray astrophysics, development of the OSSE instrument, and the understanding of high-energy emissions from the Galaxy and Active Galactic Nuclei.

Jones, Ieuan Rinallt
The Flinders Univ. of South Australia
Plasma Physics
For advancing the understanding of the interaction of radio frequency power with plasma and pioneering the use of rotating magnetic fields to produce the Rotamak compact torus configuration.

Jossem, E. Leonard
The Ohio State University
Forum on Education
For his leadership, persistence, and numerous contributions that advanced the enterprise of physics education and built a community of physics educators, both in the USA and internationally.

Kaplan, David B.
University of Washington
Nuclear Physics
For his insightful and original contributions to nuclear and particle physics, spanning topics such as kaon condensation, strangeness in the nucleon, weak scale baryogenesis, and chiral fermions on the lattice.

Kautz, Richard Lloyd
National Inst. of Standards & Tech.
Inst. & Measurements Topical Group
For experimental and theoretical investigations of Josephson junctions, particularly the nonlinear dynamics of phase locking and chaos, essential to the development of practical series-array voltage standards.

Kenkre, Vasudev Mangesh
University of New Mexico
Chemical Physics
For fundamental advances in the transport of quasiparticles in materials, ultrafast phenomena, disordered materials, and light-matter interactions.

Khosla, Rajinder P.
National Science Foundation
Forum on Industrial and Applied Physics
In recognition of exemplary leadership in developing innovative and creative applications of microelectronics in imaging technology.

Koch, Donald L.
Cornell University
Fluid Dynamics
For original contributions to our understanding of suspension mechanics in areas of bubbly flows, fiber suspensions, gas-solid suspensions, colloids, liquid crystals, and transport in porous media.

Kossler, William John
College of William & Mary
DCMP (Condensed Matter)
For pioneering work using muon spin rotation techniques in condensed matter physics.

Kotschenreuther, Michael T.
University of Texas, Austin
Plasma Physics
For fundamental contributions to the self-consistent theory of magnetic island formation, for the implementtion of the §f numerical technique, and for developing theoretical techniques that quantitatively describe plasma transport in tokamaks.

Krauss, Lawrence M.
Case Western Reserve University
Astrophysics
For his original contributions at the interface of particle physics and astrophysics

Krisch, Jean Peck
University of Michigan
Forum on Education
For leadership and national contributions to the Society of Physics Students, effective and innovative undergraduate physics teaching, including to preservice elementary teachers, and for successful mentorship of women graduate students.

Kritz, Arnold H.
Lehigh University
Computational Physics
For the development of innovative simulation tools to study wave heating, current drive and transport in plasmas, and for inspired leadership in a teamed approach to large computations.

Kumar, Sanat K.
Pennsylvania State University
High Polymer Physics
For his pioneering simulation work on thin films of polymers and thermodynamics of polymer blends.

Ladd, Anthony
University of Florida
Computational Physics
For a variety of contributions to numerical simulations of particle systems and especially for the development of lattice-gas and lattice-Boltzmann methods to particle suspension.

Landau, Rubin Harold
Oregon State University
Computational Physics
For innovative developments and practical applications of computational quantum physics to the scattering and exotic bound states of elementary particles, and for original books in quantum mechanics and computational physics.

Laughlin, Robert Bettes
Stanford University
For discovery of a new form of quantum fluid with fractionally charged excitations.

Lee, Siu Au
Colorado State University
Fundamental Const. Topical Group
For contributions to the field of high resolution laser spectroscopy, and for precision experiments in hydrogen and in tests of special relativity.

LeGoues, Francoise K.
IBM T. J. Watson Research Center
Materials Physics
For insightful contributions and creative use of electron microscopy in determining mechanisms of strain relaxation in heteroepitaxial growth of semiconductor thin films.

Limon, Peter J.
Fermilab
Particles & Fields
For many contributions to the construction of the Tevatron, leadership in the SSC Central Design Group, and guidance of the CDF calorimeter upgrade.

Liu, Kopin
Academi Sinica
Chemical Physics
For major contributions in the study of state and angle-resolved reaction and energy transfer dynamics using molecular beam techniques, in particular, the Doppler selected time-of-flight technique.

Liu, Bai Xin
Tsinghua University
Forum on International Physics
For outstanding contributions to the understanding of amorphous alloy formation by ion beam mixing.

Livingston, Arthur Eugene
University of Notre Dame
DAMOP (Atomic, Molecular, Optical)
For his contributions to the understanding of relativistic, QED, and Rydberg state atomic structures through the spectroscopy of highly-charged ions, and for precise determinations of excited-state lifetimes involving allowed and forbidden atomic transitions.

Manohar, Aneesh V.
Univ. of Calif., San Diego
Particles & Fields
For contributions to the development of effective field theories and their applications in our understanding of the fundamental properties of elementary particles.

Mate, Charles Mathew
IBM Almaden Research Center
Forum on Industrial and Applied Physics
For his pioneering contributions establishing the field of nanoscale tribology, producing widespread impact on technology, particularly on lubrication in disk drives.

Matthaeus, William Henry
University of Deleware
Computational Physics
For contributions to understanding of fluid and plasma relaxation processes, for pioneering work on novel lattice gas simulation methods, and for advances in understanding of turbulence and particle scattering in space plasmas.

