

Curriculum Vitae for Sarah Eno

I. Personal Data:

Name: Sarah Eno
Department: Physics
Current Position: Professor of Physics
Appointment date: May, 2005
Birth: October 8, 1962, Pasadena, California
Citizenship: USA

Education:

Ph.D. University of Rochester February 1990, Physics
M.A. University of Rochester May 1986, Physics
B.A. Gettysburg College June 1984, Physics

Employment:

2005-present Professor of Physics, University of Maryland
1999 - 2005 Associate Professor of Physics, University of Maryland
1993 - 1999 Assistant Professor of Physics, University of Maryland
1992 - 1993 Research Scientist, Enrico Fermi Institute
1989 - 1992 Research Associate, Enrico Fermi Institute

II. Research:

A. Books (None)

A.3. Chapters in Books

- Editor and main author for the HCAL/JET/MET sections of Chapters 14 and 15 of CMS: The TriDAS Project Technical Design Report, Volume 2: Data Acquisition and High- Level Trigger, CERN/LHCC 2002-26 (2002) (submitted to Journal of Physics, G)

- M. Carena, R. L. Culbertson, S. Eno, H. J. Frisch, and S. Mrenna. The Search for Supersymmetry at the Tevatron Collider in Perspectives on Supersymmetry, Gordon L. Kane, Editor, World Scientific (1998).
- S. Eno. On the Importance of Mentoring for New Faculty Members in Essays on Quality Learning, Steven Selden, Editor, University of Maryland Press (1998).
- H. Aihara., J. L. Siegrist, S. Eno, N. Hadley and A Skuja. Experimental Issues At Hadron Colliders in Electroweak Symmetry Breaking and New Physics at the TeV Scale, T.L. Barklow, S. Dawson, H.E. Haber, J.L. Siegrist, Editors, Singapore: World Scientific 650-688, (1996) (Advanced Series on Directions in High Energy Physics. 16).

B. Articles In Refereed Journals

B.1 Review Articles

- M. Carena, R. L. Culbertson, S. Eno, H. J. Frisch, and S. Mrenna, The Search for Supersymmetry at the Tevatron Collider, Rev. Mod. Phys. 71, 937-981 (1999).

B.2 Physics Research

I have included CMS public documents in this list. While these documents have not been published in a journal, the more than 3000 members of the CMS collaboration have referred them. I always find these internal reviews much more strict than publication reviews.

Main Publications

Publications of thesis work by myself or my students and limited authorship papers.

- H. Harada, S. Eno, R. Poling, N.M. Shaw, E.H. Thorndike, K. Abe and Y. Fujii, Electron Identification using Synchrotron Radiation, Nuclear Instruments and Methods in Physics Research, A265, 141-149 (1988).
- S. Eno et al.(AMY Collaboration), Search for a Fourth Generation Charge $-1/3$ Quark via Flavor Changing Neutral Current Decay, Phys. Rev. Lett. 63, 1910-1913 (1989).
- Y. Fujii et al., An X-ray Detector as a Detector for Electron Identification, Nuclear Instruments and Methods in Physics Research A283, 665 (1989).

- F. Abe et al.(CDF Collaboration), A Measurement of the Production and Muonic Decay Rate of W and Z Bosons in p Anti-p Collisions at $\sqrt{s} = 1.8$ TeV, Phys. Rev. Lett. 69, 28-32 (1992).
- F. Abe et al. (CDF Collaboration), Measurement of the W Boson Mass, Phys. Rev. Lett. 75, 11-16 (1995).
- F. Abe et al. (CDF Collaboration), Measurement of the W Boson Mass, Phys. Rev. D52, 4784 -4827 (1995).
- B. Abbott et al. (D0 Collaboration), Extraction of the Width of the W boson from Measurements of $\sigma(p \text{ anti-p} \rightarrow W + X) \times B(W \rightarrow e\nu)$ and $\sigma(p \text{ anti-p} \rightarrow Z + X) \times B(Z \rightarrow e e)$ and their Ratio, Phys. Rev. D61, 072001-072052 (2000).
- W. Ashmanskas, W. Carithers, H.T. Diehl, S. Eno, H. Frisch, G. Gomez, P.D. Grannis, M.W. Grunewald, Y.K. Kim, A.B. Kotwal, Y. Kulik, M. Lancaster, R.J. Madaras, H.E. Montgomery, L.J. Nodulman, N. Parashar, G. Steinbruck, D. Toback, J. Wahl, D. Wood, Q. Zu, B. Zhou, Combination of CDF and D0 Results on W Boson Mass and Width, Phys. Rev. D 70, 092008 (2004); hep-ex/0311039.
- The Tevatron Electroweak Working Group (M. Grunewald et al.), Combination of CDF and D0 Results on the W-Boson Width, hep-ex/0510077
- W. Adam et al. (The CMS Trigger and Data Acquisition Group), The CMS High Level Trigger, hep-ex/0512077, Eur. Phys. J. C46, 605-667 (2006).
- V.M. Abazov et al., Measurement of the shape of the boson rapidity distribution for ppbar $\rightarrow e^+e^-+X$ events produced at sqrt(s) of 1.96 TeV, Phys. Rev. D76, 012003 (2007)
- V.M. Abazov et al., Measurement of the shape of the boson transverse momentum distribution in $p\bar{p} \rightarrow Z/\gamma^* \rightarrow e^+e^- + X$ events produced at $\sqrt{s}=1.96$ TeV, Phys. Rev. Lett. 100, 102002 (2008); arXiv:0712.0803.
- V.M. Abazov et al., Measurement of the W boson mass, Phys. Rev. Lett. 103, 141801 (2009).
- V.M. Abazov et al., A novel method for modeling the recoil in W boson events at hadron colliders, NIM 609, 250 (2009)
- V.M. Abazov et al., Direct Measurement of the W Boson Width, Phys. Rev. Lett. 103, 231802 (2009).
- CMS Collaboration, EXO-09-001, Search for Stopped Gluinos during Beam-off Periods , <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>

