



Curriculum Vitae Professor Dr Gerald Holton

Name: Gerald Holton
Date of birth: 23 May 1922



Image: private source

Research Priorities: high-pressure physics, history of science, philosophy of science, science and society, biographies of scientists, Albert Einstein

Gerald Holton is an American physicist and historian of science. He is considered one of the leading exponents of high-pressure physics and the history and philosophy of science. He has published seminal contributions to the history of science in the 19th and 20th centuries.

Academic and Professional Career

Mallinckrodt Professor of Physics, Professor of History of Science, Emeritus, Harvard University, Cambridge, USA

Visiting Professor: Massachusetts Institute of Technology (MIT), Cambridge, USA; Institute for Advanced Study at Princeton (IAS), USA; New York University, New York City, USA; Leningrad University, Russia; Imperial College London, UK; Sapienza University of Rome, Italy; National Centre for Scientific Research (CNRS), Paris, France; Visiting Scholar, China and Japan

1952 - 1982 Head, High-Pressure Laboratory, Harvard University, Cambridge, USA

1948 - 1952 Lecturer, Department of Physics, Harvard University, Cambridge, USA

1947 Promotion in physics, Harvard University, Cambridge, USA

1944 - 1947 Study of physics, Harvard University, Cambridge, USA

1942 Master of Arts, Wesleyan University, Middletown, USA

1941 Bachelor of Arts, Wesleyan University, Middletown, USA

1940 Study of physics, Wesleyan University, Middletown, USA

Functions in Scientific Societies and Committees

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| 2003 | National Associate, The National Academies (NASEM), USA |
| 2003 | Member, Committee on Facilitating Interdisciplinary Research, NASEM, USA |
| 1997 - 2001 | Member, Committee on Public Understanding of Science (OPUS), American Association for the Advancement of Science (AAAS), USA |
| 1997 - 2000 | Member, Advisory Committee on Science and Mathematics, Massachusetts Board of Education, Malden, USA |
| 1997 - 2000 | Member, Board of Trustees, German-American Academic Council (GAAC), USA |
| 1989 - 1993 | Trustee, National Humanities Center (NHC), USA |
| 1989 - 1991 | Member, Committee on the Conduct of Science, NASEM, USA |
| 1988 | Chairperson, International Union on History and Philosophy of Science (IUHPST) |
| 1986 - 1988 | Chairperson, Advisory Committee on Directorate for Science and Engineering Education, National Science Foundation (NFS), USA |
| 1985 - 1993 | Member, Advisory Committee on Directorate for Science and Engineering Education, NFS, USA |
| 1984 - 1987 | Member, Committee on Indicators of Precollege Science Education, National Research Council (NRC), USA |
| 1983 - 1984 | President, History of Science Society (HSS), USA |
| 1982 - 1988 | Member, IUHPST |
| 1981 - 1988 | Vice President, International Academy of the History of Sciences, Paris, France |
| 1981 - 1983 | Co-Autor, "A Nation At Risk"-Report, President Ronald Reagan's National Commission on Excellence in Education, USA |
| 1980 - 1985 | Member, Selection Board, Albert Einstein Peace Prize, Albert Einstein Peace Prize Foundation, Chicago, USA |
| 1979 - 1995 | Member, Council of Scholars, Library of Congress, Washington D.C., USA |
| 1977 - 1980 | Member, US Committee on Science in UNESCO, USA |
| 1976 | Member, Center for Advanced Study in the Social Sciences, Princeton, USA |
| 1975 - 1980 | Member, U. S. Department of State's National Commission for UNESCO, USA |
| 1975 - 1989 | Trustee, Wesleyan University, Middletown, USA |
| 1973 - 1978 | Member, Advisory Committee on Ethical and Values Impact of Science and Technology (EVIST), NSF, USA |
| 1970s | Fellow, Member, Board of Directors, AAAS, USA |

- 1969 - 1972 Member, Committee on Communication with Scholars in the People's Republic of China (CSCPRC), National Academy of Sciences (NAS), American Council of Learned Societies (ACLS), Social Science Research Council (SSRC), USA
- 1965 - 1967 Trustee, Museum of Science, Boston (MOS), USA
- 1959 - 1961 Member, Advisory Board, HSS, USA
- 1958 - 1997 Member, Advisory Board, Daedalus, USA
- 1956 - 1963 Founding Editor, Daedalus, USA

Honours and Awarded Memberships

- 2021 Frontiers of Knowledge Award, BBVA Foundation, Banco Bilbao Vizcaya Argentaria (BBVA), Spain
- since 2016 Honorary Member, Austrian Academy of Sciences (OEAW), Austria
- 2008 Austrian Decoration for Science and Art, Federal Ministry Republic of Austria
- 2008 Abraham Pais Prize, American Physical Society (APS), USA
- 2001 Festschrift: Science and Culture, Transaction Publishers
- 1998 Joseph H. Hazen Prize, HSS, University of Notre Dame (ND), USA
- 1997 Rothschild Lecturer, Harvard University, Cambridge, USA
- 1994 Joseph Priestley Award, Dickinson College, Carlisle, USA
- 1989 J. D. Bernal Prize, Society for Social Studies of Science, University of Wisconsin-Milwaukee (UWM), USA
- 1989 Sarton Medal, History of Science Society (HSS), ND, USA
- 1989 Andrew Gemant Award, American Institute of Physics (AIP), College Park, USA
- since 1987 Member, German National Academy of Sciences Leopoldina, Germany
- 1985 John P. McGovern Medal, The Scientific Research Honor Society (SIGMA XI), Durham, USA
- 1981 Jefferson Lecturer, National Endowment for the Humanities (NEH), Washington, D.C., USA
- 1980 - 1981 Guggenheim Fellowship, John Simon Guggenheim Memorial Foundation, New York City, USA
- 1980 Oersted Medal, American Association of Physics Teachers (AAPT), USA
- 1979 Herbert Spencer Lecturer, Oxford University, UK
- 1967 Robert A. Millikan Medal, AAPT, USA

1962 George Sarton Memorial Lecturer, HSS, ND, USA
1962 Distinguished Service Citation, AAPT, USA
since 1960 Fellow, AAAS, USA
since 1956 Fellow, American Academy of Arts and Sciences (AAA&S), USA
Eight honorary doctorates
Honorary Member, New York Academy of Sciences (NYAS), New York, USA

Research Priorities

Gerald Holton is an American physicist and historian of science. He is considered one of the leading exponents of high-pressure physics and the history and philosophy of science. He has published seminal contributions to the history of science in the 19th and 20th centuries.

Gerald Holton's focus has been on the interrelationships between science and society. In doing so, he has examined how science shapes the culture of a society and how the cultural matrix of each historical era influences scientific practice. In his contributions to the history of science in the 19th and 20th centuries, he has demonstrated cultural, sociological and gendered connections between science and society.

He has also researched what prompts scientific research and what inspires scientists. He analysed humanistic thought processes as a driving force for researchers and identified general themes that recur in the thinking of scientists. The focus was on scientists such as Johannes Kepler, Isaac Newton and Albert Einstein. Gerald Holton has been instrumental in preserving the documentary legacy of Albert Einstein and making it accessible to the scientific community.

Gerald Holton is also known – given his biography – for his studies on the fate of children who were forced to flee National Socialist Germany. In this context, he has warned against anti-scientific movements and their dangers to society.