McClelland, Jabez Jenkins
NIST
DAMOP (Atomic, Molecular, Optical)
For elucidation of spin polarized electron-atom interactions, and for pioneering development and application of atom optical methods in nanostructure fabrication.

McGaughey, Patrick L.
Los Alamos National Laboratory
Nuclear Physics
For his contributions to experimental high-energy nuclear physics; including his leadership of Fermilab E866, his penetrating contributions to the understanding of J/y production in nuclear collisions, and his insight and leadership in helping formulate the conceptual design of the PHENIX detector at RHIC.

Meneveau, Charles
Johns Hopkins University
Fluid Dynamics
For major contributions to understanding the multifractal nature of turbulent energy dissipation, energy, the transfer of energy across scales, and subgrid-scale models.

Meyerson, Bernard S.
IBM T. J. Watson Research Center
Forum on Industrial and Applied Physics
For the invention of ultra-high vacuum chemical vapor deposition and its application to low temperature silicon epitaxy, especially the fabrication of SiGe heterojunction bipolar integrated circuits for wireless telecommunications.

Molina, Mario J.
M. I. T.
For work in atmospheric chemistry, particularly concerning the formation and decomposition of ozone.

Moser, Robert D.
University of Illinois
Fluid Dynamics
For pioneering work on the direct numerical simulation of fully turbulent wall-bounded and free shear flows, and for insightful and elegant analysis of the dynamics and three-dimensional structure of turbulence.

Neilson, George H.
Princeton Plasma Physics Laboratory
Plasma Physics
For his pioneering work in the exploitation of magnetic equilibrium diagnostics and for his leadership in the physics design of fusion experiments.

Nelson, Ann E.
University of Washington
Particles & Fields
For contributions to the theory of CP violation, kaon condensation, baryogenesis in the early Universe and supersymmetry breaking.

Ng, Andrew
University of British Columbia
Shock Compression Topical Group
For original contributions to the understanding of optical probing of shock waves and two-temperature non-equilibrium shock states, and for the use of laser-driven shocks in advancing research on high density matter.

Nienhaus, Gerd Ulrich
University of Ulm
Biological Physics
For significant contributions to the field of protein dynamics with a broad spectrum of experimental techniques, particularly x-ray diffraction, gamma ray scattering, and time-resolved optical spectroscopies.

Oono, Yoshitsugu
University of Illinois
Statistical & Nonlinear Physics
For significant contributions to the theory of chaos and to the understanding of non-equilibrium aspects of soft materials science.

Painter, Paul C.
Penn State University
High Polymer Physics
For theoretical and spectroscopic characterization of hydrogen bonded polymer blends.

Perry, Anthony Edward
University of Melbourne, AU
Fluid Dynamics
For physical insights into the behavior of turbulence, structure-based modeling approaches, elegant use of scaling arguments, and inspirational teaching.

Polanyi, John C.
University of Toronto
For contributions concerning the dynamics of chemical elementary processes.

Poling, Ronald A.
University of Minnesota
Particles & Fields
For contributions to the experimental understanding of b-quarks and his leadership role in the CLEO collaboration.

Polyzou, Wayne Nicholas
The University of Iowa
Few Body Systems Topical Group
For contributions to understanding the formulation of Poincaré invariant few body models.

Possin, George Edward
General Electric Corp. R & D
Forum on Industrial and Applied Physics
For sustained excellence in the science and technology of medical X-ray imaging equipment, flat panel displays, and semiconductor physics.

Preston, Daryl W.
California State University
Forum on Education
For substantially advancing and disseminating the art of experimental physics as taught to undergraduates by developing experiments, publishing books, and directing faculty workshops on laboratory physics for undergraduates.

Proctor, Ivan David
Lawrence Livermore National Laboratory
Forum on Industrial and Applied Physics
For producing accuracy, capacity and capability improvements in accelerator mass spectrometry that have contributed to archaeology, the earth sciences, the biological sciences and arms control.

Rahman, Talat Shahnaz
Kansas State University
DCMP (Condensed Matter)
For theoretical studies of surface dynamics.

Rehm, Karl Ernst
Argonne National Lab.
Nuclear Physics
For decisive clarification of the reaction mechanisms in the interaction and fusion of heavy ions and the development of radioactive beams for measurements of importance to explosive nucleosynthesis.

Rigden, John S.
American Institute of Physics
Forum on History of Physics
In recognition of his distinguished historical research, and his devotion to the advancement of physics through education, administration, and public service.

Rimai, Donald S.
Eastman Kodak Company
Forum on Industrial and Applied Physics
For his contributions in the fields of particle adhesion and electrophotography.

Rizzo, Thomas Ralph
Ecole Polytechnique Federale de Lausanne
Chemical Physics
For development and application of double resonance and infrared photodissociation techniques to studying unimolecular reactions and vibrational spectroscopy.

Robinson, Robert Alan
Los Alamos National Laboratory
DCMP (Condensed Matter)
For elastic and inelastic neutron scattering studies of magnetic structures.

Rose, Harvey A.
Los Alamos National Lab.
Plasma Physics
For seminal contributions to the linear and nonlinear theory of laser induced instabilities in plasmas and the role of Langmuir turbulence in the saturation of these instabilities.

