

New Members: Class of 2003

Class I: Mathematical and Physical Sciences

Section 1: Mathematics

Percy A. Deift

Courant Institute of Mathematical Sciences, New York University, New York, NY

Professor of Mathematics. Made seminal contributions to the theory of integrable systems and their applications in spectral theory, mathematical physics, combinatorics, and probability theory.

Lawrence Craig Evans

University of California, Berkeley, CA
Professor of Mathematics. Leader in the field of nonlinear partial differential equations. Established key estimates, regularity, existence, and other properties of solutions important to applications in many fields such as control, geometric motion, level set methods, the calculus of variations, and homogenization.

Richard Hamilton

Columbia University, New York, NY
Professor of Mathematics. Made contributions to geometry, partial differential equations, and applied mathematics. Did influential work on mean curvature flow and harmonic maps. Solved outstanding problems, including the topology and geometry of manifolds with positive curvature and Kahler-Einstein metrics.

Iain M. Johnstone

Stanford University, Stanford, CA
Professor of Statistics. With collaborators, introduced wavelets into the field of statistics and developed concepts, such as that of statistical "oracle," that have since become fundamental in prediction more generally.

Nicholas M. Katz

Princeton University, Princeton, NJ
Professor of Mathematics. Made contributions to number theory and arithmetical geometry, particularly with work on p-adic interpolation, exponential sums and L-functions over finite fields, and

related monodromy groups and their scaling limits.

Wilfried Schmid

Harvard University, Cambridge, MA
Dwight Parker Robinson Professor of Mathematics. Leader in the representation theory of Lie groups. Gave the first construction of the discrete series and proved Blattner's conjecture. Work on Hodge theory has produced wide-ranging applications.

James Grieg Arthur (FHM)

University of Toronto, Toronto, Ontario, Canada
University Professor of Mathematics. Research focuses on unifying the mathematical fields of algebra and analysis. Invented the "trace formula," which, along with one of its products, the so-called Arthur packets, is recognized as an important step in the ongoing development of Robert Langlands's theories.

Section 2: Physics

Paul M. Chaikin

Princeton University, Princeton, NJ
Henry DeWolf Smyth Professor of Physics. Experimentalist working in condensed matter physics. Discovered field-induced spin density waves. Co-authored a text that summarizes the "modern synthesis" in that field.

Michel Henri Devoret

Yale University, New Haven, CT
Professor of Applied Physics and Physics. Condensed matter physicist. Demonstrated macroscopic quantum effects in superconducting devices. Pioneer of the experiment and theory of the single electron transistor (SET), electron pump, and superconducting SET. Leader in the field of solid-state devices for quantum computing.

Matthew P. A. Fisher

University of California, Santa Barbara, CA
Professor of Physics. Condensed matter theorist. Made seminal contributions to the vortex-glass phase, the superconductor-insulator transition, and the theory of electron fractionalization. Deepened our understanding of strongly correlated electron materials.

Donald Glaser

University of California, Berkeley, CA
Professor of Physics and Neurobiology. Invented the bubble chamber to detect and study the properties of elementary particles. Developed automatic systems to find genetic mutants of microbial and mammalian cells. Co-founded the biotech company Cetus, now merged with Chiron. Received the Nobel Prize in physics in 1960.

Randall Gardner Hulet

Rice University, Houston, TX
Fayez Sarofim Professor of Physics and Astronomy. Leader in the development of laser cooling and the trapping of atoms. Achieved the first Bose-Einstein condensation in a gas with attractive interactions (^7Li). Produced a degenerate Bose-Fermi mixture of ^7Li and ^6Li atoms, and demonstrated matter wave soliton trains of Bose-Einstein condensates.

R. G. Hamish Robertson

University of Washington, Seattle, WA
Professor of Physics. Made contributions to direct mass measurements and to the Sudbury Neutrino Observatory that led to a demonstration that the origin of the solar neutrino problem is neutrino oscillations.

Ellen Dudley Williams

University of Maryland, College Park, MD
Distinguished University Professor; Director of the Materials Research Science and Engineering Center. Provided a quantitative thermodynamic analysis of faceting transitions on stepped crystal surfaces through tunneling microscopy and low-energy electron diffraction. Developed a general experimental and theoretical approach describing surface growth and evolution under a variety of nonequilibrium driving forces.

William G. Unruh (FHM)

University of British Columbia, Vancouver, British Columbia, Canada
Founding Director of the CIAR Cosmology Program; Professor of Physics and Astronomy. Changed our understanding of the notion of "particles" by discovering that

uniformly accelerating observers feel themselves to be immersed in a thermal bath at a nonzero temperature. Made numerous other contributions to general relativity, cosmology, quantum gravity, and quantum measurement theory.

Section 3: Chemistry

Fred Colvig Anson

California Institute of Technology, Pasadena, CA
Elizabeth W. Gilloon Professor of Chemistry Emeritus. Electrochemist recognized for the invention of chronocoulometric methods for analysis of adsorbed layers on electrodes, for the demonstration (together with James Collman) of the four-electron reduction of dioxygen to water, and for the development of the principles for predicting and manipulating the adsorption of species on electrodes.

Phaedon Avouris

IBM Thomas J. Watson Research Center, Yorktown Heights, NY
Manager of Nanometer Scale Science and Technology. Performed the first atomically resolved surface chemistry study, developed techniques to selectively break individual covalent bonds, and dissociated individual molecules using the scanning tunneling microscope. Demonstrated the first atomic-scale device, pioneered the fabrication and study of carbon nanotube transistors, and was first to fabricate a fully functional logic circuit on a single carbon nanotube molecule.

Carolyn R. Bertozzi

University of California, Berkeley, CA
Associate Professor of Chemistry and Molecular and Cell Biology; Investigator, Howard Hughes Medical Institute. Made contributions to the understanding of biological sulfation pathways. Developed "metabolic interference" techniques for perturbing cell surface glycosylation with unnatural sugars in order to study their function. Demonstrated that Golgi localization of polysaccharide biosynthetic enzymes determines their *in vivo* substrate specificity.

Charles H. DePuy

University of Colorado, Boulder, CO
Professor Emeritus of Chemistry. Made contributions to the fundamental understanding of organic reaction mechanisms, especially those involving strained rings. Provided detailed mechanisms, kinetics, stereochemistry, and thermochemistry of many important processes. Applied mass spectrometric flow techniques to the study of ionic organic reactions.

Paul Lyon Houston

Cornell University, Ithaca, NY
Professor of Chemistry. Innovator in the field of molecular reaction dynamics. Performed seminal work on vector correlations in photodissociation dynamics, co-invented the product imaging technique, and discovered a new channel in the ultraviolet photodissociation of ozone.

Thomas Joseph Katz

Columbia University, New York, NY
Professor of Chemistry. Performed the first syntheses of 10- π aromatics, prismane, pentaalkylphosphorus compounds, helical and oligomeric metallocenes, and helicenes and benzvalene in quantity; the first demonstrations of isolable metal-carbenes alone initiating olefin metatheses and acetylene polymerizations, enyne metathesis, rhodium catalyzed cycloadditions, the current photocyclization procedure, and columnar helix aggregates; and the first mechanistic analyses of olefin metathesis regiochemistry and metal-catalyzed cycloadditions.

Laura L. Kiessling

University of Wisconsin, Madison, WI
Professor of Chemistry and Biochemistry. Applied organic synthesis, particularly ring-opening metathesis polymerization, to construct defined multivalent ligands used to solve biological problems. Known for work on L-selection inhibitors, which defined new strategies for anti-inflammatory drugs and the biological effects of multivalency.

Michael Lawrence Klein

University of Pennsylvania, Philadelphia, PA
Hepburn Professor of Physical Sciences; Director of the Materials Research Science and Engineering Center. Advanced

molecular dynamics simulations by raising them to the limits of obtaining realistic descriptions of complex condensed phases. Work has led to physically significant and predictive descriptions of hydrogen-bonded liquids, self-assembled monolayers, supercooled liquids, conducting fluids, and biological membranes.

David Charles Clary (FHM)

University of Oxford, Oxford, United Kingdom
Professor of Chemistry; Head of Mathematical and Physical Sciences. Developed new quantum theories for predicting the rates of chemical reactions and the structures of molecules with weak bonds. Editor of *Chemical Physics Letters*.

Bernd Giese (FHM)

University of Basel, Basel, Switzerland
Professor of Organic Chemistry. Contributed to the modern application of free radical chemistry to stereoselective organic synthesis, to the fundamental understanding of radical-induced DNA strand scission, and to the action of ribonucleotide reductase. Discovered that electron transfer in DNA occurs by a multistep charge-hopping mechanism.

Section 4: Astronomy (including Astrophysics) and Earth Sciences

Alan Paul Boss

Carnegie Institution of Washington, Washington, DC
Research Staff Member. Astrophysical theorist in the area of star and planet formation. Demonstrated that binary star formation can be a common outcome of the fragmentation that accompanies the collapse of an interstellar molecular cloud. Revived and developed the hypothesis that Jupiter-mass planets form from gravitational instabilities in the circumstellar nebular disk.

