

1976-77 Sir Rudolph Peierls, Oxford University

- Jan. 31 "Pseudomomentum in the Theory of Condensed Matter"
Feb. 1 "The Momentum of Light in a Refractive Medium"
Feb. 4 "Recollections of the Early Days of Quantum Mechanics"
Public Feb. 7 "The Arms Race - Is There Still Hope for the World?"
Feb. 9 "Decaying States and Their Uses"

1977-78 Robert Wilson, Fermi National Accelerator Lab

- Oct. 17 "The Tevatron, a 1000 GEV Colliding Beam Accelerator"
Public Oct. 25 "A Physicist Blunders into Architecture"
Oct. 27 "The Humanness of Physics"
Oct. 28 "A World Laboratory of Nuclear Studies"

1978-79 Robert H. Dicke, Princeton University (1 week)

- Public* Nov. 13 "Cosmology, Paradoxes and Palliatives"
Nov. 14 "Observational Foundation of General Relativity"
Nov. 16 "What in the World's Going on in our Sun?"

Steven Weinberg, Harvard University (1 week)

- Public* Apr. 29 "The Search for Symmetry"
Apr. 30 "Toward a Unified Theory of All Interactions"
May 1 "Aspects of Grand Unification"

1979-80 Anthony J. Leggett, University of Sussex

- Mar. 31 "Quantum Mechanics & 'Common Sense' - Problems, Paradoxes, Alternatives"
Public Apr. 2 "Superfluidity: Order from Chaos"
Apr. 3 "Quantum Liquids", part one
Apr. 8 "Quantum Liquids", part two
Apr. 10 "Quantum Liquids", part three
Apr. 15 "Quantum Liquids", part four
Apr. 17 "Macroscopic Tunneling in SQUIDS"

1980-81 Freeman J. Dyson, Institute for Advanced Study, Princeton

- Series Title: "Implications of Science..."
Public Nov. 4 "...for Technology: Quick is Beautiful"
Public Nov. 6 "...for Weaponry: The Quest for Concept"
Public Nov. 10 "...for Philosophy: Manchester and Athens"
Nov. 12 "...for Eschatology: Life in the Universe"
Nov. 14 "...for the Environment: CO₂ in the Atmosphere"

1981-82 Norman F. Ramsey, Harvard University

- Apr. 5 "Molecular Beam Resonance Methods"
Apr. 6 "Nuclear Interactions in Molecules"
Public Apr. 7 "Inner Space: Physics at Short Distances"
Apr. 12 "Dipole Moments and Parity Violating Spin Rotations of the Neutron"
Apr. 13 "Atomic Hydrogen Maser"

1982-83 Leon M. Lederman, Fermi National Accelerator Lab.

- Nov. 1 "Status and Future of High Energy Physics"
Public Nov. 3 "Inner Space and Outer Space"
Public Mar. 23 "Basic Research for Culture and Profit"
Mar. 24 "The New Accelerators"

- 1983-84 S. Chandrasekhar, University of Chicago**
Oct. 3 “Some Aspects of the Mathematical Theory of Black Holes I”
Public Oct. 5 “The General Theory of Relativity: Why it Probably Represents the Most Beautiful of all Existing Theories”
Oct. 7 “Some Aspects of the Mathematical Theory of Black Holes II”
Oct. 10 “Some Aspects of the Mathematical Theory of Black Holes III”
Public Oct. 12 “The Principles of Invariance and the Theory of Radiative Transfer”
- 1984-85 Victor F. Weisskopf, MIT**
Oct. 22 “Qualitative Physics, In Pursuit of Simplicity I”
Public Oct. 24 “Origin of the Universe”
Oct. 25 “Qualitative Physics, In Pursuit of Simplicity II”
Public Oct. 31 “The Arms Race: Its Dangers, Causes, and Remedies”
Nov. 1 “Qualitative Physics, In Pursuit of Simplicity III”
- 1985-86 Philip W. Anderson, Princeton University**
Oct. 28 “Spin Glass: What Does Statistical Mechanics Have to Say to Computer Scientists”
Public Oct. 30 “The Politicization of Science”
Oct. 31 “Localization of Classical Waves”
Public Jan. 27 “Anti-Intellectual Science”
Jan. 30 “Physics of Mixed Valence”
- 1986-87 Kip S. Thorne, CalTech**
Oct. 6 “Gravitational Waves - A New Window into the Universe”
Public Oct. 8 “Black Holes, White Holes, Worm Holes—Tunnels Through Hyperspace”
Oct. 10 Dedication Lecture for Cornell Theory Center
Oct. 13 “Thermodynamics of Black Holes”
Oct. 20, 21 Special Symposium for Hans Bethe’s 80th Birthday
- 1987-88 Sidney D. Drell, Stanford University**
Mar. 28 “Beamstrahlung”
Public Mar. 30 “1988: Prospects and Progress of Arms Control”
Mar. 31 “Discussions in Moscow on SLCMs, Mobile ICBMs, SDI and Conventional Arms Control”
Apr. 1 “More on Beamstrahlung Including Significance for High Energy γ - γ Scattering”
Apr. 4 “Technological Developments and Strategic Policy”
Apr. 7 Technical Arms Control Seminar
- 1988-89 John Hopfield, CalTech**
Apr. 3 “The Physics of Neurobiological Computations”
Public Apr. 5 “Do Computers Think?”
Apr. 6 Neurobiology Seminar
Apr. 10 “Artificial ‘Neural’ Networks”
Public Apr. 12 “Symposium on Free Will”
- 1989-90 P. G. DeGennes, Collège de France**
Oct. 17 “The Dynamics of Wetting”
Public Oct. 18 “Bubbles, Foams and Other Fragile Objects”
Oct. 23 “Adhesion: Chemistry, Physics and Mechanics”
Oct. 24 “Motions of Polymers at Interfaces”
Public Oct. 25 “Ultradivided Matter”
- 1990-91 Michael Tinkham, Harvard University (1 week)**
Mar. 25 “Flux Motion and Resistance in High Temperature Superconductors, an Overview”
Mar. 26 “Fluxon Pinning and Motion in Large Arrays of Josephson Junctions”
Public Mar. 27 “Superconductivity: Past, Present and Future”
Mar. 28 “Quantum Properties of Submicron Josephson Junctions”