Rosenzweig, James Benjamin
U.C.L.A.
Physics of Beams
For experimental and theoretical work on plasma wakefield acceleration and focusing techniques, and developments in the theory and diagnosis of high brightness, short pulse electron beams.

Rubinstein, Roy
Fermilab
Forum on International Physics
For his leadership on behalf of Fermilab, US physics organizations and international physics organizations to strengthen collaboration among physicists of the world.

Ruggiero, Alessandro G.
Brookhaven National Laboratory
Physics of Beams
For contributions to accelerator theory, including instabilities and nonlinear dynamics; to accelerator complex designs notably the Antiproton Source and the Relativistic Heavy Ion Collider; and to accelerator architecture investigation of Spallation Neutron Sources.

Ryutomv, Dmitri D.
Lawrence Livermore National Laboratory
Forum on International Physics
For his long-continued contributions to the diverse areas of fusion plasma and astrophysical research, in a career characterized by exceptional analytical skills and innovative ideas.

Rzazewski, Kazimierz
Polish Academy of Sciences
Laser Science
For creative application of the methods of quantum optics to frontier problems of strong-field and atomic physics.

Sai-Halasz, George Anthony
IBM, T.J. Watson Research Center
Forum on Industrial and Applied Physics
For his applications of physics in seminal contributions to microelectronics.

Sales, Brian Craig
Oak Ridge National Laboratory
Materials Physics
For development of important new materials for: (a) the storage of nuclear waste, and (b) the generation of electrical power.

Salin, Antoine Beno
Universite Bordwaux I
DAMOP (Atomic, Molecular, Optical)
For fundamental contributions to the theory of ion-atom collisions including the development of CDW method for the description of charge transfer, and elucidation of the role of dynamic correlation.

Sauls, James Avery
Northwestern University
DCMP (Condensed Matter)
For contributions to theories of unconventional superfluidity and superconductivity.

Scheffler, Matthias
Max-Planck-Gesellschaft
Materials Physics
For significant contributions to elucidating atomic-scale structures in solids and solid surfaces by first-principles approaches.

Schenck, John Frederic
General Electric Corp. R&D Center
Biological Physics
For contributions to the physics of magnetic resonance imaging.

Schrader, David M.
Marquette University
DAMOP (Atomic, Molecular, Optical)
In recognition of significant contributions to the discovery of positron-atoms and positron-molecules.

Schutz, Bernard Fredrick
Albert Einstein Institute
Gravitational Topical Group
For his pioneering work in the theory of gravitational radiation, for the discovery of new instabilities in rotating, relativistic stars, and for elucidating how gravitational-wave observations can reveal astrophysical and cosmological information.

Schwettman, Harry Alan
Stanford University
Physics of Beams
For contributions in the development and applications of superconducting radio frequency accelerators and free-electron lasers.

Scott, Steven Douglas
Princeton Plasma Physics Lab.
Plasma Physics
For definitive experimental investigations of the cross-field transport physics of heat, particles, and angular momentum in tokamak plasma.

Serene, Joseph W.
Georgetown University
DCMP (Condensed Matter)
For contributions to theories of the normal and superfluid states of quantum liquids and strongly correlated electronic materials.

Shafi, Qaisar
University of Deleware
Particles & Fields
For contributions to the understanding of physics and cosmology, helping to understand influences on the early development of the universe and subsequent structure formation.

Shaka1, Arnold J.
Technical University of Vienna
Laser Science
For his contributions to ultrafast optics and leadership role in the funding of scientific research in Austria.

Shanabrook, Benjamin Victor
Naval Research Laboratory
DCMP (Condensed Matter)
For experimental studies of semiconductor quantum wells and superlattices.

Shapiro, Stuart Louis
Univeristy of Illinois
Astrophysics
For his broad contributions to theoretical astrophysics and general relativity, including the physics of black holes, neutron stars, and large N-body dynamical systems, and his pioneering use of supercomputers to explore these areas.

Sherrill, Bradley Marc
Michigan State University
Nuclear Physics
For his contributions to the field of radioactive beams, especially for development of innovative ion-optical techniques, and for their use in the measurement of breakup momentum distributions and obtaining their relation to the momentum wavefunctions of weakly bound nuclei.

Shimony, Abner
Boston University
Forum on History of Physics
For his original contributions both to general questions in the philosophy of science, and to the analysis of nonlocality in quantum mechanics.

Shraiman, Boris I.
AT&T Bell Laboratories
DCMP (Condensed Matter)
For theoretical contributions to statistical physics as applied to the non-linear dynamics of fluids and to magnetism.

Sobel, Henry Wayne
Univ. of Calif., Irvine
Particles & Fields
For many contributions to the study of neutrino physics and the investigation of nucleon stability.

Sokol, Paul E.
Pennsylvania State University
DCMP (Condensed Matter)
For neutron scattering studies of 3He and 4He.

Souder, Paul
Syracuse University
Nuclear Physics
For precise measurements of the effects of electroweak interactions in few-body systems, leading to fundamental information about muonium, muonic helium, and the spin structure of the nucleon.

Stephens, Peter Wesley
SUNY Stony Brook
Materials Physics
For determination of the structure of fullerene materials and elucidation of the relationships between their structures and physical properties.