William Eric Dietrich

University of California, Berkeley, CA
Professor of Geography; Chair of the Department of Earth and Planetary Science. Leader in the quantitative study of Earth-surface processes. Combined field observations, laboratory experiments, and numerical modeling to develop a mechanistic understanding of landform evolution. Applied cosmogenic radionuclides to measure

landscape development rates in studies of runoff processes, landsliding, soil formation, and stream-channel networks.

Joseph L. Kirschvink

California Institute of Technology, Pasadena, CA
Professor of Geobiology. Magnetogeobiologist with research interests focusing on geomagnetic reversals, paleomagnetism and magnetostratigraphy, geomagnetic sensitivity in animals, the biological effects of electromagnetic fields, and the biomineralization of ferromagnetic materials.

Donald Quincy Lamb, Jr.

University of Chicago, Chicago, IL
Louis Block Professor in Astronomy and Astrophysics. Contributed to our understanding of the structure and evolution of white dwarfs and neutron stars; the physics of X-ray and gamma-ray bursts; and fundamental physical processes at high densities, temperatures, and magnetic field strengths. Applied advanced statistical methods to the analysis of astronomical data.

S. George H. Philander

Princeton University, Princeton, NJ
Professor of Geosciences. Theoretician of tropical ocean circulation and dynamics. Contributed new information to our present understanding of the complex oceanic-atmospheric phenomenon known as El Niño, La Niña, and the Southern Oscillation.

George H. Rieke

University of Arizona, Tucson, AZ
Professor of Astronomy and Planetary Sciences; Deputy Director of the Steward Observatory. Infrared astronomer. Co-discoverer of ultraluminous and starburst galaxies. Carried out pioneering infrared observations of active galactic nuclei, the Galactic Center, low mass stars, brown dwarfs, and the solar system. Developed methods for infrared telescope optimization and many instruments for ground-based telescopes. Leader of space instrumentation programs for SIRTIF and JWST.

Alexander Sandor Szalay

Johns Hopkins University, Baltimore, MD
Alumni Centennial Professor of Physics and Astronomy. Astrophysicist and leader in the study of large-scale structure in the universe and the application of ad-

vanced statistical and computational techniques, including the introduction of powerful database software to cosmology and astrophysics.

Lynne Talley

University of California, San Diego, CA
Professor of Oceanography. Made fundamental contributions to both the theory and observation of large-scale ocean circulation. Former co-chairperson of the international working group planning global observations as part of the World Ocean Circulation Experiment.

J. Richard Bond (FHM)

University of Toronto, Toronto, Ontario, Canada
University Professor; Director of the Canadian Institute for Theoretical Astrophysics. Made contributions to physical cosmology and astrophysics through seminal research that has improved our understanding of supermassive objects, the nature of dark matter in the universe, and the origin and growth of a large-scale structure. Developed the fluctuations in cosmic background radiation into a cosmological tool of exceptional power.

Konrad Mauersberger (FHM)

Max-Planck-Institut für Kernphysik, Heidelberg, Germany
Director of the Division of Atmospheric Physics. Leading researcher in the mass-spectrometric analysis of ozone and other gases in the stratosphere and phases in polar stratospheric clouds. Discovered unexpected isotope effects in ozone formation leading to new mechanisms causing isotopic shifts.

Section 5: Engineering Sciences and Technologies

Uma Chowdhry

DuPont Engineering, Wilmington, DE
Vice President of Central Research and Development. Made contributions in the fields of catalysis/surface science, electronic ceramics, high-temperature superconductors, and electronic packaging.

Ray Dolby

Dolby Laboratories, Inc., San Francisco, CA
Founder and Chairman. Known for innovations in the quality of audio and video recording. Recipient of the National Medal of Technology.

James Economy

University of Illinois at Urbana-Champaign, Urbana, IL

Professor of Materials Science and Engineering. Developed original ideas for endowing composite materials with important properties for engineering applications. Materials include boron nitride, metal matrix composites, and high-performance aromatic copolyesters. Designed advanced materials for electronic applications and environmental control.

Morris E. Fine

Northwestern University, Evanston, IL

Walter P. Murphy and Technological Institute Professor Emeritus. Created the first materials science department. Played a key role in transforming materials research and education by emphasizing the common principles that govern the behavior of all materials.

Julio Mario Ottino

Northwestern University, Evanston, IL

R. R. McCormick Institute Professor; Walter P. Murphy Professor of Engineering. Launched the discipline of modern mixing with a series of papers and a book that defined the field. Clarified important aspects of the dynamic behavior of granular matter and the competition between chaos and order.

Henry Petroski

Duke University, Durham, NC

Aleksandar S. Vesic Professor of Civil Engineering, Department of Civil and Environmental Engineering; Professor of History. Authority on the failure of structures. Has written about bridges, pencils, paper clips, books and bookshelves, engineering errors, and delivering newspapers as a boy. Latest book concerns why there is no perfect design.

Kathleen C. Taylor

General Motors Research and Development Center, Warren, MI
Former Director of the Materials and Processes Laboratory. Developed automobile exhaust pollution control through research on catalysis, which resulted in the use of palladium and platinum in catalytic converters. Served as president of the Materials Research Society.

Section 6 : Computer Sciences (including Artificial Intelligence and Information Technologies)

Alfred V. Aho

Columbia University, New York, NY
Professor of Computer Science at the Fu Foundation School of Engineering and Applied Science; Chair of the Department of Computer Science. Authority in the field of computer science. Research contributions include both theoretical results and associated applications. Managed R&D at Bell Laboratories and Bellcore. Authored or co-authored ten textbooks.

Paul Baran

Novo Ventures, Inc., Milpitas, CA
Founder. Made contributions to the technique for data transmission, which later came to be called packet switching, and to the building of a distributed network that were significant in the development of the ARPANET.

Thomas M. Cover

Stanford University, Stanford, CA
Kwo-Ting Li Professor of Engineering; Professor of Statistics. Contributed to the fields of information theory, mathematical statistics, pattern recognition, and investment theory.

Solomon W. Golomb

University of Southern California, Los Angeles, CA

University Professor. Worked on the theory of linear shift-register sequences (basic components in spread spectrum communication systems) and on prime number theory. Contributed to number theory (twin primes), combinatorics, error-correcting and cryptographic codes, digital communication, and academic administration.

William Kahan

University of California, Berkeley, CA
Professor of Computer Science and Electrical Engineering. Mathematician. Led the design of a mathematically reliable "floating-point" arithmetic standard built into commercially significant fast computers since 1985. Honored by the Association for Computing Machinery, the Society for Industrial and Applied Mathematics, and the Institute of Electrical and Electronic Engineers.

Leonard Kleinrock

University of California, Los Angeles, CA

Professor of Computer Science. Developed the basic principles that led to packet switching, the technology underpinning the Internet. Led the laboratory where the Internet was born and directed the transmission of the first message to pass over the Internet. Introduced and extended the theory of queuing systems to model, analyze, design, and optimize packet switching networks.

Frank Thomson Leighton

Massachusetts Institute of Technology and Akamai Technologies, Cambridge, MA

Professor of Applied Mathematics; Chief Scientist. Co-founder of Akamai Technologies. Specialist in algorithms for network applications. Author of research papers, patents, and a text on parallel algorithms and architectures.

Silvio Micali

Massachusetts Institute of Technology, Cambridge, MA
Professor of Computer Science. Provided the foundation for modern cryptography, introducing (with Goldwasser) probabilistic encryption and semantic security of encryptions. Invented (with Goldwasser and Raccoff) Zero Knowledge Proofs. Created the theory of pseudo-random generators central to cryptography.

Richard M. Stallman

Free Software Foundation, Boston, MA

President. Launched the Free Software Movement, which advocates users' freedom to study, change, and redistribute software, and led the development of the GNU operating system. Widely used GNU/Linux variant of GNU, which uses Linux as the kernel, is often inaccurately called "Linux." Also developed Emacs and GCC.

Niklaus Wirth (FHM)

ETH Zentrum, Zurich, Switzerland
Professor of Computer Science Emeritus. Designer of programming languages, including EULER, ALGOL-W, MODULA, PASCAL, and OBERON. Had an impact on language design and implementation.

Class II : Biological Sciences

Section 1 : Biochemistry and Molecular Biology

Philip Beachy

Johns Hopkins University School of Medicine, Baltimore, MD

Professor of Molecular Biology and Genetics; Investigator, Howard Hughes Medical Institute. Elucidated the structure and processing of the hedgehog signaling protein and its modification by cholesterol, and demonstrated its role as a crucial developmental morphogen. Conducted studies of signal transduction and of pathway inhibition by the potent teratogen cyclopamine, which have provided a foundation for future mechanism-based therapies in human cancer.

Jennifer A. Doudna Cate

University of California, Berkeley, CA

Professor of Molecular and Cellular Biology; Investigator, Howard Hughes Medical Institute. Solved the high-resolution X-ray structures of large RNA molecules: a group I intron fragment, the hepatitis delta virus ribozyme, and the bacterial signal recognition particle. Revealed novel principles of RNA folding (motifs such as adenine platforms and ribose zippers, how helices fold around a magnesium core) and provided insights into the basis of RNA catalysis.

Stephen Elledge

Baylor College of Medicine, Houston, TX

Robert A. Welch Professor of Biochemistry; Investigator, Howard Hughes Medical Institute. At the forefront of the field of cell cycle checkpoints and DNA damage control. Discovered three related but independent control systems key to the regulation of the cell cycle. Developed several technologies, including the Univector plasmid fusion system, the lambda-Yes cDNA expression system, and a membrane two-hybrid system.

