

Sidney D. Drell
Professional Biography

Present Position

- Professor Emeritus, SLAC National Accelerator Laboratory, Stanford University (Deputy Director before retiring in 1998)
- Senior Fellow at the Hoover Institution since 1998

Present Activities

- Member, JASON, The MITRE Corporation
- Member, Board of Governors, Weizmann Institute of Science, Rehovot, Israel

Professional and Honorary Societies

- American Physical Society (Fellow) - President, 1986
- National Academy of Sciences
- American Academy of Arts and Sciences
- American Philosophical Society
- Academia Europaea

Awards and Honors

- Prize Fellowship of the John D. and Catherine T. MacArthur Foundation, November (1984-1989)
- Ernest Orlando Lawrence Memorial Award (1972) for research in Theoretical Physics (Atomic Energy Commission)
- University of Illinois Alumni Award for Distinguished Service in Engineering (1973); Alumni Achievement Award (1988)
- Guggenheim Fellowship, (1961-1962) and (1971-1972)
- Richtmyer Memorial Lecturer to the American Association of Physics Teachers, San Francisco, California (1978)
- Leo Szilard Award for Physics in the Public Interest (1980) presented by the American Physical Society
- Honorary Doctors Degrees: University of Illinois (1981); Tel Aviv University (2001), Weizmann Institute of Science (2001)
- 1983 Honoree of the Natural Resources Defense Council for work in arms control
- Lewis M. Terman Professor and Fellow, Stanford University (1979-1984)
- 1993 Hilliard Roderick Prize of the American Association for the Advancement of Science in Science, Arms Control, and International Security
- 1994 Woodrow Wilson Award, Princeton University, for “Distinguished Achievement in the Nation's Service”
- 1994 Co-recipient of the 1989 “Ettore Majorana - Erice - Science for Peace Prize”
- 1995 John P. McGovern Science and Society Medalist of Sigma Xi
- 1996 Gian Carlo Wick Commemorative Medal Award, ICSC–World Laboratory
- 1997 Distinguished Associate Award of U.S. Department of Energy

Awards and Honors – cont'd

- 1998 I. Ya. Pomeranchuk Prize, Inst. of Theoretical and Experimental Physics, Moscow
- 1999-2000 Linus Pauling Medal of Stanford University
- 2000 University of California Presidential Medal
- 2000 One of 10 scientists honored as “Founder of national reconnaissance as a space discipline” by the U.S. National Reconnaissance Office
- 2000 The Enrico Fermi Award, presented on behalf of the President of the United States and the Secretary by the U.S. Department of Energy, for a lifetime of achievement in the field of nuclear energy
- 2001 National Intelligence Distinguished Service Medal, the U.S. intelligence community’s highest honor, presented by the Director of Central Intelligence at the CIA
- 2001 William O. Baker Award for contributions to national security, particularly in the field of foreign intelligence, sponsored by the Intelligence and National Security Alliance (INSA)
- 2001 Heinz R. Pagels Human Rights of Scientists Award, New York Academy of Sciences
- 2005 11th annual Heinz Award for Public Policy, Washington, D.C.
- 2008 American Academy of Arts and Sciences Rumford Prize
- 2008 Stanford University Pioneers in Science
- 2010-2013 Intelligence and National Security Alliance (INSA) created the Annual Sidney D. Drell Achievement Academic Award for graduate students and untenured professors, Washington, D.C.
- 2012 NNSA Administrator’s Gold Medal of Excellence, Washington, D.C., in recognition of his many years of exceptional contributions to Los Alamos and Lawrence Livermore national laboratories, the NNSA, the Department of Energy (DOE) and the nation.
- 2012 The Reykjavik Award presented by the Federation of American Scientists, Washington, D.C.
- The Federation of American Scientists presented Dr. Sidney Drell with the 2012 Public Service Award for his excellent service in working toward a world without nuclear weapons
- 2013 Awarded the 2011 National Medal of Science, Washington, D.C., for his contributions to quantum field theory and quantum chromodynamics and for his application of science to inform public policy in national security and intelligence
- 2013 Inducted into the Engineering at Illinois Hall of Fame for pioneering contributions to elementary particle physics and for applying fundamental physics principles to inform public policy in national security and intelligence