Stewart, Donald Scott
Univ. of Illinois
Fluid Dynamics
For fundamental contributions to the theory of chemically reactive flows, especially concerning the dynamics of multi-dimensional detonations.

Swartz, Morris L.
Stanford Linear Accelerator Center
Particles & Fields
For contributions to high precision experimental studies of the electroweak interaction at high energy.

Tang, Ching W.
Eastman Kodak Company
Forum on Industrial and Applied Physics
For his pioneering work in organic light emitting diodes.

Tejedor, Carlos
University Autonoma de Madrid
Forum on International Physics
For his contributions to the understanding of the electronic band structure and collective phenomena in semiconductors and low-dimensionality structures, and for his influence on the development of condensed-matter physics in Spanish-speaking countries.

Thaler, Jon J.
University of Illinios
Particles & Fields
For contributions to the development of hardware and software systems for large collider detectors.

Thielemann, Friedrich K.
University of Basel
Astrophysics
For his work at the interface of nuclear physics and astrophysics and the applications to stellar nucleosynthesis, Type Ia and Type II Supernovae, as well as the r- and rp-process

Thomas, Valerie
Princeton University
Forum on Physics & Society
For her efforts to build an active interface between the science of materials and pollutants, and the avenues mechanisms necessary to build sound management strategies, and to build international networks of environmental science and policy researchers.

Tibbetts, Gary George
General Motors R & D Center
Forum on Industrial and Applied Physics
For his pioneering research which led to the discovery of vapor-phase growth of carbon fibers from natural gas and for his subsequent significant researches on the properties and applications of these fibers.

Ting, Antonio C.
Naval Research Laboratory
Plasma Physics
In recognition of his seminal experimental and theoretical contributions tot the field of ultra high intensity laser interactions.

Tiwari, Sandip
IBM Watson Research Center
Forum on Industrial and Applied Physics
For contributions to understanding of device physics and for innovations in small electronics and optical devices with strong quantum confinement.

Tornow, Werner
Duke University
Nuclear Physics
For his contributions to few-nucleon physics, especially his measurements with polarized neutron beams and their precise determination of the n-n scattering length.

Urry, Claudia Megan
Space Telescope Science Institute
Astrophysics
For pioneering studies of the nature of Active Galactic Nuclei through multi-wavelength observational campaigns and the elucidation of unified models.

Valls, Oriol Tomas
University of Minnesota
DCMP (Condensed Matter)
For contributions to the theory of unconventional Cooper paring and to the theory of nonequilibrium phenomena in liquids.

van Hemmen, Jan Leonard
Technical University of Munich
Biological Physics
For theoretically resolving learning in spatio-temporal neuronal activity with specific application to the barn owl's sound localization.

Vinokur, Valerii M.
Argonne National Laboratory
DCMP (Condensed Matter)
For contributions to the theory of vortex pinning and dynamics in a random environment.

Von Klitzing, Klaus
Max-Planck Institute - Stuttgart
For the discovery of the quantized Hall effect.

Wadehra, Jogindra Mohan
Wayne State University
DAMOP (Atomic, Molecular, Optical)
For extensive contributions to theoretical atomic and molecular physics, notably studies of the dissociative electron attachment process, scattering of positrons by atoms, and the transport of electrons in gases.

Walther, Herbert
Max-Planck-Institut für Quantenoptik
Laser Science
In recognition of his fundamental contributions to the quantum optics of atoms.

Ward, Bennie Franklin Leon
Uiversity of Tennessee
Particles & Fields
For contributions to the understanding of radiative corrections required for precision electroweak studies in electron-positron collisions.

Weiler, Margaret Horton
Lockheed Martin
Forum on Industrial and Applied Physics
For fundamental contributions to HgCdTe infrared detector and GaAs microwave device technologies, in the development and experimental validation of new physical models for semiconductor device properties and their influence on system applications.

Weinberger, Peter
Technische Universitat
Forum on International Physics
For the development of techniques for relativistic electron structure calculations and their application.

Weiss, Robert A.
University of Connecticut
High Polymer Physics
For outstanding contributions to the understanding of viscoelastic and phase equilibria in high polymers, especially in ionomeric and liquid crystalline high polymers.

West, Roy N.
University of Texas, Arlington
DCMP (Condensed Matter)
For contributions to the development of positron annihilation spectroscopy.

White, Steven R.
Univ. of Calif., Irvine
Computational Physics
For the development of the density matrix renormalization group method which provides a powerful numerical technique for investigating the properties of strongly correlated electron systems.

White, Carter T.
Naval Research Laboratory
Chemical Physics
For theoretical contributions to materials chemistry problems including carbon-based conductors and energetic materials.

Wiescher, Michael C. F.
University of Notre Dame
Nuclear Physics
For his productive work both in laboratory nuclear astrophysics measurements and in connecting those results to specific astrophysical sites.

Wilson, Kenneth G.
The Ohio State Unversity
For his theory for critical phenomena in connection with phase transitions.

Winkler, Peter
University of Nevada, Reno
DAMOP (Atomic, Molecular, Optical)
For development of innovative theoretical methods to describe many-body effects in atomic structure and atomic interactions in plasma environments.