Perry Allen Frey

University of Wisconsin, Madison, WI

Professor of Biochemistry; Co-director of the Institute for Enzyme Research. Studied enzyme-catalyzed reactions using substrates chirally labeled with isotopic elements, site-directed

mutations, and substrate analogs. Demonstrated chemical insight that has defined the molecular mechanism of many enzyme functions.

Carol W. Greider

*Johns Hopkins University,
Baltimore, MD*

Professor of Molecular Biology and Genetics. Co-discoverer of the enzyme telomerase, which is responsible for the synthesis of the ends of chromosomes (telomeres). Analyzed many aspects of the biochemistry of telomerase and provided insights into the role of the enzyme in genome stability, cellular senescence, and tumorigenesis.

Peter Bartlett Moore

Yale University, New Haven, CT

Sterling Professor of Chemistry with joint appointment in Molecular Biophysics and Biochemistry. With colleagues, developed and used neutron scattering procedures and NMR methods to probe structural features of the ribosome. With the recent discovery of the atomic structure of the 50S ribosomal subunit, has provided new insights into the architecture of an RNA-protein machine and the role of RNA in catalysis.

Maynard V. Olson

*University of Washington,
Seattle, WA*

Director of the Genome Center. Invented techniques essential to the completion of the genome project, including novel implementation of pulsed field gel electrophoresis, determination of physical maps based on clone fingerprints, development of yeast artificial chromosome cloning systems, and use of sequence tagged sites for mapping of mammalian genomes.

William Tobey Wickner

*Dartmouth Medical School,
Hanover, NH*

Chilcote Distinguished Professor of Biochemistry. Investigated the biochemical dissection of two essential membrane assembly events: protein translocation and bilayer fusion. Led the team that purified the bacterial Sec apparatus required for protein assembly into the envelope and dissected the regulation and mechanism of membrane fusion that accompanies the segregation of vacuoles into daughter yeast cells.

Section 2 : Cellular and Developmental Biology, Microbiology, and Immunology (including Genetics)

Frederick M. Ausubel

*Massachusetts General Hospital and
Harvard Medical School, Boston, MA*

Professor of Genetics. Made seminal contributions to the knowledge of the genetics and molecular biology of nitrogen fixation in plants and microorganisms. Opened the way to understanding the molecular and biochemical interactions between plants and microbial pathogens. Identified common virulence factors between plant and animal pathogens.

Kathryn Lee Calame

Columbia University, New York, NY

Professor of Microbiology and Biochemistry. Leader in gene regulation in lymphocytes. Discovered the IgH intronic enhancer and characterized its mechanism. Discovered the translocation of *c-myc* proto-oncogene to the IgH locus, studied the regulation of normal and translocated *c-myc* genes, and identified regulatory cascades in terminal B-cell development.

Martin Chalfie

Columbia University, New York, NY

Professor of Biological Sciences. Revolutionized many aspects of biological research by introducing the technique of vitally labeling cells in intact organisms with the jellyfish green fluorescent protein. Established the touch neurons of the nematode *Caenorhabditis elegans* as among the most fully genetically characterized nerve cells in biology.

Robert N. Eisenman

*Fred Hutchinson Cancer Research
Center, Seattle, WA*

Member. Studies cancer causation and progression, with a focus on the MYC oncogene. Has shown that the oncogenic MYC protein is only one member of a network of interacting gene regulatory factors that act to control cell behavior.

Rochelle Easton Esposito

University of Chicago, Chicago, IL

Professor in the Department of Molecular Genetics and Cell Biology and Professor in the Committee on Genetics. Pioneered the identification of genes required for meiosis in budding yeast and

developed genetic tools to analyze mechanisms regulating genetic recombination and chromosome segregation. Isolated key controlling genes for meiotic progression, established the requirement of recombination for chromosome segregation, and provided the paradigm for further studies of meiosis.

Thomas B. Kornberg

*University of California,
San Francisco, CA*

Professor of Biochemistry and Biophysics. Researcher who has worked in several fields, including DNA replication and developmental biology. Has studied the function of *Drosophila* genes that regulate patterning during embryogenesis, such as engrailed and hedgehog.

Robert Eugene Krumlauf

*Stowers Institute for Medical
Research, Kansas City, MO*

Scientific Director. Made contributions to our understanding of the role of Hox master control genes in patterning the basic body plan of the vertebrate embryo. Helped to establish the structural and regulatory conservation among the *Drosophila* and mammalian Hox genes. Identified upstream regulators of the Hox genes and established a direct role for retinoic acid in their regulation.

Dan Littman

*New York University School of
Medicine, New York, NY*

Professor of Pathology and Microbiology; Investigator, Howard Hughes Medical Institute. Leading scientist in the field of immunology. Clarified our understanding of the biology of T-cell development and how HIV infects immune cells.

Andrew P. McMahon

Harvard University, Cambridge, MA

Frank B. Baird, Jr. Professor of Science; Chairman of the Department of Molecular and Cellular Biology. Identified the molecules responsible for regulating the development of the vertebrate body plan and elucidated the diverse roles of the wingless and hedgehog signaling pathways in the vertebrate embryo.

Peter Gruss (FHM)

*Max-Planck-Gesellschaft,
Göttingen, Germany*

President. Developmental biologist who has defined the function of Cdx, Evx, Hox, and Six mamma-

lian gene families. Played a fundamental role in defining the Pax gene, which encodes master regulators of the organogenesis of the eyes, brain, and pancreas.

Jules Alphonse Hoffmann (FHM)

*Centre National de la Recherche
Scientifique, Strasbourg, France*

Director of Research. Through molecular and genetic studies of *Drosophila*, has illuminated the mechanisms leading to resistance to microbial infection, providing a model system of innate immunity in animals.

Janet Rossant (FHM)

*Samuel Lunenfeld Research Institute
and University of Toronto, Toronto,
Ontario, Canada*

Senior Investigator; University Professor of Medical Genetics and Microbiology. Studies the genetic control of normal and abnormal development in the early mouse embryo. Uses new techniques to genetically manipulate the mouse genome to address problems that may arise in development. Produced studies on early mammalian embryogenesis that will have an impact on studies of birth defects.

Section 3 : Neurosciences, Cognitive Sciences, and Behavioral Biology

Thomas D. Albright

*The Salk Institute for Biological
Studies, San Diego, CA*

Professor of Neurobiology; Investigator, Howard Hughes Medical Institute. Leader in the study of brain systems underlying primate visual perception. Emphasized the importance of context in sensory information processing and provided evidence for an object-based motion system in area MT, based on both form and color.

Allan Basbaum

*University of California,
San Francisco, CA*

Professor of Anatomy; Chairman of the Department of Anatomy. Performed studies leading to an understanding of the mechanisms that underlie the generation and control of acute and persistent pain and to the development of novel therapies for the treatment of these conditions.

Michael Eldon Greenberg

Children's Hospital and Harvard Medical School, Boston, MA

Professor of Neurology and Neurobiology. Discovered that the c-fos proto-oncogene is induced rapidly by extracellular factors and controls programs of gene transcription that regulate the response of cells to their environment.

Jerome B. Posner

Memorial Sloan-Kettering Cancer Center and Cornell University Medical College, New York, NY

Cotzias Chair of Neuro-Oncology. Leader in understanding paraneoplastic neurological disorders and their treatment. Author of books and articles about coma and neurologically related cancer problems. Trained many teaching neurologists and oncologists to recognize and treat neurologic complications of cancer.

Rae Silver

Columbia University and Barnard College, New York, NY

Helene L. and Mark N. Kaplan Professor of Natural and Physical Sciences. Leader in the study of circadian rhythmicity. Through studies of neural tissue transplants, gene activation, and formal modeling has contributed to our understanding of how the brain circadian clock functions to regulate biological processes.

Mriganka Sur

Massachusetts Institute of Technology, Cambridge, MA

Sherman Fairchild Professor of Neuroscience. Research centers on understanding how the cortex develops and changes. Defined the mechanisms by which the environment interacts with intrinsic programs in order to regulate the development of cortical areas. Combined a range of disciplines to examine how the pattern of electrical activity in inputs to the cortex influences networks, function, and plasticity in a cortical area.

Larry William Swanson

University of Southern California, Los Angeles, CA

Milo Don and Lucille Appleman Professor of Biological Sciences; Director of the NIBS Neuroscience Program. Developed a comprehensive description of the organization of the hypothalamus, produced the best brain atlases of both the developing and adult rat brain, and developed a

new four-system proposal for the basic plan of the vertebrate nervous system.

Alain Berthoz (FHM)

Collège de France, Paris, France

Director of the Laboratory of Physiology of Perception. Examined the neural mechanisms controlling gaze by focusing primarily on the vestibular system and demonstrated the way in which moving visual scenes affect body posture. Discovered the existence of eye position signals in second-order vestibular neurons and that the brainstem nuclear prepositus is the site of the neural integrator responsible for holding gaze.

Geoffrey E. Hinton (FHM)

University of Toronto, Toronto, Ontario, Canada

Professor of Computer Science. Developed the use of distributed representations and described how they can be used for semantic knowledge representation. Introduced the Boltzmann Machine, a neural network architecture for finding globally optimal solutions to difficult constraint satisfaction problems, and proposed a learning algorithm for use in such networks. Introduced the back-propagation learning algorithm.