Personal Data

Born September 13, 1926 - Atlantic City, New Jersey

Married (Harriet J. Stainback, Minter City, Mississippi)

Children (Daniel W., b. 1953; Persis S., b. 1955; Joanna H., b. 1965)

Education

1946 A.B., Princeton University

1947 M.A., University of Illinois

1949 Ph.D., University of Illinois

Special Fields

Theoretical Physics: Elementary Particle Physics and Quantum Theory.

National security and arms control.

Recent Positions and Activities – GOVERNMENT

2006-2012 External Governor on the Board of Governor's LANS LLC and LLNS LLC

2001-2003 Member, Advisory Committee to the National Nuclear Security Administration (NNSA/DOE)

2001-2002 Chair, Senior Review Board for the Intelligence Technology Innovation Center

1992-2001 Member, Non-Proliferation Advisory Panel

1993-2001 Member, President's Foreign Intelligence Advisory Board

1998-1999 Member, Commission on Maintaining US Nuclear Weapons Expertise

1990-1993 Chairman, Technology Review Panel, Senate Select Committee on Intelligence

1991-1993 Member, Director's Advisory Committee, Lawrence Livermore National Laboratory

1990-1991 Chairman, House Armed Services Committee Panel on Nuclear Weapons Safety

1978-1982 Consultant, Senate Select Committee on Intelligence

1980-2007 Member, Council on Foreign Relations

1978-1980 Member, Energy Research Advisory Board, U. S. Department of Energy

1977-1982 Consultant, Office of Science and Technology Policy

1975-1991 Consultant, Office of Technology Assessment, U.S. Congress

1974-1985 Member, High Energy Physics Advisory Panel, U.S. Department of Energy, Chairman 1974-82; Chairman HEPAP Subpanel on Superconducting Super-Collider Physics (1990) and on the Vision for the Future of High Energy Physics (1994)

1974-1976 Member, U.S. Defense Science Board Task Force

1973-1981 Consultant, National Security Council

1969-1981 Consultant, U. S. Arms Control and Disarmament Agency

1966-1971 Member, President's Science Advisory Committee

1963-1973 Consultant, Office of Science and Technology, Executive Office of the President, and Member (or Chairman) of PSAC Panels on national security problems

Recent Positions and Activities – GOVERNMENT - cont'd

1960-present JASON group of academic scientists advising U.S. Government on technical problems of importance to national security.

Recent Positions and Activities – ACADEMIC

2001 Lauritsen Lecturer, California Institute of Technology
1992-1999 Chairman, University of California President's Council on the National Labs
1999-2000 Linus Pauling Lecturer and Medalist, Stanford University
1997 Brickwedde Lecturer, Johns Hopkins University
1995 Kovler Lecturer, U. of Chicago
1991 First Colonel Tom Johnson Visiting Scholar at West Point Military Academy
1989-1996 Adjunct Professor, Department of Engineering and Public Policy, Carnegie Mellon University
1988-1993 Member, Carnegie Commission on Science, Technology, and Government
1984-1991 Member, Aspen Strategy Group
1977-1990 Member, American Committee on U.S.-Soviet Relations (formerly Committee on East-West Accord) [Member, Science Advisory Committee]
1983-1989 Founding Co-Director, Stanford Center for International Security and Arms Control
Spring 1988 Hans Bethe Lecturer, Cornell University
1969-1986 Executive Head, Theoretical Physics, Stanford Linear Accelerator Center
Spring 1984 I. I. Rabi Visiting Professor, Columbia University
1984, 1990 Visiting Professor, Rockefeller University
Spring 1983 Danz Lecturer, University of Washington, Seattle
1974-1983 Member, Board of Trustees, Institute for Advanced Study Princeton, New Jersey (current emeritus)
Spring 1979 Visiting Fellow, All Souls College, Oxford University
Spring 1975 Schrodinger Visiting Professor, University of Vienna, Austria
1972 Amos de Shalit Lecturer, Weizmann Institute
Spring 1972 Visiting Professor, University of Rome, Italy
Spring 1971 Dupont Lecturer, University of Pennsylvania
Fall 1962 and 1970 Visiting Professor and Loeb Lecturer, Harvard University
1991-1993 Chairman, International Advisory Committee of the University of California's Institute on Global Conflict and Cooperation (IGCC)
1985-1990 Member, MIT Lincoln Laboratory Advisory Board
1971-1993 Member, Board of Directors, the Arms Control Association, Washington, D.C.
1966-1969 Member, Advisory Council, Physics Dept., Princeton Univ., (Chairman 1967-69)