1991-92 Richard L. Garwin, IBM

- Oct. 8 "The Future of U.S. Military Forces, Post 1991"
Public Oct. 9 "Control of the Kuwaiti Oil Flows and Fires: Present and Future"
Oct. 10 "Missile Defenses for the 1990's"
Public Oct. 14 "Glimpses of Fermi in Chicago and Los Alamos", part of a Symposium on Enrico Fermi.

1992-93 Frank Wilczek, Institute for Advanced Study, Princeton

- Oct. 19 "The Unification of Couplings"
Public Oct. 21 "The Language of God: A View from Modern Physics"
Oct. 22 "Disassembled Anyons: New Quantized Hall and Superconducting States"
Oct. 23 "The Nature of the QCD Phase Transition"
Oct. 28 "Confrontation of QCD with Experiments"
Oct. 30 "New Techniques in QCD Perturbation Theory"

1993-94 Klaus von Klitzing, Max-Planck-Institut für Festkörperforschung (1 week)

- Oct. 4 "Miniaturization in Microelectronics - where are the limitations?"
Public Oct. 6 "How Long is One Meter?"
Oct. 7 "New Aspects of the Quantum Hall Effect"

1994-95 Henry Kendall, MIT

- Apr. 1 "The Future of Basic Research in the United States" Panel participant for the
'Bethe 60 Years at Cornell' Celebration.
Apr. 3 "Early Studies in Deep Inelastic Electron Scattering"
Apr. 10 "Radioactive Waste: Science, Technology and Politics"
Public Apr. 12 "Environment, Resources and Population: The Next 50 Years"

1995-96 Bernard Sadoulet, Center for Particle Astrophysics, U.C. Berkeley (1 week)

- Nov. 3 "Supersymmetry and Dark Matter"
Nov. 6 "The Dark Matter Problem"
Nov. 8 Astronomy Seminar

Margaret Geller, Harvard-Smithsonian Center for Astrophysics (1 week)

- May 6 "The Stickman, The Great Wall, and The Hectospec: Large-Scale Structure in the Universe"
Public May 7 "So Many Galaxies... So Little Time"
May 8 "Groups, Clusters, and Cosmology"

1996-97 Walter Kohn, U.C. Santa Barbara

- Sept. 30 "Density Functional Theory of Electronic Structure in Physics and Chemistry"
Public Oct. 2 "Shifting Viewpoints in Condensed Matter Physics, 1950-1995: A Personal Selection"
Oct. 10 "Edge Electronic Structure, The Airy Gas"

1997-98 Alan Guth, MIT

- Mar. 2 "Inflationary Cosmology: A Progress Report"
Public Mar. 4 "The Inflationary Universe"
Mar. 23 "Eternal Inflation: Could Our Universe be One of an Infinitude?"