Section 4: Evolutionary and Population Biology and Ecology

William R. Atchley

North Carolina State University, Raleigh, NC

William Neal Reynolds Professor of Genetics and Statistics. Made contributions in computational biology, quantitative genetics, and evolutionary biology. Known for work in theoretical and computational analyses of protein structure and evolution, developmental quantitative genetics, epigenetic maternal effects, experimental phylogenetics, and morphometrics.

James Jeffrey Bull

University of Texas at Austin, Austin, TX

Professor of Integrative Biology. Developed the field of experimental molecular evolution. Devised systems of investigation to enable evolutionary processes and phenomena that are typically studied in the context of millions of years to be studied in experimental settings over a period of weeks or months.

Paul G. Falkowski

Institute of Marine and Coastal Sciences, Rutgers University, New Brunswick, NJ

Professor of Biological Oceanography and Geobiology. Leader in shaping our understanding of the evolution of biogeochemical cycles in the oceans and their coupling to climate change. Co-authored the text *Aquatic Photosynthesis* and co-invented several novel instruments that are used in oceanography to assess phytoplankton photosynthetic rates.

Stephen P. Hubbell

University of Georgia, Athens, GA

Professor of Plant Sciences. Developed a long-term global research program on tropical forest ecology and contributed to theoretical community ecology, particularly the unified neutral theory of biodiversity and biogeography. Founder and chairman of the National Council for Science and the Environment.

Stephen W. Pacala

Princeton University, Princeton, NJ

Frederick D. Petrie Professor. Leader in ecological theory. Made contributions in areas ranging from evolutionary biology to ecosystem ecology. Has studied global biogeochemistry and global change, spatial ecology, and the role of neighborhood interactions in community ecology.

Craig Packer

University of Minnesota, St. Paul, MN

Distinguished McKnight University Professor. Behavioral ecologist and field mammalogist. Has studied the evolution of sociality and cooperation in lions and baboons and the dynamics of infectious disease in social mammals.

Douglas W. Schemske

Michigan State University, East Lansing, MI

Hannah Professor in the Department of Plant Biology. Investigates the ecological and genetic mechanisms of adaptation and speciation, and the origin of tropical diversity. Received the Mercer Award from the Ecological Society of America and the E. O. Wilson Naturalist Award from the American Society of Naturalists.

Marvalee H. Wake

University of California, Berkeley, CA

Professor of Integrative Biology. Leader in the practice and promotion of integrative biology and

scientific studies of biodiversity. Combines neural, muscular, and osteological data with studies of development and reproduction to illuminate major evolutionary innovations. Expanded our understanding of the origin of live-bearing modes of reproduction in vertebrates.

Oswaldo E. Sala (FHM)

University of Buenos Aires, Buenos Aires, Argentina

Professor of Ecology. Research focuses on a wide variety of topics in plant physiological ecology, ecosystem ecology, and the response of biological communities to climate change. Leader in organizing and coordinating the scientific community's responses to global change.

Section 5: Medical Sciences (including Physiology and Pharmacology), Clinical Medicine, and Public Health

Peter Courtland Agre

Johns Hopkins University School of Medicine, Baltimore, MD

Professor of Biological Chemistry and Medicine. Discovered the prototype of a family of proteins called aquaporins, which function as water channels in the membranes of animal and plant cells. Led efforts to find new family members and to elucidate the structure, distribution, physiology, and pathophysiology of the aquaporins. Recipient of the Nobel Prize in chemistry in 2003.

Dennis A. Ausiello

Harvard Medical School and Massachusetts General Hospital, Boston, MA

Physician-in-Chief. Made contributions as a renal cell biologist, leading to a better understanding of diseases such as cystic fibrosis. Educator of M.D. – Ph.D.s and translational researchers. Has published widely on medicine in the twenty-first century.

Barry Morton Brenner

Harvard Medical School, Boston, MA

Professor of Medicine; Director Emeritus of the Renal Division. Benefited millions of patients with diabetes, hypertension, and other life-threatening kidney diseases by elucidating the mechanisms of the progression of kidney disease and performing experimental and clin-

ical studies demonstrating that angiotensin blockade effectively stems this progression.

Samuel C. Silverstein

Columbia University, New York, NY
Professor of Physiology and Cellular Biophysics and Professor of Medicine. Studies the roles of phagocytic white blood cells in inflammation, immunity, infection, and chronic degenerative diseases. Past president of the Federation of American Societies for Experimental Biology, and founder and director of Columbia's Summer Research Program for Secondary Science Teachers.

Patricia G. Spear

Feinberg School of Medicine of Northwestern University, Chicago, IL
Guy and Anne Youmans Professor. Leader in studying the molecular basis of infectious diseases. Research focuses on herpes simplex virus. Identified viral proteins and cell surface molecules that interact to enable viral entry into cells, and demonstrated that a cascade of receptor-ligand interactions is required.

Ellen S. Vitetta

University of Texas Southwestern Medical Center, Dallas, TX
Professor of Microbiology. Discovered a biochemical technique to study surface molecules on lymphocytes and characterized the B cell antigen-specific receptor and peptide differences between membrane and secreted IgM. Co-discoverer of an important cytokine, IL-4. Leader in antibody-based strategies to treat B cell lymphomas. Translated basic research findings into clinical applications.

Arthur Weiss

University of California, San Francisco, CA
Ephraim P. Engleman Distinguished Professor of Rheumatology; Investigator, Howard Hughes Medical Institute. Demonstrated that the T cell antigen receptor initiates signal transduction via the CD3 and zeta chains. Identified the ZAP-70 cytoplasmic tyrosine kinase, defined its role in a congenital immunodeficiency disease, and delineated the mechanisms by which cytoplasmic tyrosine kinases and the CD45 transmembrane phosphatase regulate TCR signaling.

Zena Werb

University of California, San Francisco, CA
Professor of Anatomy. Recognized for studies on extracellular matrix proteolysis. Defined the critical role of matrix metalloproteinases in embryonic implantation, mammary and bone development, and angiogenesis *in vivo*. Achieved a new understanding of how MMPs are central players in stem cell biology and neoplastic progression.

Class III: Social Sciences

Section 1: Social Relations (Anthropology, Archaeology, Sociology, Social and Developmental Psychology, Education, Demography, Geography)

John T. Cacioppo

University of Chicago, Chicago, IL
Tiffany and Margaret Blake Distinguished Service Professor. Leader in the fields of social psychophysiology and social neuroscience. Psychologist who has integrated social psychology and biology with studies relating physiological processes to social attitudes, emotion, and cognition.

William A. V. Clark

University of California, Los Angeles, CA
Professor of Geography. Provided fundamental insights into the role of preferences, discrimination, and public intervention in generating ethnic and racial separation in America's large urban regions. Crafted multiple survey-based tests of the Schelling segregation model and contributed innovative analyses of the connections among mobility, migration, and housing choice.

Richard J. Davidson

University of Wisconsin, Madison, WI
Vilas Research Professor of Psychology and Psychiatry. Investigator of the psychobiology of affect, affective style, and affective disorders. Director of the NIMH-funded center concerned with the social and psychobiological substrates of affective styles. Organized the continuing series of Wisconsin Symposia on Emotion.

Elizabeth F. Loftus

University of California, Irvine, CA
Distinguished Professor in the Department of Psychology and Social Behavior. Experimental researcher who explores the reliability of eyewitness testimony, the nature of repressed memories about significant childhood events, and the methods to induce false "memories" with particular applicability to legal decisions.

Tanya Marie Luhmann

University of Chicago, Chicago, IL
Professor in the Committee on Human Development. Conducted important studies of witchcraft in contemporary London, the Parsi of India, and the current state of psychiatric practice in the United States.

Ellen M. Markman

Stanford University, Stanford, CA
Professor of Psychology. Authority on the development of language and communication in young children. Performed theoretical and experimental studies of the whole object, taxonomic, and mutual exclusivity constraints that guide the young child's acquisition of word meanings. Author of *Categories and Naming in Children*.

Doug McAdam

Stanford University, Stanford, CA
Professor of Sociology; Director of the Center for Advanced Study in the Behavioral Sciences. Theoretician and empirical researcher. Leading figure in the development of the dominant approach to the study of social movements, the "political process" model. Applied this model in several prize-winning studies of the civil rights movement.

Adrian E. Raftery

University of Washington, Seattle, WA
Professor of Statistics and Sociology. Made fundamental contributions to the application of Bayesian statistical methods in the social sciences, including procedures for model selection. Served as editor of major journals in statistics and is the founding director of the Center for Statistics and the Social Sciences.

Shelley E. Taylor

University of California, Los Angeles, CA
Professor of Psychology. Founder and leader in the fields of health psychology and social cognition.

Author of many scientific papers on these topics. Known for work on positive illusions, coping with stress, and psychosocial cofactors in illness progression.

Martin Trow

University of California, Berkeley, CA
Emeritus Professor of Public Policy, Richard and Rhoda Goldman School of Public Policy. Leads research in comparative studies of national systems of higher education, focusing on social trends and public policies affecting access to and performance of universities in the United States, United Kingdom, Sweden, Japan, and elsewhere. Member of numerous boards and commissions advising universities in the United States and abroad, as well as ministries of higher education.