Wodkiewicz, Krzysztof
Warsaw University
Laser Science
For key contributions to our understanding of the role of stochastic processes in nonlinear optical resonance, and for pathbreaking studies of the operational approach to quantum phase-space measurements.

Wollan, David S.
US Arms Control & Disarmament Agncy
Forum on Physics & Society
For leadership in the arms control of both offensive and defensive strategic arms, combining deep technical analysis with legal and diplomatic expertise regarding the SALT II, START I, and ABM treaties.

Yaffe, Laurence G.
University of Washington
Particles & Fields
For work on finite temperature gauge field theory and on non-perturbative approximations to quantum field theory.

Yang, Guozhen
Chinese Academy of Sciences
Forum on International Physics
For his achievements in optics computing and laser physics, his outstanding accomplishments in scientific management, and his significant contributions to international exchanges.

Yodh, Arjun Gaurang
University of Pennsylvania
DCMP (Condensed Matter)
For contributions to the use of diffusing light fields in studies of the structural, dynamical, and spectroscopic properties of highly scattering materials.

Yoh, John
Fermilab
Particles & Fields
For contributions to the discovery of the Upsilon resonance indicating the existence of the b-quark.

Yuan, Jian-Min
Drexel University
Chemical Physics
For the application of nonlinear dynamics and chaos theory to the understanding of atomic and molecular processes, particularly laser-induced molecular dissociation and ionization.

Zeilinger, Anton
University of Innsbruck
DAMOP (Atomic, Molecular, Optical)
For elucidating and extending the mystery of the quantum phenomena of interference and entanglement by elegant experiments with neutrons, atoms, and photon pairs together with new theoretical insights.

Zhang, Zhenyu
Oak Ridge National Laboratory
Materials Physics
For original and innovative contributions to the understanding of thin-film growth mechanisms and kinetic/dynamical processes at surfaces.

Zimmerman, Jr. William
University of Minnesota
DCMP (Condensed Matter)
For research on macroscopic quantum properties and vorticity in superfluid 4HE.

1999 APS Fellowship Nomination Deadlines

Fellowship nominations may be submitted at any time, but must be received by the deadlines listed below for 1999 review. Nomination forms and submission information may be found through the APS Home Page [www.aps.org] under the Fellowship button.

All nominations should be sent to: Executive Officer, The American Physical Society; One Physics Ellipse, College Park. MD 20750; ATTN: Fellowship Program

UNIT	DEADLINE (1999)
DIVISIONS	
Astrophysics	05/01
Biological Physics	06/01
Chemical Physics	Past
Computational Physics	Past
Atomic, Molecular, Optical	Past
Condensed Matter	Past
Fluid Dynamics	Past
High Polymer Physics	Past
Laser Science	04/01
Materials Physics	Past
Nuclear Physics	04/01
Particles & Fields	04/01
Physics of Beams	03/15
Plasma Physics	04/01

UNIT	DEADLINE (1999)
FORUMS	
Physics & Society	04/01
History of Physics	04/01
International Physics	04/01
Industrial & Applied Physics	03/01
Education	Past
TOPICAL GROUPS	
Few Body	04/01
Fundamental Constants	04/01
Precision Instrs. & Meas.	04/01
Shock Compression	04/01
Gravitation	04/01
Magnetism & Its Appli.	05/06

APS GENERAL NOMINATIONS 06/01

Nomination Announcements

Call for Nominations for Y2K APS Prizes and Award

The following prizes and awards will be bestowed by the Society in 2000. Members are invited to nominate candidates to the respective committees charged with recommending the recipients. A brief description of each prize and award is given below, along with the addresses of the selection committee chairs to whom nominations should be sent. Please refer to the APS Membership Directory, pages A21-A40, for complete information regarding rules and eligibility requirements for individual prizes and awards, or visit the Prize and Awards page on the APS Web site at http://www.aps.org.

NOMINATION DEADLINE IS JULY 1, 1999, UNLESS OTHERWISE INDICATED.

PRIZES

WILL ALLIS PRIZE FOR THE STUDY OF IONIZED GASES

Sponsored by AT&T, General Electric, GTE, IBM, and Xerox Corporations.

Purpose: To recognize and encourage outstanding research into the microscopic or macroscopic behavior of ionized gases.

Send name of proposed candidate and supporting information to: Chair, Allis Prize, J.W. McConkey, Dept. of Physics, Univ. of Windsor; Windsor, ON N9B 3P4; Canada; Fax (519) 973-7075, Email: mcconk@server.uwindsor.ca

HANS A. BETHE PRIZE

Endowed by contributions from the Division of Astrophysics, the Division of Nuclear Physics and friends of Hans Bethe.

Purpose: To recognize outstanding work in theory, experiment or observation in the areas of astrophysics, nuclear physics, nuclear astrophysics, or closely related fields.

Send name of proposed candidate and supporting information to: John D Walecka, Dept of Physics, College William and Mary, PO Box 8795, Williamsburg, VA 23187-8795, Phone (757) 221-3530, Fax (757) 221-3540, Email walecka@physics.wm.edu

BIOLOGICAL PHYSICS PRIZE

Established by the Division of Biological Physics. Corporate sponsors include Abbot Labs, Bio-Rad Microscience Division, Candela Laser Corp., Coherent Laser Products Group, Eastman Kodak, Furumoto Research Foundation, Newport Corporation, and Siemans AG Medical Enigneering Group.

