

CURRICULUM VITAE

Howard E. Haber
Distinguished Professor of Physics
Department of Physics
University of California, Santa Cruz

EMPLOYMENT

1990–present	Professor of Physics, Department of Physics, UC Santa Cruz
1989–1990	Associate Professor of Physics, Department of Physics, UC Santa Cruz
1988–1989	Assistant Professor of Physics, Department of Physics, UC Santa Cruz
1984–1988	Adjunct Assistant Professor of Physics, Department of Physics, UC Santa Cruz
1982–1984	Assistant Research Physicist/Visiting Assistant Professor, UC Santa Cruz
1980–1982	Postdoctoral Research Associate, University of Pennsylvania
1978–1980	Postdoctoral Research Associate, Theoretical Physics Group, Lawrence Berkeley Laboratory
1975–1978	Research Assistant, University of Michigan
1973–1978	Teaching Assistant, University of Michigan

EDUCATION

Ph.D., Physics	University of Michigan, 1978
S.M., Physics	Massachusetts Institute of Technology, 1973
S.B., Physics	Massachusetts Institute of Technology, 1973
S.B., Math	Massachusetts Institute of Technology, 1973

ACADEMIC WEB PAGE OF HOWARD E. HABER

<http://scipp.ucsc.edu/~haber/>

HONORS AND AWARDS

2018	Simons GGI Visiting Scientist Fellowship, The Galileo Galilei Institute for Theoretical Physics, Arcetri, Florence, Italy
2017	Co-recipient of the American Physical Society J.J. Sakurai Prize for Theoretical Particle Physics (\$10,000, shared among the four recipients)
2015	Received the honorary designation of Distinguished Professor of Physics
2013	Selected (with Abe Seiden) to deliver the UCSC Faculty Research Lecture in February, 2014

2013	Finalist for an Excellence in Teaching Award, chosen by the Committee on Teaching of the UCSC Faculty Senate
2009	Alexander von Humboldt Research Award, € 60,000
1998	Frontier Fellow, Fermilab
1995	Scientific Associate, CERN
1993	elected Fellow of the American Physical Society
1985–1988	Department of Energy Outstanding Junior Investigator

PROFESSIONAL ORGANIZATIONS

American Physical Society
 American Association of Physics Teachers
 Sigma Xi, University of California, Santa Cruz Chapter
 Mathematical Association of America

PROFESSIONAL SERVICE

2015–present	Member of the International Advisory Committee of the Higgs Hunting Conference, Orsay, France
2013–present	Member of the International Advisory Committee of the International Workshop on Higgs as a Probe of New Physics (HPNP)
2013–present	Honorary Member, Aspen Center for Physics
2009–present	Member, International Advisory Committee, Workshop on Multi-Higgs Models, Lisbon, Portugal
2007–present	Member of the Particle Data Group
2001–present	Member of the International Advisory Board of the International Symposium on Radiative Corrections (RADCOR)
1997–present	Member of the Board of Editors, <i>European Physical Journal C</i>
2019	Member, National Science Foundation High Energy Physics Theory and Cosmology Panel
2018	Mail-in reviewer for theoretical HEP proposals to the FY2018 DOE Office of Science Early Career Research Program
2018	Member of the Aspen Center for Physics Presidential Search Committee
2017	Member of the American Physical Society J.J. Sakurai Prize Selection Committee
2016–2017	Member of the Division of Particles and Fields Mentoring Award Selection Committee
2016	Chair of the Aspen Center for Physics Presidential Search Committee
2015-2018	Member of the Advisory Committee to the Fermilab Distinguished Scholars Program (FDSP)
2015	Member of the Advisory Committee to HEPAP to formulate a charge to the Subcommittee on Respective Roles and Responsibilities (RR&R)

2015 Member, Department of Energy FY16 University Theory Program Comparative Review Panel

2015 Member, National Science Foundation High Energy Physics Theory and Cosmology Panel

2014 Member, Department of Energy FY15 University Theory Program Comparative Review Panel

2014 Member of the P5 Rollout Campaign Committee

2013–2018 Member of the Dean’s Advisory Committee to evaluate the Laboratory for Nuclear Science at MIT

2013–2015 Elected Secretary/Treasurer of the Division of Particles and Fields of the American Physical Society