Publications

Numerous papers in theoretical physics; 3 books on physics:

- *Relativistic Quantum Mechanics* (with J.D. Bjorken) McGraw Hill, 1964
- *Relativistic Quantum Fields* (with J.D. Bjorken) McGraw Hill, 1965
- *Electromagnetic Structure of Nucleons* (with F. Zachariasen) Oxford, 1961

Books and articles on nuclear weapons and arms control:

- *Facing the Threat of Nuclear Weapons* (University of Washington Press, 1983) (2nd Edition 1989)
- *Sidney Drell on Arms Control* (edited by Kenneth W. Thompson) (University Press of America, 1988)
- *The Reagan Strategic Defense Initiative: A Technical, Political, and Arms Control Assessment* (with P. J. Farley and D. Holloway) (Ballinger, 1984)
- *Sakharov Remembered: A Tribute by Friends and Colleagues* (edited with Sergei Kapitsa) (American Institute of Physics, 1991)
- *In the Shadow of the Bomb: Physics and Arms Control* (American Institute of Physics, 1993)
- *Reducing Nuclear Danger* (with McGeorge Bundy and William J. Crowe, Jr.) (Council on Foreign Relations Press, 1993)
- *The New Terror: Facing the Threat of Biological and Chemical Weapons* (edited with Abraham D. Sofaer and George D. Wilson) (Hoover Institution Press, 1999)
- *The Gravest Danger: Nuclear Weapons* (with James E. Goodby) (Foreword by George P. Shultz) (Hoover Institution Press, 2003)
- *What Are Nuclear Weapons For?* (with James E. Goodby) (Arms Control Association, 2005)
- *Nuclear Weapons, Scientists, and the Post-Cold War Challenge*, Selected Papers on Arms Control, World Scientific, (2007)
- *Implications of the Reykjavik Summit on Its Twentieth Anniversary, Conference Report*, Conference Organizers and Report Editors: Sidney D. Drell and George P. Shultz, at Hoover Institution October 11-12, 2006, (Hoover Institution Press, 2007)
- *Stevenson and the Comprehensive Test Ban Treaty Today* by Sidney D. Drell and James E. Goodby, appeared in *Adlai Stevenson's Lasting Legacy*, Edited by Alvin Liebling, (2007)
- *Reykjavik Revisited: Steps Toward a World Free of Nuclear Weapons A Summary Report*, co-edited with George P. Shultz and James E. Goodby, (Hoover Institution Press, 2008)
- *The Reality: A Goal of a World without Nuclear Weapons Is Essential*” by Sidney Drell and James Goodby, The Center for Strategic and International Studies and the Massachusetts Institute of Technology, (The Washington Quarterly, 2008)
- *Reykjavik Revisited: Steps Toward a World Free of Nuclear Weapons, A Complete Report of 2007 Hoover Institute Conference*, edited by George P. Shultz, Steven P. Andreasen, Sidney D. Drell, and James E. Goodby, (Hoover Institution Press No. 565, 2008)