Purpose: To recognize and encourage outstanding achievement in biological physics research.

Send name of proposed candidate and supporting information to: Egidijus E. Uzgiris, GE Research & Development Center, PO Box 8, Schenectady, NY 12301, Phone: (518) 387-6408, Email: uzgiris@eaglet.crd.ge.com

TOM W. BONNER PRIZE IN NUCLEAR PHYSICS

Endowed by friends of Tom W. Bonner.

Purpose: To recognize and encourage outstanding experimental research in nuclear physics, including the development of a method, technique, or device that significantly contributes in a general way to nuclear physics research.

Send name of proposed candidate and supporting information to: Sam Austin, NSCL, Michigan State Univ,East Lansing MI 48824-1321, Phone (517) 333-6311, Fax 517 353 3246, Email Austin@nscl.msu.edu

OLIVER E. BUCKLEY CONDENSED MATTER PHYSICS PRIZE

Endowed by AT&T Bell Laboratories.

Purpose: To recognize and encourage outstanding theoretical or experimental contributions to condensed matter physics.

Send name of proposed candidate and supporting information to: Zachary Fisk, National High Magnetic Field Laboratory, Florida State University, 1800 E Paul Dirac Dr, Tallahassee FL 32306-4005, Phone (850) 644-2922, Fax (850) 644-5038, Email FISK@MAGNET.FSU.EDU

DAVISSON-GERMER PRIZE IN ATOMIC OR SURFACE PHYSICS

Established by AT&T Bell Laboratories (now Lucent Technologies).

Purpose: To recognize and encourage outstanding work in atomic physics or surface physics.

Send name of proposed candidate and supporting information to: Chun C Lin, Dept of Physics, Univ of Wisconsin, 1150 University Ave, Madison WI 53706, Phone (608) 262-0697, Fax (608) 265-2334

DANNIE HEINEMAN PRIZE FOR MATHEMATICAL PHYSICS

Sponsored by the Heineman Foundation for Research, Educational, Charitable and Scientific Puruposes, Inc.

Purpose: To recognize outstanding publications in the field of mathematical physics.

Send name of proposed candidate and supporting information to: John L Challifour, Dept of Phys 117 Swain Hall W., Indiana Univ, Bloomington IN 47405, Phone (812) 855-3257, Fax (812) 855-5533 Email CHALLIFO@INDIANA.EDU

HIGH POLYMER PHYSICS PRIZE

Sponsored by the Ford Motor Company.

Purpose: To recognize outstanding accomplishment and excellence of contributions in high polymer physics research.

Send name of proposed candidate and supporting information to: Anna Christina Balazs, Dept of Chemical Engineering, Univ of Pittsburgh, 1231 Benedum Hall, Pittsburgh PA 15261, Phone (412) 648-9250, Fax (412) 624-1108, Email balazs@vms.cis.pitt.edu

FRANK ISAKSON PRIZE FOR OPTICAL EFFECTS IN SOLIDS

Supported by Elsevier Science, Ltd., publishers of the journal, Solid State Communications.

Purpose: To recognize and encourage outstanding contributions to the field of optical effects in solids.

Send name of proposed candidate and supporting information to: Marvin L. Cohen, Dept of Phys, UCB, Berkeley CA 94720, Phone (510) 642-4753, Fax 510 643 9473

JULIUS EDGAR LILIENFELD PRIZE

Sponsored by the Lilienfeld Trust.

Purpose: To recognize a most outstanding contribution to physics by a single individual who also has exceptional skills in lecturing to diverse audiences.

Send name of proposed candidate and supporting information to: Chair of the Lilienfeld Prize Selection Committee: Jolie Cizewski; Phys Dept Serin Lab; Rutgers Univ; PO Box 849; Piscataway NJ 08855-0849

JAMES C. MCGRODDY PRIZE FOR NEW MATERIALS

Endowed by IBM.

Purpose: To recognize and encourage outstanding achievement in the science and application of new materials. This shall include the discovery of new classes of materials, the observation of novel phenomena in known materials leading to both fundamentally new applications and scientific insights, and shall also include theoretical and experimental work contributing significantly to the understanding of such phenomena.

Send name of proposed candidate and supporting information to: Mildred Dresselhaus, 13-3005, MIT, 77 Massachusetts Ave, Cambridge MA 02139, Phone (617) 253-6864, Fax (617) 253-6827, Email millie@MGM.MIT.EDU

LARS ONSAGER PRIZE

Endowed by Russell and Marion Donnelly.

Purpose: To recognize outstanding research in theoretical statistical physics including the quantum fluids.

Send name of proposed candidate and supporting information to: Moses H W Chan, Dept of Phys, Pennsylvania State Univ, 104 Davey Lab, University Park PA 16802, Phone (814) 863-2622, Fax (814) 865-3604, Email CHAN@PHYS.PSU.EDU

GEORGE E. PAKE PRIZE

Endowed by the Xerox Corporation.

Purpose: To recognize and encourage outstanding work by physicists combining original research accomplishments with leadership in the management of research or development in industry.