2013 Member, Colloquium Committee, Aspen Center for Physics

2011–2012 Member, Admissions Committee, Aspen Center for Physics

2011 Member, Program Committee for the International Workshop on Future Linear Colliders (LCWS11)

2011 Member, International Advisory Committee for the SUSY 2011 Conference

2010–2011 Member, Executive Committee of the Trustees, Aspen Center for Physics

2010 Member, Local Organizing Committee for the SUSY-10 Conference

2010 Member, National Science Foundation High Energy Physics Theory and Cosmology Panel

2007 Member, Program Committee, American Linear Collider Physics Group Workshop 2007 (ALCPG07)

2007 Candidate for Vice-Chair of the Division of Particles and Fields

2005–2011 Trustee, Aspen Center for Physics

2006 Member, Department of Energy Panel to Review Outstanding Junior Investigator (OJI) grants in particle physics

2006 Chair of the American Physical Society J.J. Sakurai Prize Selection Committee

2005 Vice-chair of the American Physical Society J.J. Sakurai Prize Selection Committee

2002–2004 Member, Editorial Board of Physical Review D

2002–2004 elected Member, Executive Committee of the Division of Particles and Fields of the American Physical Society

2001–2002 Member, International Scientific Advisory Committee for the SUSY-07 Conference

2001 Member, NSF Panel to Review Theoretical Physics Grants

1998–2001 Corporate Secretary, Aspen Center for Physics

1996–2000 Member, SLAC Experimental Program Advisory Committee

1996–1997 Scientific Secretary, Aspen Center for Physics

1995–1996 Assistant Scientific Secretary, Aspen Center for Physics

1994–1997 Member, Board of Editors, *Zeitschrift für Physik C*

1993–2013 General Member, Aspen Center for Physics

1992–2006 Outside consultant to the Particle Data Group

1989–1992 Divisional Associate Editor of *Physical Review Letters*
 December, 1989 Member of a National Science Foundation Panel to select recipients of the Presidential Young Investigator Awards in Physics

REFEREE

2011–present Peer-review Referee for the Israel Science Foundation grant proposals.
 1985–present Peer-review Referee for Department of Energy grant proposals.
 1984–present Peer-review Referee for National Science Foundation grant proposals.
 1980–present Peer-review referee for professional journals: *Physical Review Letters*, *Physical Review D*, *Physics Letters B*, *Nuclear Physics B*, *Physics Reports*, *Modern Physics Letters A*, *Zeitschrift für Physik C*, *European Physical Journal C*, *JHEP*, and *European Physics Letters*.

PANELS AND WORKING GROUPS

2017 co-convener of the Higgs/EW/BSM session of the Americas Workshop on Linear Colliders 2017 (AWLC2017)
 2015–2016 co-convener of the Higgs session of the KITP workshop, “Experimental Challenges for the LHC Run II”
 2014 co-convener of the Higgs/Electroweak Symmetry Breaking Working Group, Americas Workshop on Linear Colliders (AWLC14)
 2014 founding member of the Precision SUSY Higgs Mass Calculation Initiative
 2013 co-convener of the Higgs/EWSB Working Group, International Conference on Future Linear Colliders (LCWS-13)
 2007 co-convener of the Higgs Working Group for the Workshop on “The LHC early phase for the ILC”
 2005–2006 co-convener of the CP violation in 2HDM working group, Workshop on CP Studies and Non-Standard Higgs Physics (CPNSH)
 April, 2004 co-convener of the Higgs and Electroweak Symmetry Breaking Working Group, International Conference on Linear Colliders (LCWS-04)
 2003–2004 co-editor of the LHC/ILC Study Group
 2000–2004 co-convener of the Higgs Working Group, American Linear Collider Physics Group
 July, 2001 co-convener of the Snowmass 2001 Working Group on Electroweak Symmetry Breaking
 October, 1998 co-convener of the “Is it really top? Is it only top?” Discussion Group, Top-Quark Physics for Tevatron Run II Thinkshop
 March–Dec., 1998 co-convener of the Higgs Working Group, Tevatron Run II Workshop
 June–July, 1996 co-convener of the Light Higgs Boson Working Group, Snowmass Workshop on New Directions for High Energy Physics
 1995 co-convener of the Higgs Boson Working Group, European Workshop on Future e^+e^- Linear Colliders

1994–1995	co-convener of the <i>Electroweak Symmetry Breaking and Beyond the Standard Model Working Group</i> , for the DPF Long Range Planning Study
1990–1991	member of SLAC working group on the Next Linear Collider
January, 1989	co-leader of <i>Higgs Boson Working Group</i> at the Workshop on High Energy Physics Phenomenology, Tata Institute for Fundamental Research, Bombay, India
1987–1988	member of SLAC panel studying Opportunities and Requirements for Experimentation at a Very High-Energy e^+e^- Collider
July, 1987	co-leader of <i>Non-minimal Higgs Boson Working Group</i> at the 1987 Berkeley Workshop on the SSC
March–Aug., 1985	leader of <i>Beyond the Standard Model Working Group</i> at the 1985 Oregon Workshop on Supercollider Physics
June–July, 1984	leader of <i>New W's and Z's Working Group</i> at the 1984 Snowmass Workshop on the SSC

SELECTED LIST OF PUBLICATIONS

Books

1. *The Higgs Hunter's Guide*, J.F. Gunion, H.E. Haber, G.L. Kane, and S. Dawson, Frontiers in Physics Lecture Note Series #80, (Addison-Wesley Publishing Company, Redwood City, CA, 1990); paperback edition: (Westview Press, Boulder, CO, 2000).