Edward F. Zigler

Yale University, New Haven, CT
Sterling Professor of Psychology Emeritus. First director of the Office of Child Development and chief of the U.S. Children's Bureau. Member of the planning committee of Head Start. Founder of the Bush Center in Child Development and Social Policy and of the School of the 21st Century.

Section 2: Economics

Colin Camerer

California Institute of Technology, Pasadena, CA
Rea A. and Lela G. Axline Professor of Business Economics. Pioneer in the area of behavioral economics, initially studying decision biases. Published numerous articles covering the areas of behavioral economics, business strategy and organization, and laboratory experimental research in games, decisions, and markets.

David Cass

University of Pennsylvania, Philadelphia, PA
Paul F. and E. Warren Shafer Miller Professor of Economics; Director of the Center for Analytic Research in Economics and the Social Sciences. Deals with the careful refinement and extension of neoclassical theory, especially the specification of utility functions and conditions for existence of general equilibrium. In collaboration, investigated the existence of equilibrium under conditions of overlapping generations.

Vincent Paul Crawford

University of California,
San Diego, CA

Professor of Economics. Game theorist whose analysis (with Sobel) of strategic information transmission has defined the direction of subsequent research on communication in games. Has conducted research on contract theory with applications to international lending, bargaining, arbitration, matching, and learning. Recent work focuses on behavioral and experimental game theory.

Boyan Jovanovic

New York University, New York, NY
Professor of Economics. Theorist in industrial organization and macroeconomics. Known for analyses of turnover in the labor market and wage mobility, entry and exit of firms incorporating liquidity constraints, mergers, technology diffusion and adaptation, and the sources of technological progress.

Kenneth L. Judd

Stanford University, Stanford, CA
Senior Fellow of the Hoover Institution. Has defined a new field that makes dynamic theory operational, and has written several influential papers about industrial organization on patents, price dispersion, and credible entry deterrence. Developed the application of dynamic models in public finance.

Michael Kremer

Harvard University, Cambridge, MA
Professor of Economics. Development economist who applies economic theory to wide-ranging topics, such as the link between population and economic growth, the transmission of AIDS, and the development of vaccines for diseases in poor countries.

Kenneth L. Sokoloff

University of California,
Los Angeles, CA

Professor of Economics. Economic historian who has enriched our understanding of innovation, productivity growth, and democratization of inventive activity in early industrial America and in East Asia. Recent work clarifies the divergent paths of development and equity in North and South America.

Aloisio Araujo (FHM)

Institute for Pure and Applied
Mathematics and Getulio Vargas
Foundation, Rio de Janeiro, Brazil
Professor of Mathematics and Professor of Economics. Mathemat-

ical economist who served on the Council of the Econometric Society and played a key role in the promotion of economic research in Latin America. Early work on central limit theorems in Banach spaces is used in probability theory. Has recently studied bankruptcy in incomplete markets and signaling models without single crossing. Recipient of the Brazilian President's Order of Scientific Merit.

Martin F. Hellwig (FHM)

University of Mannheim,
Mannheim, Germany

Professor of Economics. Chairman of the German Monopolies Commission. Has written on many topics in economic theory, including dynamic debtor-creditor relationships, aggregation of information through market prices, the asymptotic properties of Bertrand-Edgeworth equilibria, optimal debt contracting, risk and regulation in banking, and the foundations of the linear agency model.

Guido Tabellini (FHM)

Bocconi University, Milan, Italy

Professor of Economics; President of Innocenzo Gasparini Institute for Economic Research (IGIER). Elucidated how the institutional, economic, and political features of a country determine economic policy outcomes. Has done extensive work on the design of monetary and fiscal institutions, especially in the context of the European Union.

Section 3: Political Science, International Relations, and Public Policy

Henry E. Brady

University of California, Berkeley, CA
Professor of Political Science. Has studied campaigns and elections, the media, political participation, mass mobilization, political attitudes, political and social inequality, democratic transitions, and welfare reform using innovative methods.

James MacGregor Burns

University of Richmond,
Richmond, VA

Senior Scholar at the Jepson School of Leadership Studies. Author of *Roosevelt: The Lion and the Fox*, *The Deadlock of Democracy*, and *Leadership*. Winner of the Pulitzer Prize and the National Book Award. Past president of the American Political Science Association.

Donald Philip Green

Yale University, New Haven, CT

Director of the Institution for Social and Policy Studies; A. Whitney Griswold Professor. Conducted the first large-scale randomized field experiments in political science. Contributed to the study of voter turnout, hate crime, political partisanship, campaign finance, preelection polling, and response error in surveys. Invented the strategy game OCTI, designed to defy computer analysis.

John Mark Hansen

University of Chicago, Chicago, IL

Dean of Social Sciences. Has worked on the development of interest group activity in legislative politics, on mass participation in politics, and on congressional policy-making. Member and chair of the National Election Studies Board of Overseers.

John J. Mearsheimer

University of Chicago, Chicago, IL

R. Wendell Harrison Distinguished Service Professor. Exponent of the realist approach to understanding international relations. Books and articles examine military deterrence, military strategy, the end of the Cold War, international institutions, and ethnic partition. Author of *The Tragedy of Great Power Politics*.

Benjamin Ingrim Page

Northwestern University,
Evanston, IL

Professor of Political Science. Brings empirical evidence to bear on rational choice theories. Helped promote the view that collective public opinion is considerably more stable and coherent than was previously suggested by studies of individual behavior. Provided some of the first solid evidence that collective public opinion has substantial effects on the making of both foreign and domestic policy.

Michael J. Sandel

Harvard University, Cambridge, MA

Anne T. and Robert M. Bass Professor in the department of Government. Member of the President's Council on Bioethics. Political philosopher. Author of *Democracy's Discontent: America in Search of a Public Philosophy* and *Liberalism and the Limits of Justice*. Current work is on the moral limits of markets.

Kay Lehman Schlozman

Boston College, Chestnut Hill, MA

J. Joseph Moakley Professor of Political Science. Has written on a broad range of topics in American politics, including interest groups, elections, citizen participation, and gender politics. Work on stratification in relation to interest groups and citizen activity has been basic to the field.

Archibald (Archie) H.

Brown (FHM)

St. Antony's College, University of
Oxford, Oxford, United Kingdom

Fellow; Professor of Politics. Brings together diverse academic and policy communities in the United Kingdom, the United States, and Russia. Author of *The Gorbachev Factor* and co-editor of *The British Study of Politics in the Twentieth Century*. Former chair of the Political Studies Section of the British Academy.

Section 4: Law (including the Practice of Law)

Thomas M. Franck

New York University School of Law,
New York, NY

Murray and Ida Becker Professor of Law Emeritus. Served as legal advisor to eight countries and argued cases before international tribunals. Former president of the American Society of International Law.

Thomas C. Grey

Stanford Law School, Stanford, CA

Nelson Bowman Sweitzer and Marie B. Sweitzer Professor of Law. One of the foremost writers on American legal theory and history. Works in constitutional law and torts. Editor of *The Legal Enforcement of Morality*.

Samuel Issacharoff

Columbia Law School, New York, NY

Harold R. Medina Professor in Procedural Jurisprudence. Leading figure in the law governing the political process and in the law of employment. Work combines innovative approaches to law with newer interdisciplinary scholarship.

Louis Kaplow

Harvard Law School,
Cambridge, MA

Professor of Law. Scholar of economics and law. Made contributions to antitrust, competition policy, intellectual property, tax policy, and distributive justice. Recent co-authored work on nor-

mative foundations of social policy draws on philosophy, economics, and psychology. Research associate at the National Bureau of Economic Research.

Robert A. Katzmann

United States Court of Appeals, Second Circuit, New York, NY
U.S. Circuit Court Judge. Author of numerous books and articles on a wide range of subjects, including the regulatory state and the relationship between the legislative and judicial branches. Formerly Walsh Professor of Government, professor of law, and professor of public policy at Georgetown University. Former senior fellow and acting program director of the Governmental Studies Program at the Brookings Institution.

Robert F. Nagel

University of Colorado, Boulder, CO
Rothgerber Professor of Constitutional Law. Leading scholar on the United States Supreme Court. Author of numerous articles and three books: *Constitutional Cultures: The Mentality and Consequences of Judicial Review*; *Judicial Power and American Character: Censoring Ourselves in an Anxious Age*; and *The Implosion of American Federalism*.

Antonin Scalia

Supreme Court of the United States, Washington, DC
Associate Justice of the Supreme Court of the United States and, for more than three decades, leading intellectual force in American jurisprudence. Eloquent opinions and scholarly writings emphasize the importance of text and of structure in the Constitution. Previous positions include Chairman of the Administrative Conference of the United States, Assistant Attorney General of the United States, and professor of law at the Universities of Virginia and Chicago.

Harry N. Scheiber

University of California, Berkeley, CA
Director of the Earl Warren Legal Institute; Stefan Riesenfeld Professor of Law and History. Cited for pathbreaking work in U.S. constitutional and legal history. With writings on government and the economy, federalism, freedom of contract, and other subjects in American economic and legal history has set a standard of research, analysis, and interpretation that has shaped the field. Honorary Fellow of the American Society for Legal History.