Send name of proposed candidate and supporting information to: Stephen Laderman, Hewlet-Packard Laboratories, MS 25-U, 3500 Deer Creek Road, Palo Alto, CA 94304, Phone: (415) 857-3202, Fax: (415) 857-5308, email: laderman@hpl.hp.com

W.K.H. PANOFSKY PRIZE IN EXPERIMENTAL PARTICLE PHYSICS

Endowed by the friends of W.K.H. Panofsky and the Division of Particles and Fields.

Purpose: To recognize and encourage outstanding achievements in Experimental Particle Physics.

Send name of proposed candidate and supporting information to: Karl Berkelman, Newman Lab, Cornell Univ, Ithaca NY 14853, Phone (607) 255-4198, Fax (607) 254-4552, Email kb@lns62.lns.cornell.edu

EARLE K. PLYLER PRIZE FOR MOLECULAR SPECTROSCOPY

Sponsored by the George E. Crouch Foundation.

Purpose: To recognize and encourage notable contributions to the field of molecular spectroscopy.

Send name of proposed candidate and supporting information to: Paul A Alivisatos, Dept of Chem, University of California, Berkeley, Berkeley CA 94720, Phone (510) 643-7371, Email alivis@uclink4.berkeley.edu

I. I. RABI PRIZE IN ATOMIC, MOLECULAR AND OPTICAL PHYSICS

Endowed by family, friends and colleagues of I.I. Rabi.

Purpose: To recognize and encourage outstanding research in Atomic, Molecular and Optical Physics.

Send name of proposed candidate and supporting information to: Chris H Greene, JILA, Univ of Colorado, CB 440, Boulder CO 80309-0440, Phone (303) 492-4770, Fax (303) 492-5235, Email CHG@JILACG.COLORADO.EDU

ANEESUR RAHMAN PRIZE FOR COMPUTATIONAL PHYSICS

Sponsored by the IBM Corporation and Argonne National Laboratory.

Purpose: To recognize and encourage outstanding achievement in computational physics research.

Send name of proposed candidate and supporting information to: Ralph Roskies, Dept of Phys, Univ of Pittsburgh, Pittsburgh, PA 15260, Phone (412) 268-4960, Fax (412) 268-5832, Email ROSKIES@PSC.EDU

J. J. SAKURAI PRIZE FOR THEORETICAL PARTICLE PHYSICS

Endowed by the family and friends of J.J. Sakurai.

Purpose: To recognize and encourage outstanding achievement in particle theory.

Send name of proposed candidate and supporting information to: Richard Keith Ellis, MS 106, Fermilab, PO Box 500, Batavia IL 60510, Phone (630) 840-3749, Fax (630) 840-5435, Email ellis@fnal.gov

ARTHUR L. SCHAWLOW PRIZE IN LASER SCIENCE

Endowed by the NEC Corporation.

Purpose: To recognize outstanding contributions to basic research which uses lasers to advance our knowledge of the fundamental physical properties of materials and their interaction with light. Some examples of relevant areas of research are: nonlinear optics, ultrafast phenomena, laser spectroscopy, squeezed states, quantum optics, multiphoton physics, laser cooling and trapping, physics of lasers, particle acceleration by lasers, and short wavelength lasers.

Send name of proposed candidate and supporting information to: Robert W Field, Dept of Chem 6-219, MIT, 77 Massachusetts Ave, Cambridge MA 02139, Phone (617) 253-1489, Fax (617) 253-7030, Email rwfield@mit.edu

PRIZE TO A FACULTY MEMBER FOR RESEARCH IN AN UNDERGRADUATE INSTITUTION

Sponsored by the Research Corporation.

Purpose: To honor a physicist whose research in an undergraduate setting has achieved wide recognition and contributed significantly to physics and who has contributed substantially to the professional development of undergraduate physics students.

Send name of proposed candidate and supporting information to: Marjorie A Olmstead, Dept of Physics, Univ of Washington, PO Box 351560, Seattle WA 98195, Phone (206) 685-3031, Fax (206) 685-0635, Email olmstead@phys.washington.edu

ROBERT R. WILSON PRIZE

Sponsored by friends of Robert Wilson.

Purpose: To recognize and encourage outstanding achievement in the physics of particle accelerators.

Send name of proposed candidate and supporting information to: Richard J Briggs, 279 Bolla Ave, Alamo, CA 94507, Phone (510) 552-9746

AWARDS

LEROY APKER AWARD

Endowed by Jean Dickey Apker in memory of LeRoy Apker.

Purpose: To recognize outstanding achievement in physics by undergraduate students, and thereby provide encouragement to young physicists who have demonstrated great potential for future scientific accomplishment.

Send name of proposed candidate and supporting information BY 15 JUNE 1999 to: Dr. Barrett H. Ripin, The American Physical Society, One Physics Ellipse, College Park, Maryland 20740, ATTN: Apker Award Committee, Tel: (301) 209-3233, Fax: (301) 209-0865, Email: ripin@aps.org

JOSEPH A. BURTON FORUM AWARD

Endowed by Jean Dickey Apker.

Purpose: To recognize outstanding contributions to the public understanding or resolution of issues involving the interface of physics and society.