1998-99 Daniel Kleppner, MIT

- Mar. 29 "Bose-Einstein Condensation of Atomic Hydrogen"
Mar. 30 "Bridging the Gap: Connecting the Quantum and Classical Worlds Experimentally"
Apr. 5 "How Physics Got Precise"
Public Apr. 7 "Views from a Garden of Worldly Delights"

1999-2000 Steven Block, Stanford University

- Public* May 3 "Living Nightmares: Facing the Growing Threat of Biological Terrorism"
May 8 "Sensory Transduction: Clever Physics by Dumb Organisms"
May 10 "Kinesin Motors: Mastering the Molecular Mechanism of Movement by Mechanoenzymes"

2000-01 Wick Haxton, U. of Washington

- Apr. 16 “Solar Neutrinos and Neutrino Oscillations”
Public Apr. 18 “Neutrinos: John Updike and the Big Bang”
Apr. 23 “Supernovae and Nucleosynthesis”

2001-02 Stanford Woosley, UC Santa Cruz

- Feb. 25 “Core Collapse Supernovae”
Mar. 4 “Type Ia Supernovae”
Public Mar. 6 “Gamma-Ray Bursts: The Brightest Explosions Since The Big Bang”

2002-03 Carl E. Wieman, U. of Colorado at Boulder (1 week)

- Oct. 7 “Resonant BEC”
Public Oct. 9 “Bose-Einstein Condensation: Quantum Weirdness at the Lowest Temperature in the Universe”

Bertrand Halperin, Harvard University (1 week)

- Mar. 24 “One-dimensional Metals In Theory and Experiment”
Mar. 25 “Quantum Hall Bilayers at Total Filling $\nu=1$ ”
Mar. 27 “Recent Developments in the Quantum Hall Effects”

2003-04 Bruce Winstein, University of Chicago

- Apr. 12 “The Allure of the Neutral Kaons”
Public Apr. 14 “Startling Revelations about Our Universe”
Apr. 19 “Searching for Patterns in the Polarization of the Cosmic Microwave Background Radiation”

2004-05 Albert Libchaber, The Rockefeller University

- Oct. 18 “Some Physical Aspects of the Origin of Life and of Artificial Cells”
Public Oct. 20 “The Dawn of Theoretical Biology: A Physics Approach to Information and Computation in Living Matter”
Oct. 25 “From Physics Techniques to Biological Observation”

2005-06 Donald M. Eigler, IBM Fellow, IBM Almaden Research Center

- Oct. 17 “Information Transport and Computation in Nanometer-Scale Structures”
Public Oct. 19 “Life Among the Atoms: A Celebration of the Small Frontier”
Oct. 24 “Single-Atom Spin-Excitation Spectroscopy”

2006-07 David J. Gross, UC Santa Barbara (1 week)

- Series Title: “The Search for a Theory of Fundamental Reality...”
Oct. 16 “The Theory of Elementary Particles”
Oct. 17 “Questions and Speculations”
Public Oct. 18 “The Coming Revolutions”

Joseph Polchinski, UC Santa Barbara (1 week)

- Mar. 12 “Gauge/Gravity Duality: From Black Holes to the Bethe Ansatz”
Mar. 14 “Cosmic String Loops and Gravitational Wave Signatures”
Public Mar. 14 “Superstrings, Cosmic Strings, and the Landscape”

2007-08 Steve Chu, Stanford (1 week)

- Apr. 14 “What We Can Learn from Single Molecule Experiments of Biological Systems”
Apr. 15 “Coherent Control of Ultra-Cold Matter”
Public Apr. 16 “The World’s Energy Problem and What We Can Do About It”

2008-09 Robert Kirshner, Harvard (1 week)

- Oct. 20 “The Mystery of Dark Energy”
Oct. 21 “The Attraction of Astronomy” (Undergrad talk at the Bethe House)
Public Oct. 22 “The Accelerating Universe: Einstein’s Blunder Undone”
Oct. 23 “Fundamentals of Supernova Cosmology”

2008-09 Paul C. W. Chu, Hong Kong University of Science and Technology (1 week)

- Mar. 23 "From BCS through HTS or RTS?"
Mar. 24 "High Pressure Studies on Fe-Pnictide Superconductors"
Public Mar. 25 "An Exciting Odyssey of Discovery: From high-temperature superconductors in Houston
To developing an intellectual powerhouse in Hong Kong"

2009-10 There was no Bethe Lecturer

2010-11 Wolfgang Ketterle, MIT (1 week)

- Apr. 11 "Superfluid Gases Near Absolute Zero Temperature"
Apr. 12 "Towards Quantum Magnetism with Ultracold Atoms"
Public Apr. 13 "When Freezing Cold is not Cold Enough"

2011-12 Paul Alivisatos, Lawrence Berkeley National Laboratory (1 week)