Peer-reviewed Articles in Professional Journals (2015–2020)

1. Basis-independent treatment of the complex 2HDM, R. Boto, T.V. Fernandes, H.E. Haber, J.C. Romão and J.P. Silva, *Phys. Rev.* **D101**, 055023 (2020).
2. Symmetries and Mass Degeneracies in the Scalar Sector, H.E. Haber, O.M. Ogreid, P. Osland and M.N. Rebelo, *JHEP* **1901**, 042 (2019).
3. Heavy Higgs boson decays in the alignment limit of the 2HDM, B. Grzadkowski, H.E. Haber, O.M. Ogreid and P. Osland, *JHEP* **1812**, 056 (2018).
4. Multi-Higgs doublet models: the Higgs-fermion couplings and their sum rules, M.P. Bento, H.E. Haber, J.C. Romão and J.P. Silva, *JHEP* **1810**, 143 (2018).
5. Multi-Higgs doublet models: physical parametrization, sum rules and unitarity bounds, M.P. Bento, H.E. Haber, J.C. Romão and J.P. Silva, *JHEP* **1711**, 095 (2017).
6. The Impact of Two-Loop Effects on the Scenario of MSSM Higgs Alignment without Decoupling, H.E. Haber, S. Heinemeyer and T. Stefaniak, *Eur. Phys. J.* **C77**, 742 (2017).
7. High scale flavor alignment in two-Higgs doublet models and its phenomenology, S. Gori, H.E. Haber and E. Santos, *JHEP* **1706**, 110 (2017).
8. The Light and Heavy Higgs Interpretation of the MSSM, P. Bechtle, H.E. Haber, S. Heinemeyer, O. Stål, T. Stefaniak, G. Weiglein and L. Zeune, *Eur. Phys. J.* **C77**, 67 (2017).

9. Perturbation Theory in Supersymmetric QED: Infrared Divergences and Gauge Invariance, M. Dine, P. Draper, H.E. Haber and L.S. Haskins, *Phys. Rev.* **D94**, 095003 (2016).
10. Partially Natural Two Higgs Doublet Models, P. Draper, H.E. Haber and J.T. Ruderman, *JHEP* **1606**, 124 (2016).
11. Scrutinizing the alignment limit in two-Higgs-doublet models. II. $m_H = 125$ GeV, J. Bernon, J.F. Gunion, H.E. Haber, Y. Jiang and S. Kraml, *Phys. Rev.* **D93**, 035027 (2016).
12. Alignment limit of the NMSSM Higgs sector, M. Carena, H.E. Haber, I. Low, N.R. Shah and C.E.M. Wagner, *Phys. Rev.* **D93**, 035013 (2016).
13. New LHC Benchmarks for the CP-conserving Two-Higgs-Doublet Model, H.E. Haber and O. Stål, *Eur. Phys. J.* **C75**, 491 (2015).
14. Scrutinizing the alignment limit in two-Higgs-doublet models: $m_h = 125$ GeV, J. Bernon, J.F. Gunion, H.E. Haber, Y. Jiang and S. Kraml, *Phys. Rev.* **D92**, 075004 (2015).
15. Preserving the validity of the Two-Higgs Doublet Model up to the Planck scale, P. Ferreira, H. E. Haber and E. Santos, *Phys. Rev.* **D92**, 033003 (2015).
16. Complementarity between nonstandard Higgs boson searches and precision Higgs boson measurements in the MSSM, M. Carena, H.E. Haber, I. Low, N.R. Shah and C.E.M. Wagner, *Phys. Rev.* **D91**, 035003 (2015).

Top cited publications (with over 1000 citations on the INSPIRE database)

1. The Search for Supersymmetry: Probing Physics Beyond the Standard Model, H.E. Haber and G.L. Kane, *Physics Reports* **117**, 75 (1985).
2. Can the Mass of the Lightest Higgs Boson of the Minimal Supersymmetric Model be Larger than m_Z ?, H.E. Haber and R. Hempfling, *Phys. Rev. Lett.* **66**, 1815 (1991).
3. Higgs Bosons in Supersymmetric Models – I, J.F. Gunion and H.E. Haber, *Nucl. Phys.* **B272**, 1 (1986) [Erratum: *Nucl. Phys.* **B402**, 567 (1993)].