Class IV: Humanities and Arts

Section 1: Philosophy and Religious Studies

David Carrasco

Harvard University, Cambridge, MA
Neil Rudenstine Professor of Latin American Studies. Historian of religion who specializes in Mesoamerican, Latin American, and Latino religions. Has written extensively on the rituals and sacred sites of Mesoamerica. Served as editor in chief of the *Oxford Encyclopedia of Mesoamerican Cultures*.

Fred Dretske

Duke University, Durham, NC
Senior Research Scholar. Introduced the distinction between non-epistemic and epistemic seeing. Developed the relevant-alternatives approach to knowledge and skepticism. Advocate of the account of intentionality in terms of information.

Hartry Field

New York University, New York, NY
Professor of Philosophy. Specializes in metaphysics, philosophy of mathematics, philosophy of logic, and philosophy of science. Author of *Science Without Numbers*, which won the Lakatos Prize, *Realism, Mathematics and Modality*, and *Truth and the Absence of Fact*. Current interests include objectivity and indeterminacy, a priori knowledge, causation, and the semantic and set-theoretic paradoxes.

Stanley M. Hauerwas

Duke University, Durham, NC
Gilbert T. Rowe Professor of Theological Ethics. Theologian who challenges Christians to lead courageous and ethical lives. Numerous books address systematic and philosophical theology, ethics, political theory, social science, and medical ethics.

Thomas English Hill, Jr.

University of North Carolina at Chapel Hill, Chapel Hill, NC
Kenan Professor of Philosophy. Leading Kantian scholar. Has studied moral psychology and the moral dimensions of self-respect and has written extensively on ethics and political philosophy.

Mary Mothersill

Barnard College and Columbia University, New York, NY
Professor of Philosophy Emeritus. Philosopher of art. Author of *Beauty Restored*, a discussion of art in analytic philosophy.

Philip L. Quinn

University of Notre Dame, Notre Dame, IN
John A. O'Brien Chair in Philosophy. Author of *Divine Commands and Moral Requirements* and numerous articles and reviews in philosophy of religion and philosophy of science, and co-editor and contributor to *A Companion to Philosophy of Religion* and *The Philosophical Challenge of Religious Diversity*. Formerly Faunce Professor of Philosophy at Brown University and chair of the APA National Board of Officers.

Ed Parish Sanders

Duke University, Durham, NC
Arts and Sciences Professor of Religion. Author of nine monographs on Jesus, Paul, and Judaism. Holds honorary doctorates from the Universities of Oxford and Helsinki. Fellow of the British Academy. Previously Dean Ireland's Professor of Exegesis at Oxford.

Sir Anthony John Patrick Kenny (FHM)

St. John's College, University of Oxford, Oxford, United Kingdom
Emeritus Fellow. Authority on Aquinas, Aristotle, Descartes, and Wittgenstein. Served as Master of Balliol College, president of the British Academy, and chairman of the British Library.

Section 2: History

Thomas A. Brady, Jr.

University of California, Berkeley, CA
Peder Sather Professor of History. Historian of the Protestant Reformation. Author of many books and articles stretching back to the early 1970s, including *Community, Politics, and Reformation in Early Modern Europe*.

Harry D. Harootunian

New York University, New York, NY
Professor of History; Chair of East Asian Studies. Brought the study of Japanese intellectual history into dialogue with the concerns of scholars of modernity around the world. Writes on subjects as diverse as samurai activism, early modern nativism, and twentieth-century

modernism. Author of *Overcome by Modernity: History, Culture, and Community in Interwar Japan*.

Thomas C. Holt

University of Chicago, Chicago, IL
James Westfall Thompson Distinguished Service Professor. Scholar of African American history. Transformed how a generation of scholars conceptualizes African American history by situating it in an international context that includes the Caribbean as well as the United States, and by locating freedom in a context of "race-making."

Friedrich Katz

University of Chicago, Chicago, IL
Morton D. Hull Distinguished Professor of History. Historian of nineteenth- and twentieth-century Mexico. Writes on modern Mexican history, emphasizing agrarian change and popular movements, and studies ancient Aztec civilizations. Author of *Ancient American Civilizations* and, most recently, of a biography of Pancho Villa.

Hue-Tam Ho Tai

Harvard University, Cambridge, MA
Kenneth T. Young Professor of Sino-Vietnamese History. Historian of modern Vietnam. Publications include *Millenarism and Peasant Politics in Vietnam*; *Radicalism and the Origins of the Vietnamese Revolution*; and *The Country of Memory: Remaking the Past in Late Socialist Vietnam*.

Laurel Ulrich

Harvard University, Cambridge, MA
James Duncan Phillips Professor of History; Director of the Charles Warren Center for Studies in American History. Author of three books on colonial and women's history, including *A Midwife's Tale: The Life of Martha Ballard Based on Her Diary*, which won the Pulitzer Prize.

Thongchai Winichakul

University of Wisconsin, Madison, WI
Professor of History and Southeast Asian Studies. Model for the younger generation of Southeast Asia historians. Author of *Siam Mapped: A History of the Geo-Body of a Nation*.

Lawrence Wolff

Boston College, Chestnut Hill, MA
Professor of History. Made contributions to the study of European history with *The Vatican and Poland in the Age of Partitions*; *Postcards from the End of the World*; *Inventing*

Eastern Europe; and *Venice and the Slavs*. Has published on a wide range of interests, from Mozart to Rebecca West.

Fergus Graham Burtholme Millar (FHM)

Oriental Institute, University of Oxford, Oxford, United Kingdom
Camden Professor of Ancient History Emeritus. Authority on Roman and Near Eastern history. Fellow of the British Academy and Foreign Member of the Finnish and Russian Academies. Former Fellow of All Souls College and Queen's College, Oxford, and former professor at University College London.

Lutz Niethammer (FHM)

Friedrich-Schiller-Universität, Jena, Germany
Professor of Modern and Contemporary History. Founding president of the Cultural Studies Institute in Essen. Advisor to the German Chancellor on reparations for forced labor under the Nazi regime. Member of the Kuratorium for the Buchenwald Memorial. Has published on oral history methods, post-history theory, the industrial life in the German Democratic Republic, concentration camps, national memory, and the concept of identity.

Section 3: Literary Criticism (including Philology)

Rolena Adorno

Yale University, New Haven, CT
Reuben Post Halleck Professor of Spanish. Leading scholar in the field of colonial Latin American literature. Specialist in seventeenth-century Inca historian and artist Felipe Guaman Poma de Ayala. Author of work on Álvaro Núñez Cabeza de Vaca's account of Spanish exploration in North America.

Charles F. Altieri

University of California, Berkeley, CA
Professor of English; Director of the Consortium for the Arts. Poetry critic. Created some of the parameters by which we judge twentieth-century poetry today. Literary theorist concerned with links between the concepts of action, expression, and the nature of affects.

Anne Ferry

Boston College, Chestnut Hill, MA
Professor of English Emeritus. Literary critic and historian of expres-

sive forms in poetry in English, ranging from the sixteenth century to the present. Author of seven books, including *Milton's Epic Voice*, *The "Inward" Language*, and *The Title to the Poem*, which won the Christian Gauss Prize.

Peter Uwe Hohendahl

Cornell University, Ithaca, NY
Jacob Gould Sherman Professor of German and Comparative Literature. Leader in German studies in the United States, expert on Adorno and the Frankfurt School, and historian of the institution of literary criticism in Germany. Devoted a lifetime to the study of literature and literary criticism as social and cultural phenomena. Founder of the Institute for German Cultural Studies.

Geoffrey Keith Pullum

University of California, Santa Cruz, CA
Professor of Linguistics. Co-author of the encyclopedic *Cambridge Grammar of the English Language*. Researches syntax, phonology, mathematical linguistics, phonetics, computational linguistics, and the history and philosophy of linguistics. Advocate for endangered languages; observer and critic of the academic scene in linguistics.

Andrew Baruch Wachtel

Northwestern University, Evanston, IL
Herman and Beulah Pearce Miller Research Professor in Literature; Chair of the Department of Slavic Languages and Literatures; Director of the Program in Comparative Literary Studies. Conducted research on the breakup of Yugoslavia from a cultural perspective. Contributed to Russian literary and cultural studies in *longue durée* historical perspectives and by focusing on the interrelationship of literature and other arts.

Michael Witzel

Harvard University, Cambridge, MA
Wales Professor of Sanskrit. Recognized Sanskritist and Indologist. Deals with the linguistic and text-critical study and the analysis and interpretation of Vedic texts and pieces of evidence for early religious and social history.

Michael Wood

Princeton University, Princeton, NJ
Charles Barnwell Straut Professor of English; Chair of the English Department. Has published books on Stendhal, Nabokov, Kafka, and

other areas of modern fiction. Authority on Hollywood and world cinema. Has written extensively on Latin American literature and culture.

Linda Hutcheon (FHM)

University of Toronto, Toronto, Ontario, Canada
University Professor. Literary theorist and prolific writer. Author of more than a dozen books, ninety chapters in books, and a hundred refereed articles. Expert on post-modernism, opera, and Canadian literature. Past president of the MLA of America.