- Sept. 26 "The Science of Nanocrystals in Six Easy Pieces"
Sept. 27 "Towards Artificial Photosynthesis"
Public Sept. 28 "Carbon Cycle 2.0"

2011-12 Lisa Randall, Harvard (1 week)

- Apr. 30 "Particle Physics Today"
Public May 1 "Knocking on Heaven's Door"
May 2 "Light Stops and Compositeness"

2012-13 John Carlstrom, Chicago (1 week)

- Oct. 15 "Cosmological Physics with the Cosmic Microwave Background: New Results from the
South Pole Telescope"
Public Oct. 16 "CMB Status and Future Directions"
Oct. 17 "Exploring the Universe from the South Pole"
Oct. 18 "New Measurements of the Sunyaev-Zel'dovich Effect: Constraining
Cosmology through the Growth of Structure"

2012-13 Gordon Baym, U. Illinois (1 week)

- Mar. 25 "Two Slit Diffraction with Highly Charged Particles: Niels Bohr's consistency argument that
the electromagnetic field must be quantized."
Mar. 26 "The Landau criterion for superfluidity is neither necessary nor sufficient."
Public Mar. 27 "Quarks and Cold Atoms: From the hottest to the coldest places in the Universe"

2013-14 Fabiola Gianotti, CERN, The European Organization for Nuclear Research (1 week)

- Nov. 11 "Challenges and Accomplishments of the ATLAS Experiment at the Large Hadron Collider"
Nov. 12 "Most Recent Results from Higgs Boson Studies in ATLAS and their Implications"
Public Nov. 13 "Discovery! The Elusive Higgs Boson"

2013-14 David Awschalom, U. Chicago

- April 7 "Beyond Electronics: Abandoning Perfection for Quantum Technologies"
April 8 "Ultrafast Quantum Control of Single Electron Orbital and Spin Dynamics in Diamond"
Public April 9 "Engaging Diamonds in the Quantum Age"

2014-15 Juan Maldacena, IAS Princeton

- Sept. 22 "Quantum Mechanics and the Geometry of Spacetime"
Sept. 23 "Causality Constraints on Graviton Three Point Functions"
Public Sept. 24 "Black Holes and the Structure of Spacetime"

2014-15 William Bialek, Princeton

- Mar. 16 "Are Biological Networks Poised at Criticality?"
Mar. 17 "Predictive Information and the Problem of Long Time Scales in the Brain"
Public Mar. 18 "More Perfect than We Imagined: A Physicist's View of Life"

- 2015-16 Hitoshi Murayama, UC Berkeley & U. Tokyo**
Oct. 19 “When a Symmetry Breaks”
Oct. 20 “Goldstone Bosons Without Lorentz Invariance”
Public Oct. 21 “The Quantum Universe”
- 2015-16 Francis Halzen, University of Wisconsin-Madison**
March 21 “IceCube: The Discovery of High-Energy Cosmic Neutrinos”
March 22 “IceCube Neutrinos: From Oscillations to PeV Dark Matter”
Public March 23 “Ice Fishing for Neutrinos”
- 2016-17 Anton Zeilinger, University of Vienna**
Nov. 28 “Quantum Communication with Entangled Photons”
Nov. 29 “Quantum Entanglement in Higher Dimensions”
Public Nov. 30 “From Quantum Puzzles to Quantum Information Technology”
- 2016-17 Josh Frieman, Fermilab**
April 24 “Probing Cosmic Acceleration with the Dark Energy Survey”
April 25 “Cosmic Acceleration Then and Now”
Public April 26 “Probing the Dark Universe”
- 2017-18 Margaret Murnane, University of Colorado**
Oct. 16 “Science at the Timescale of the Electron: Coherent X-Ray Beams from Tabletop Femtosecond Lasers”
Oct. 17 “Capturing the Fastest Charge and Spin Dynamics in Nanosystems using Tabletop High Harmonic Beams”
Public Oct. 18 “Harnessing Quantum Light Science for Tabletop X-Ray Lasers, with Applications in Nanoscience and Nanotechnology”
- 2017-18 Saul Teukolsky, Cornell University**
March 26 “Testing General Relativity with LIGO”
Public March 28 “Black Holes, Neutron Stars, and Gravitational Waves: Was Einstein Right?”
March 29 “The Coming Revolution in Computational Astrophysics”
- 2018-19 Shoucheng Zhang, Stanford University**
September 24 “Topological Insulators and Superconductors”
September 25 “AI for Material Discovery”
Public September 26 “Majorana Fermions and their Application to Quantum Computing”
- 2018-19 John Preskill, Caltech**
April 8 “TBD”
April 9
Public April 10 “TBD”
April 11
April 12 LEPP Seminar