Publications - cont'd

- *Technical Issues in Keeping the Nuclear Stockpile Safe, Secure, and Reliable* by Marvin L. Adams and Sidney D. Drell, appeared in Nuclear Weapons in 21st Century U.S. National Security, Supporting Papers (CSIS, APS physics, and AAAS, 2009)
- *The nuclear state: a new start* by Sidney Drell, (Physics World, Vol. 22, No. 2, 2009)
- *A World Free of Nuclear Weapons* by Sidney D. Drell, William J. Perry, Sam Nunn, and George P. Shultz (appeared in Bulletin of the American Academy, Winter 2009)
- *A World Without Nuclear Weapons: End State Issues* by Sidney D. Drell and James E. Goodby, Foreword by George P. Shultz (Hoover Institution Press, Stanford University, 72 pp., 2009)
- *The U.S. Nuclear Stockpile and Ratification of the CTBT* by Sidney Drell, Stanford University (appeared in CTBTO Spectrum 13, September 2009, 20-21)
- *Working toward a world without nuclear weapons*” by Sidney D. Drell (Physics Today, July 2010, 30-35) (For the Max von Laue Lecture spring 2010)
- *Deterrence: Its Past and Future – Papers Presented at Hoover Institution, November 2010* (Hoover Institution Press 2011)
- *“Ideas for a better world in 2011”* by Sidney D. Drell, (The Christian Science Monitor, December 2010, p. 22)
- *“Nuclear Deterrence in a World without Nuclear Weapons”* by Sidney D. Drell and Raymond Jeanloz, Hoover Institution Conference Nov. 11-12, 2010, 18 pp.
- *“Tribute to Andrei Sakharov”* Conference on *“Deterrence: Its Past and Future”*, Presented at the Lancaster House, London, UK, May 22, 2011
- *“Deterrence: It’s Past and Future, A Summary Report of Conference Proceedings*, Hoover Institution, November 2010, edited by George P. Shultz, Sidney D. Drell, and James E. Goodby, Hoover Institution Press, Stanford University, Stanford, California, 2011, 211 pp.
- *“Realizing the Full Potential Of the Open Skies Treaty”* by Sidney D. Drell and Christopher W. Stubbs, ARMS CONTROL TODAY, Vol. 41, Number 6, July/August 2011, 15-20
- *“Modernize Open Skies”* by George P. Shultz, Sidney D. Drell and Christopher Stubbs, THE NEW YORK TIMES Opinion, March 29, 2012
- *“Nuclear Deterrence In a Changed World”* by Sidney D. Drell and James E. Goodby, ARMS CONTROL TODAY, June 2012, 8-13
- *“A Safer Nuclear Enterprise”* by Sidney D. Drell, George P. Shultz, Steven P. Andreasen, SCIENCE, published by AAAS, Vol. 336, June 8, 2012, p. 1236

Publications - cont'd

- “Reducing the Global Nuclear Risk” by Sidney D. Drell, George P. Shultz, and Steven P. Andreasen, Hoover Institution, Policy Review No. 175, October 2, 2012
- “The Nuclear Enterprise: High-Consequence Accidents: How to Enhance Safety and Minimize Risks in Nuclear Weapons and Reactors”, World-Renowned Nuclear Experts Analyze Risks and Rewards of the Nuclear Enterprise in a new book edited by George P. Shultz and Sidney D. Drell, Hoover Institution, October 2, 2012, 370 pp.
- “How to Detect a Nuclear Test on Your iPhone”, Christopher Stubbs and Sidney Drell, Foreign Policy on-line Magazine, April 9, 2013
- The Present-Minded Professor, Sidney Drell, Hoover Digest, Spring 2013, 4 pp.
- “Is It Illogical To Work Toward A World Without Nuclear Weapons?”, Sidney Drell, October 10, 2013 (to be published)
- “Public Domain Treaty Compliance Verification in the Digital Age”, Christopher Stubbs and Sidney Drell, IEEE Technology and Society Magazine, Winter 2013