Section 4: Literature (Fiction, Poetry, Short Stories, Nonfiction, Playwriting, Screenwriting)

Paul Auster

New York, NY
Poet, novelist, and essayist. Volumes of poetry include *Fragments From Cold*, *Facing the Music*, and *Disappearances: Selected Poems*. Nonfiction includes *The Invention of Solitude* and *The Art of Hunger*. Novels include *City of Glass*, *Ghosts*, *The Locked Room*, *In the Country of Last Things*, *Moon Palace*, *The Music of Chance*, *Leviathan*, *Mr. Vertigo*, *Timbuktu*, *The Book of Illusions*, and the forthcoming *Oracle Night*.

Peter Carey

Hunter College, New York, NY
Director of Creative Writing. Novelist. Author of *Oscar and Lucinda*, *True History of the Kelly Gang*, and *Jack Maggs*. Two-time recipient of both the Booker and the Commonwealth Writers Prizes.

Robert Creeley

Brown University, Providence, RI
Distinguished Professor of English. Key figure in twentieth-century American poetry. Has published more than sixty books of poetry, including *Just in Time: Poems 1984 - 1994* and *Life & Death*. Honors include the Lannan Lifetime Achievement Award, the Bollingen Prize, and the Before Columbus Lifetime Achievement Award. Was New York State Poet from 1989 - 1991 and is a member of the American Academy of Arts and Letters.

Michael Cunningham

Brooklyn College, Brooklyn, NY
Distinguished Professor of English. Novelist. Recipient of the

Pulitzer Prize for *The Hours*. Author of *A Home at the End of the World* and *Flesh and Blood*. Prominent for his work with PEN.

Richard Ford

New Orleans, LA
Novelist. Recipient of the PEN/Faulkner Award and Pulitzer Prize for *Independence Day*. Other works include *The Ultimate Good Luck* and *The Sportswriter*.

Charles Johnson

University of Washington, Seattle, WA
S. Wilson and Grace M. Pollock Endowed Professor of English. Novelist, literary critic, screenwriter, philosopher, and cartoonist. Works include *Dreamer*, *Oxherding Tale*, *Faith and the Good Thing*, and *Middle Passage*, which received the National Book Award; *The Sorcerer's Apprentice and Soulcatcher*; and *Africans in America: America's Journey Through Slavery*, *King: The Photobiography of Martin Luther King Jr.*, and *Turning the Wheel: Essays on Buddhism and Writing*. Recipient of the Academy Award in Literature from the American Academy of Arts and Letters.

Sigrid Nunez

New York, NY
Novelist. Author of *Feather on the Breath of God*, *Naked Sleeper*, and *For Rouenna*. Has won numerous prizes, most recently the Rome Prize for Literature.

Alan Shapiro

University of North Carolina at Chapel Hill, Chapel Hill, NC
William R. Kenan, Jr. Distinguished Professor. Poet, critic, translator, and author. Wrote eight books of poems including *After the Digging*, *The Courtesy*, *Happy Hour*, *Mixed Company*, *The Dead Alive and Busy*, and *Song and Dance*. Author of three books of prose, *In Praise of the Impure: Poetry and the Ethical Imagination*, *The Last Happy Occasion*, and *Vigil*. Recipient of the Lila Wallace-Reader's Digest Writer's Award.

Dario Fo (FHM)

Milan, Italy
Playwright, director, stage and costume designer, and occasional musical composer. Often works in collaboration with Franca Rame. Recipient of the Nobel Prize in Literature in 1997.

Hermione Lee (FHM)

University of Oxford, Oxford, United Kingdom
Goldsmiths' Professor of English Literature; Fellow of New College Oxford. Writer, reviewer, and broadcaster. Publications include critical studies of Virginia Woolf, Philip Roth, Elizabeth Bowen, and Willa Cather. Author of *Virginia Woolf: A Biography*, which received the British Academy's Rose Mary Crawshay Award and was chosen as a *New York Times Book Review* Best Book of the Year. Fellow of the British Academy and of the Royal Society of Literature.

Section 5: Visual and Performing Arts – Criticism and Practice (including Art, Architecture, Sculpture, Music, Theater, Film, Dance)

Robert A. Falls

Goodman Theatre, Chicago, IL; Northwestern University, Evanston, IL
Artistic Director of the Goodman Theatre since 1986; Adjunct Professor. Past artistic director of Northwestern University's graduate directing program. Recipient of Tony, Drama Desk, Obie, National Broadway Theatre, and Joseph Jefferson Awards for direction. Directing work spans classic and contemporary plays, as well as new American musicals and opera.

Martin Filler

New York, NY
Architecture critic, historian, editor, lecturer, museum curator, and filmmaker. Longtime contributor to *The New York Review of Books*. Known for broad perspective in evaluating both historical topics and contemporary developments in architecture and urban planning.

Eric Fischl

New York, NY
Painter; sculptor. Has exhibited internationally since the early 1980s. Work has been the focus of two monographs and numerous exhibition catalogues.

Jan LaRue

New York University, New York, NY
Professor of Music Emeritus. Author of fundamental articles on the music of Haydn, Mozart,

and Beethoven, a catalogue of eighteenth-century symphonies, and *Guidelines for Style Analysis*, a book on the analysis of Western European music. Developed computer-assisted research in musicology.

Fred S. Licht

Collezione Peggy Guggenheim, Venice, Italy; Boston University, Boston, MA
Curator; Professor Emeritus of Art History. Brought the eye of the humanist to bear on the work of Goya, Canova, Fuseli, and many other painters and sculptors ranging from the Renaissance to the present day.

Sherrill Milnes

Northwestern University, Evanston, IL
John Evans Distinguished Professor of Music. Recognized as one of the foremost operatic baritones of his generation. Made more than eighty recordings and appeared in all of the world's major opera houses, including the Met, where he gave more than six hundred fifty performances over a thirty-two-year span. A three-time Grammy winner.

Jessie Ann Owens

Brandeis University, Waltham, MA
Louis, Frances and Jeffrey Sachar Professor of Music; former Dean of Arts and Sciences. Past president of the American Musicological Society and vice president of the Renaissance Society of America. Author of *Composers at Work: The Craft of Musical Composition 1450 – 1600* and articles on Italian and English Renaissance music. New work centers on early modern English musical theory and practice.

Cindy Sherman

New York, NY
Photographer. Uses herself as the model for most of her photographs. Work is the subject of much writing and many exhibits around the world. Recipient of the MacArthur Foundation Genius Award.

Helmuth Rilling (FHM)

Internationale Bachakademie Stuttgart, Stuttgart, Germany
Conductor. Interpreter of Bach. Established the Oregon Bach Festival, the Internationale Bachakademie Stuttgart, and Bach academies throughout the world. Ardent believer in the power of music to cross political and ethnic boundaries.

Class V: Public Affairs, Business, and Administration

Section 1: Public Affairs, Journalism, and Communications

William Allen

New York University School of Law and Stern School of Business, New York, NY
Nusbaum Professor of Law and Business; Director of the NYU Center for Law & Business. Author of many articles on corporate law and governance. Former chair of the Independence Standards Board and former chancellor of the Court of Chancery of the State of Delaware.

John S. Carroll

Los Angeles Times, Los Angeles, CA
Executive Vice President and Editor. Set a standard of ethical probity and journalistic excellence. Former editor of the *Baltimore Sun* and the *Lexington [KY] Herald-Leader*. As a reporter, served in Vietnam, the Middle East, and Washington. Former member and chairman of the Pulitzer Prize Board.

Walter Cronkite

CBS, Inc., New York, NY
Special correspondent. Covered virtually every major news event during his more than sixty-five years in journalism. Became a special correspondent for *CBS News* when he stepped down as anchorman and managing editor of the *Evening News* after nineteen years. Accomplishments – both on-air and off – have won acclaim and trust from journalism colleagues and the American public alike.

Gretchen C. Daily

Stanford University, Stanford, CA
Bing Interdisciplinary Research Scientist. Pioneered the field of countryside biogeography to evaluate and enhance the ability of human-dominated ecosystems to maintain biodiversity and deliver ecosystem services. Leader in interdisciplinary efforts to translate scientific knowledge of the environment into sound policy initiatives, and in bringing that knowledge to the public.

Joel L. Fleishman

Duke University, Durham, NC
Professor of Law and Public Policy Studies; Director of the Heyman Center for Ethics. Founding director of the Terry Sanford Institute of Public Policy at Duke. Served as university vice president and senior vice president. Former president and current senior advisor of Atlantic Philanthropies (USA). Author and editor of writings that span public policy, the nonprofit sector, and ethics.

William H. Gates, Sr.

Bill and Melinda Gates Foundation, Seattle, WA
Co-Chairman. Known for civic contributions. Serves on the board of directors of United Way of America. Distinguished regent of the University of Washington. Provided the impetus for the creation of the Bill and Melinda Gates Foundation.

Jeri Laber

Human Rights Watch, New York, NY
Founder and advisor. Former executive director of Helsinki Watch. Author of *The Courage of Strangers: Coming of Age with the Human Rights Movement*; co-author of *A Nation is Dying: Afghanistan Under the Soviets, 1979 – 1987* and of numerous articles on human rights issues.

Arthur Levitt, Jr.

The Carlyle Group, Washington, DC
Senior Advisor. Chairman of the Securities and Exchange Commission (1993 – 2001), the longest serving official in this position. Member of several advisory and pro-bono boards. Previously chairman and CEO of the American Stock Exchange, as well as chairman of the Levitt Media Company and owner of *Roll Call*, a Capitol Hill newspaper.

