

**VITA**, David J. Wineland, February, 2018

**EDUCATION:**

- University of California, Davis, Sept. 1961 - Dec. 1963
- University of California, Berkeley, Jan. 1964 - June 1965. [B.A., June 1965]
- Harvard University, Sept. 1965 - Nov. 1970 [M.A., June 1966; Ph.D., Nov. 1970]  
(Thesis adviser: Norman Ramsey)

**POSITIONS:**

- Postdoctoral Research Associate: University of Washington, Nov. 1970 - June 1975  
(Adviser: Hans Dehmelt)
- Physicist, National Bureau of Standards (became National Institute of Standards and Technology (NIST) in 1989), Boulder, CO, July 1975 – December, 2017
  - Leader, Ion Storage Group, 1979-2017: <http://www.nist.gov/pml/div688/grp10/index.cfm>
  - NIST Fellow, 1988
- Affiliate Faculty, Colorado State University, 1985 - 1993
- University of Colorado, Lectureship, 2000 – 2012, Professor Adjoint, 2012 – present
- University of Oregon; Philip H. Knight Distinguished Research Chair; and Research Professor, Department of Physics, January 2018 - present

**PROFESSIONAL SOCIETIES, COMMITTEES:**

- Fellow, American Physical Society
- Fellow, Optical Society of America
- Member, Sigma Xi
- Member, org. committee, IEEE Conf. on Precision Electromagnetic Measurements, 1982
- Member, American Physical Society, DEAP Sympos. Committee, 1982 - 1985
- Chair (1989), vice-chair (1987), Gordon Conference on Atomic Physics
- Member, program committee, Int. Quant. Electronics Conf. (IQEC), 1987
- Member, local organizing committee, 12th International Conference on General Relativity and Gravitation (GR12), 1989
- Member, program committee, Fourth Symposium on Frequency Standards and Metrology, Ancona, Italy, 1988
- Member, Laser Spectroscopy Program Committee, IQEC '90
- Member, APS Laser Science Topical Group Fellowship Committee, 1989 - 1991
- Member, NAS Committee on Fundamental Constants and Basic Standards, '89 - '92
- Member, OSA Annual Meeting Technical Program Committee, 1990
- Chair, Arthur L. Schawlow Prize in Laser Science Committee (APS) 1991
- Chair, QELS '92 Laser Spectroscopy subcommittee
- Member, Davison-Germer Prize committee, 1991
- Chair ('92 - '93), Vicechair ('91 - '92), APS Division of Atomic, Molecular, and Optical Physics (DAMOP)
- Member, International Advisory Committee for the Int. Symposium on Atomic Frequency Standards and Coherent Quantum Electronics, Nara, Japan, Aug. '93.
- Co-Chair, 1994 International Conference on Atomic Physics (ICAP-14), Boulder, CO (with C. Wieman)
- Member, advisory committee for the Nobel Symposium on "Particle Traps and Related Fundamental Physics," Lysekil, Sweden, 1994

- Chair, National Academy of Sciences panel on Atomic, Molecular, and Optical Physics. (Spring '93 - Spring '96)
- Member, Local organizing committee, Fifth Symposium on Frequency Standards and Metrology, Woods Hole, Oct., 1995.
- Member, NSF AMOP Physics review panel, May, 1996
- Member, NAS Committee on Atomic, Molecular, and Optical Science (CAMOS) '93 - '96.
- Member, ICAP-15 International Program committee Jan. '95 - Aug. '96.
- Member, NBS Precision Measurements Grants Committee, 1978 - 1997.
- Member, Organizing Committee, Workshop on Nonneutral Plasmas, Boulder, July, 1997.
- Member, International Union of Pure and Applied Physics, Commission on Quantum Electronics, 1997 - 1999.
- Member, International Advisory Committee, Conference on Trapped Charged Particles and Fundamental Physics, Monterey, CA, August, 1998.
- Member, Program Committee, Int. Conf. on Atomic Physics (ICAP-16), Aug. 1998.
- Member, Quantum Optics Program Committee, IQEC, San Francisco, May, 1998.
- Member, Board of Editors, Review of Scientific Instruments, 1998-2000.
- Member, Program Committee, NASA Int. Conf. Quantum Computing and Quantum Communications, February, 1998.
- Chair, Subcommittee on Quantum Optics and Atom Optics, QELS, Baltimore, May, 1999.
- Member, AIP Visiting Scientist Program in Physics, 1993-2001.
- APS Centennial Speaker, 1998-99.
- Co-chair, QELS 2000 program committee, San Francisco, May, 2000.
- Member, IQEC-2000 subcommittee on ACold Atoms, @ Nice, September, 2000
- Member, Program Committee, International Conf. on Atomic Physics (ICAP-17), Florence, August, 2000.
- Member, Multidisciplinary University Research Initiative (MURI) Executive Advisory Board and Technical Advisory Committee AInformation Physics: Non-classical Information Representation and Manipulation, @ 1999-2000.
- Member, steering committee, NSF Workshop and Report on Quantum Information Science, Dec., 1999.
- Member, International Conference on Quantum Advisory Committee (Rochester, 2001)
- Member, DAMOP Nominating Committee, 2001 - 2003
- General Co-chair, QELS 2002
- Member, International Advisory Committee, meeting on "Trapped Charged Particles and Fundamental Interactions, @ August, 2002, Wildbad Kreuth, Germany
- Chair, Southwest Quantum Information & Technology (SQuInT) Network Meeting, Boulder, CO, March, 2002.
- Member, Arthur L. Schawlow Prize in Laser Science Committee (APS), 2002-2003
- Member, Planning Committee, 4<sup>th</sup> Quantum Information Processing and Communication (QIPC), Oxford, UK, July, 2003.
- Member, William F. Meggers Award Committee (OSA) 1991, 1995, 2003
- Member, Program committee, ERATO conference on Quantum Information Science 2004, Tokyo, Sept. >04
- Chair, Program committee, Workshop on Quantum Information Science and Emerging Technologies (QISET), NIST, Boulder, April, 2004
- Member, Program committee, ICONO-2005 (International Conferences on Coherent and Nonlinear Optics) May, >05, St. Petersburg, Russia