Send name of proposed candidate and supporting information to: Beverly Karplus Hartline, Office Of Sci & Tech Policy, Rm 436 OEOB, Washington, DC 20502, Phone (202) 456-6128, Fax (202) 456-6027, Email fbhartl@ibm.net

MARIA GOEPPERT-MAYER AWARD

Sponsored by the GE Fund.

Purpose: To recognize and enhance outstanding achievement by a woman physicist in the early years of her career, and to provide opportunities for her to present these achievements to others through public lectures in the spirit of Maria Goeppert-Mayer.

Send name of proposed candidate and supporting information to: Katherine Gebbie, B 160 Physics, NIST, Rte 270 & Quince Orchard Road, Gaithersburg, MD 20899, Phone (301) 975-4201, email: gebbie@nist.gov

JOSEPH F. KEITHLEY AWARD FOR ADVANCES IN MEASUREMENT SCIENCE

Endowed by Keithley Instruments, Inc., and the Instrument and Measurement Science Topical Group (IMSTG).

Purpose: To recognize physicists who have been instrumental in the development of measurement techniques or equipment that have impact on the physics community by providing better measurements.

Send name of proposed candidate and supporting information to: Lawrence G Rubin, 1504 Centre St, Newton Center MA 02159, Phone (617) 253-5517, Fax (617) 253-5405, Email lrubin@mit.edu

MEDALS AND LECTURESHIPS

DAVID ADLER LECTURESHIP AWARD

Established by friends of David Adler.

Purpose: To recognize an outstanding contributor to the field of materials physics, who is noted for the quality of his / her research, review articles and lecturing.

Send name of proposed candidate and supporting information to: Frances Hellman, Dept of Phys 0319, UCSD, 9500 Gilman Dr, La Jolla CA 92093-0319, Phone (619) 534-5533, Fax (619) 534-0173, Email fhellman@ucsd.edu

EDWARD A. BOUCHET AWARD

Sponsored by the Research Corporation.

Purpose: To promote the participation of under-represented minorities in physics by identifying and recognizing a distinguished minority physicist who has made significant contributions to physics research. The program will help publicize the lecturer's work and career development to the physics community, especially among minority physics students.

Send name of proposed candidate and supporting information to: Carlos R Handy, Dept of Physics, Clark Atlanta Univ, 223 James P Brawley Dr, Atlanta GA 30314, Phone (404) 880-8664, Fax (404) 880-8360, Email handy@pioneer.cau.edu

JOHN H. DILLON MEDAL

Sponsored by Elsevier Science, Oxford, U.K., publishers of the journal, Polymer.

Purpose: To recognize outstanding research accomplishments by young polymer physicists who have demonstrated exceptional research promise early in their careers.

Send name of proposed candidate and supporting information to: Anna Christina Balazs, Dept of Chemical Engr, Univ of Pittsburgh, 1231 Benedum Hall, Pittsburgh PA 15261, Phone (412) 648-9250, Fax (412) 624-1108, Email balazs@vms.cis.pitt.edu

LEO SZILARD LECTURESHIP AWARD

Endowed by members of the Forum on Physics and Society and the Packard, Mac Arthur, and Energy Foundations.

Purpose: To recognize outstanding accomplishments by physicists in promoting the use of physics for the benefit of society in such areas as the environment, arms control, and science policy. The lecture format is intended to increase the visibility of those who have promoted the use of physics for the benefit of society.

Send name of proposed candidate and supporting information to: Beverly Karplus Hartline, Office Of Sci & Tech Policy, Rm 436 OEOB, Washington, DC 20502, Phone (202) 456-6128, Fax (202) 456-6027, Email fbhartl@ibm.net

DISSERTATION AWARDS

OUTSTANDING DOCTORAL THESIS RESEARCH IN BEAM PHYSICS AWARD

Supported by Brookhaven Science Associates, Southwest Universities Research Association, and Universities Research Association.

Purpose: To recognize doctoral thesis research of outstanding quality and achievement in beam physics and engineering.

Send name of proposed candidate and supporting information to: Todd I Smith, Hansen Lab, Stanford Univ, Stanford CA 94305, Phone (650) 723-1906, Fax (650) 725-8311, Email tismith@leland.stanford.edu

NICHOLAS METROPOLIS AWARD FOR OUTSTANDING DOCTORAL THESIS WORK IN COMPUTATIONAL PHYSICS

Sponsored by the Journal of Computational Physics, a publication of Academic Press.

Purpose: The purpose of the award is to recognize doctoral thesis research of outstanding quality and achievement in computational physics and to encourage effective written and oral presentation of research results.

Send name of proposed candidate and supporting information to: Edmund Bertschinger, Dept of Phys 6-207, MIT, 77 Massachusetts Ave, Cambridge MA 02139, Phone (617) 253-5083, Email bertschinger@mit.edu

DISSERTATION AWARD IN NUCLEAR PHYSICS

Sponsored by the Division of Nuclear Physics.

Purpose: To recognize a recent Ph. D. in Nuclear Physics.

Send name of proposed candidate and supporting information to: Walter F. Henning, Phys 203, Argonne Natl Lab, 9700 S Cass Ave, Argonne IL 60439, Phone (630) 252-4004, Fax (630) 252-3903, Email henning@anlphy.phy.anl.gov