Lloyd Axworthy (FHM)

University of British Columbia, Vancouver, British Columbia, Canada
Director of the Liu Centre for the Study of Global Issues. Served as Canada's Minister of Foreign Affairs (1996 – 2000), leading efforts to develop an international treaty to ban land mines, to focus world attention on the need for an international criminal court, and to address the problem of children affected by wars. First elected to Parliament in 1979. Served as Minister of Employment and Immigration, Minister of Transport, and Minister of Human Resources Development.

Section 2 : Business, Corporate, and Philanthropic Leadership (Private Sector)

James A. Block

Block Asset Management, Inc., New York, NY

President. Chairman of the board of the publicly held Block Drug Company, recently sold to Smith-Kline Beecham. Trustee of the National Museum of the American Indian and chairman of the Museum's development committee. Recipient of the Smithsonian Institution's James Smithson Society Founders Medal. Honorary president of the Associated YM-YMHA's of Greater New York.

Lewis B. Cullman

Cullman Ventures, LLC, New York, NY

CEO. Philanthropist and major benefactor and supporter of the arts and education. Senior vice chairman of the New York Botanical Garden, honorary trustee of the Museum of Modern Art and the Metropolitan Museum of Art, and vice chairman of the Neurosciences Research Foundation, Inc. Chairman of Chess-in-the-Schools, Inc.

Richard W. Fisher

Kissinger McLarty Associates, Washington, DC

Vice Chairman. Served as deputy U.S. trade representative with responsibility for Asia, Latin America, and Canada (1997 – 2001) and as chief operating officer of the U.S. government for NAFTA. Had oversight responsibilities for bilateral trade issues in the Western hemisphere, the development of the Free Trade Area of the Americas, the American deregulation of the Japanese Economy, and the U.S.-Singapore Free Trade Agreement.

Sidney Harman

Harman International Industries, Inc., Washington, DC

Executive Chairman. Founder of Harman International, a major world manufacturer of audio equipment. Awarded the Electronic Industries Alliance Medal of Honor and the Aspen Institute Award for Corporate Leadership. Has served as a trustee of the Carter Center, the Aspen Institute, the Martin Luther King, Jr. Center for Social Change, the Public Agenda Foun-

ation, the Los Angeles Philharmonic Association, and the National Symphony Orchestra.

Robert P. Henderson

Greylock Management Corporation, Boston, MA

Special Limited Partner; Former Chairman. As chairman of Greylock (1992 – 1997), led the corporation's involvement in companies such as Numatics, Filene's Basement, DBS, Simonds, and SDRC. Former CEO of Itek Corporation, group vice president of Honeywell, chairman of Dartmouth's Tuck Board of Overseers, and chairman of the board of the Boston Federal Reserve Bank. Board member of the Cabot Corporation, Allmerica Financial Corporation, and Filene's Basement.

Martin L. Leibowitz

TIAA-CREF, New York, NY

Vice Chairman and Chief Investment Officer. Previously served at Salomon Brothers, devising many new investment products. Author of four books and more than one hundred forty published articles.

Judy C. Lewent

Merck & Company, Inc., Whitehouse Station, NJ

Executive Vice President, CFO, and President of Human Health Asia. Member of Merck's senior executive team that manages business operations and formulates growth strategies and corporate policies. Responsible for worldwide finance, business development, licensing, joint ventures, and Asia human health. Life member of the Corporation of the Massachusetts Institute of Technology, a trustee of the Rockefeller Family Trust, and a member of the National Bureau of Economic Research.

C. D. Spangler, Jr.

University of North Carolina at Chapel Hill, Chapel Hill, NC; National Gypsum Company, Charlotte, NC

President Emeritus; Chairman. Played an active role in the expansion of the University of North Carolina at Chapel Hill. Rose to prominence in family's construction and real estate firm, and in banking where he led a merger in the early 1980s of the Bank of North Carolina with the North Carolina National Bank Corporation. President-elect of the Harvard University Board of Overseers.

Laurence Alan Tisch

Loews Corporation, New York, NY

Co-Chairman of the Board. Former chairman of CBS and of New York University. Philanthropic interests include the arts, medical research, Jewish philanthropies, and education. Trustee of the Metropolitan Museum of Art and the New York Public Library and past trustee of the Whitney Museum. Member of the Council on Foreign Relations.

Lord Browne of Madingley (John Browne) (FHM)

BP plc, London, England

Group Chief Executive. Non-executive director of Intel and Goldman Sachs, and trustee of the British Museum. Fellow of the Royal Academy of Engineering. Knighted in 1998 and made a life peer in 2001.

Section 3 : Educational, Scientific, Cultural, and Philanthropic Administration (Non-profit Sector)

Drew E. Altman

Henry J. Kaiser Family Foundation, Menlo Park, CA

President and CEO. Head of one of the nation's leading private health foundations, supporting efforts to improve health policy and health care in the United States and abroad. Former director of the Health and Human Services Program at the Pew Charitable Trust.

Lawrence S. Bacow

Tufts University, Medford, MA

President. Social scientist, attorney, planner, and scholar. Contributed to environmental policy, bargaining and negotiation theory, and university leadership through scholarly work, teaching, and engagement with civic and governmental agencies. Author of four books and numerous scholarly papers.

Catherine Ann Bertini

United Nations, New York, NY

Under-Secretary-General for Management. As Chief Executive of the World Food Program, led one of the world's largest efforts at humanitarian intervention, targeting women and children in need of food all over the globe. Honored as the 2003 World Food Prize laureate.

William R. Brody

Johns Hopkins University, Baltimore, MD

President. Former head of the department of radiology at Johns Hopkins and provost of the University of Minnesota Academic Health Center. Recognized for contributions to the literature in radiology, cardiology, and engineering.

Larry R. Faulkner

University of Texas at Austin, Austin, TX

President. Previously served as provost, dean of liberal arts and sciences, and professor of chemistry at the University of Illinois. Developed the field of electrogenerated chemiluminescence, and helped to design a cybernetic electrochemical instrument, which marked a major step toward the use of artificial intelligence in cybernetic chemical instrumentation. Recipient of the American Chemical Society Award in analytical chemistry.

Paul Kellogg

New York City Opera, New York, NY; Glimmerglass Opera, Cooperstown, NY

General Director; General and Artistic Director of Glimmerglass Opera since 1979. Serves on the boards of OPERA America, The New York State Historical Association, and Shen Wei Dance Arts; on panels for the National Endowment for the Arts; and as an adjudicator for the Metropolitan Opera National Council Auditions.

Sharon Percy Rockefeller

WETA, Arlington, VA

President and CEO. Continues to guide WETA, Washington, D.C.'s flagship public television and radio stations, to accomplishments in broadcasting and production. Chairman of the Corporation for Public Broadcasting for four years. Active in a number of areas including education, fine arts, government, and women's issues. Serves on the boards of PepsiCo, Sotheby's, the Public Broadcasting Service, the National Gallery of Art, and the Museum of Modern Art.

Steven B. Sample

University of Southern California, Los Angeles, CA

President. Past president of SUNY Buffalo (1982 – 1991). Credited with establishing the University

of Southern California as a top-ranked research university and with leading SUNY Buffalo to greater levels of academic excellence. Author of *The Contrarian's Guide to Leadership*.

Ralph J. Snyderman

Duke University, Durham, NC
Chancellor for Health Affairs; President and CEO of Duke University Health System; James B. Duke Professor of Medicine, Duke University Medical Center. Physician, scientist, administrator. Conceptualized and developed the Duke integrated academic health system as the model for prospective health care. Earlier career was distinguished by seminal research on the mechanisms of inflammation and leukocyte chemotaxis.

Provided leadership in biotechnology while senior vice president for research and development at Genentech.

Kofi A. Annan (FHM)

United Nations, New York, NY
Secretary-General. First Secretary-General to be elected from within the staff, as well as the first black African to serve in this post. Has overseen growth in the size and scope of peacekeeping operations and worked to reestablish UN centrality in emergencies across the globe.

Neil MacGregor (FHM)

British Museum, Bloomsbury, London, United Kingdom
Director. Immediate past director of the National Gallery, London.

One of the leading museum directors in Europe. Champion of scholarship and public access to museums.

Lord Sainsbury of Turville (David Sainsbury) (FHM)

Parliament, London, United Kingdom
Parliamentary Under-Secretary of State for Science and Innovation. Formerly chairman and CEO of J Sainsbury plc. Author of *Governance and Industry: A New Partnership*. ■



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1. **Marvalee H. Wake (UC Berkeley), Jules Alphonse Hoffmann (Centre National de la Recherche Scientifique), and Daniele Hoffmann**

2. **Thomas B. Kornberg (UC San Francisco) and Robert Eugene Krumlauf (Stowers Institute for Medical Research)**

3. **Paul Baran (Novo Ventures, Inc.) and William Allen (NYU)**

4. **Kathryn Lee Calame (Columbia University) and Arthur Weiss (UC San Francisco)**

5. **Alexander Sandor Szalay (Johns Hopkins University) and Michael Eldon Greenberg (Children's Hospital and Harvard Medical School)**

6. **Philip L. Quinn (University of Notre Dame), Stella Kleinrock, Leonard Kleinrock (UCLA), and Lynne Talley (UC San Diego)**