- Member, FOCUS (U. Michigan) External Advisory Board, April >04, >05
- Member, Advisory Editorial Board, Optics Communications, 2000-2006.
- Member, Advisory Committee, Canadian Institute for Research (Quantum Computing) 2002-2006.
- Member, Quantum Science & Technology Roadmap committee (ARDA/NSA sponsored), 2002-2006.
- Co-chair, Workshop on Trapped Ion Quantum Computing, Boulder, Feb. '06
- Member, Advisory Board, International Conference on Trapped Charged Particles and Fundamental Physics, TRIUMPF, BC-Canada, Sept. '06.
- Member, Evaluation Committee for the Center for Research in Optics and Photonics, São Carlos, Brazil 2007
- Co-Chair, Workshop on Ion Trap Technology, Boulder, CO, February, 2011.
- Member, program committee, QIPC 2011 (Zurich, Sept. 2011)
- Member, Herbert Walther Award Committee, 2011,2012
- Member, DAMOP Nominating Committee, 2009- 2010
- Member, DAMOP Rabi Prize Committee, 2010 – 2011
- Member, External Review Committee, U. C. Berkeley, Physics Department, 2012
- Chair, US nomination selection committee for OSA Herbert Walther Award, 2012
- Co-vice-chair, Gordon Research Conference on Quantum Science, 2012
- Member, Advisory Board, Center for Quantum Technologies, National University of Singapore, 2007 → 2014
- Member, National Security Agency Advisory Board (NSAAB) 2004 → 2012
- Co-chair, Gordon Research Conference on Quantum Science, 2014
- Member, program committee, Gordon Research Conference on Quantum Science, 2016
- Member, NSA Advisory Board on advanced computing 2013 → 2016
- Member, International Advisory Committee, Conference on Trapped Charged Particles and Fundamental Physics 1994 →
- Member, ICAP (International Conference on Atomic Physics) International Advisory Committee, 1996 →
- Member, Steering committee for SQuInT (South-Western Quantum Information Technology network), 1999 →
- Managing co-editor, *Quantum Information and Computation*, 2001 →

### **HONORS:**

- 1963, Phi Kappa Phi Sophomore Award (Highest Academic Record), U. C. Davis
- 1965, Phi Beta Kappa, Berkeley
- NSF Graduate Fellow, September 1965 - November 1970
- 1978 E.U. Condon Award, NBS, for written exposition
- 1980, Dept. of Commerce Silver Medal, for laser cooling. Shared with F. L. Walls and R. E. Drullinger
- 1985 Dept. of Commerce Gold Medal, for ion frequency standard. Shared with J. C. Bergquist, J. J. Bollinger, and W. M. Itano.
- 1985 E.U. Condon Award, NBS, for written exposition
- 1987, APS Fellow

- 1988, NBS (NIST) Fellow
- 1989 Samuel Wesley Stratton Award (NIST), for ion frequency standard development. Shared with J. C. Bergquist, J. J. Bollinger, and W. M. Itano.
- 1990 Davisson-Germer Prize (APS)
- 1990 William F. Meggers Award (OSA)
- 1990, OSA Fellow
- 1992, Member, National Academy of Sciences
- 1996 Soc. of Opt. & Quant. Electronics (Einstein medal for laser science, shared with Peter Knight, Imperial College)
- 1998 I.E.E.E. International Frequency Control Symposium, I.I. Rabi Award (for laser cooling and application to clocks)
- 2000 International Award on Quantum Communications (Tomagawa Univ.) for "Outstanding Contributions to Quantum Information Science." (shared with Chris Monroe and Paul Benioff)
- 2001 A. P. S. Schawlow Prize in Laser Science
- 2001 E. U. Condon Award (NIST), for written exposition (shared with J. C. Bergquist and S. R. Jefferts)
- 2003 Samuel Wesley Stratton Award (NIST), for experiments on quantum-state control of atoms
- 2004 Frederic Ives Medal (OSA), for atomic quantum state engineering
- 2004 Presidential Rank Award
- 2005 Frew Fellowship, Australian Academy of Science
- 2007 Alexander M Cruickshank Lecturer, Gordon Conference on Atomic Physics
- 2007 National Medal of Science
- 2008 Bonfils-Stanton Foundation Award for Science and Medicine
- 2009 Herbert Walther Award (DPG/OSA), for quantum information and metrology with ions
- 2010 Benjamin Franklin Medal in Physics (shared with Peter Zoller and J. Ignacio Cirac)
- 2011 E.U. Condon Award (NIST) for written exposition (shared with T. Rosenband)
- 2012 Nobel Prize in Physics (shared with Serge Haroche, Collège de France, Paris)
- 2013 Election to National Academy of Inventors
- 2013 Election to American Academy of Arts and Sciences
- 2014 Election to Academy of Achievement
- 2014 Presidential Rank Award
- 2014 Galileo Ferraris Prize, Istituto Nazionale di Ricerca Metrologica, Turin, Italy
- 2015 Visiting Honorary Professor, Universidad Autónoma del Estado de Hidalgo, Mexico
- 2015 Honorary member, Colombian Academy of Exact, Physical, and Natural Science