- CMS Collaboration, EXO-10-003, Search for Stopped Gluinos, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResult>
- CMS Collaboration, EXO-08-010, Search for First Generation Leptoquarks, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResult>
- CMS Collaboration, EXO-10-005, Search for leptoquarks, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, JME-10-002, Missing ET in 0.9 and 2.36 TeV pp Collisions, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, JME-10-004, Missing Transverse Energy Performance in Minimum -Bias and Jet Events, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, JME-10-005, Missing Transverse Energy Performance in Events Containing Electroweak Bosons from pp Collisions, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- “Search for Stopped Gluinos in pp collisions at $\sqrt{s} = 7$ TeV”
V. Khachatryan *et al.* [CMS Collaboration]
Phys. Rev. Lett. 106, 011801 (2011) [arXiv:1011.5861 [hep-ex]]

Major Contribution Publications

Papers for which I had direct editorial responsibility. Papers based on thesis work by students who I worked with over a period of years.

- K. Ueno, et al., The Design of the AMY Central Drift Chamber and Performance in a 3 T MagneticField, Nuclear Instruments and Methods in Physics Research A323, 601-610 (1992).
- F. Abe et al.(CDF Collaboration), Search for $W \rightarrow e\nu$ and $W \rightarrow \mu\nu$ in anti-p p collisions at $\sqrt{s} = 1.8$ TeV, Phys. Rev. Lett. 67, 2609-2623 (1991).
- F. Abe et al.(CDF Collaboration), The Dijet Angular Distribution in p anti-p Collisions at $\sqrt{s} = 1.8$ TeV, Phys. Rev. Lett. 69, 2896-2900 (1992).
- F. Abe et al. (CDF Collaboration), Measurement of the Ratio $\sigma_B(W \rightarrow e\nu)/\sigma(Z \rightarrow e^+e^-)$ in p anti-p Collisions at $\sqrt{s} = 1.8$ TeV, Phys. Rev. Lett. 73, 220-224 (1994).
- F. Abe et al. (CDF Collaboration), Measurement of Drell-Yan Electron and Muon Pair Differential Cross-sections in anti-p p collisions at $\sqrt{s} = 1.8$ TeV, Phys. Rev. D49, 1-6 (1994). Phys. Rev. Lett. 80, 5498-5503 (1998).
- B. Abbott et al. (D0 Collaboration), Search for Charge -1/3 Third Generation Leptoquarks in p anti-p Collisions at $\sqrt{s} = 1.8$ TeV, Phys. Rev. Lett. 81, 38-43 (1998).

- B. Abbott et al. (D0 Collaboration), The Dijet Mass Spectrum and a Search for Quark Compositeness in anti-p p collisions at $\sqrt{s} = 1.8\text{-TeV}$, Phys. Rev. Lett. 82, 2457-2462 (1999).
- B. Abbott et al. (D0 Collaboration), Search for Squarks and Gluinos in Single-Photon Events with Jets and Large Missing Transverse Energy in p Anti-p Collisions at $\sqrt{s} = 1.8\text{ TeV}$, Phys. Rev. Lett. 82, 29-34 (1999).
- B. Abbott et al. (D0 Collaboration), Search for Squarks and Gluinos in Events Containing Jets and a Large Imbalance in Transverse Energy, Phys. Rev. Lett. 83, 4937-4942 (1999).
- B. Abbott et al. (D0 Collaboration), Search for R-Parity Violating Supersymmetry in the Dielectron Channel, Phys. Rev. Lett. 83, 4476-4786 (1999).
- V. M. Abazov *et al.* [D0 Collaboration], Measurement of trilinear gauge boson couplings from WW + WZ to lnu jj events in pp-bar collisions at $\sqrt{s}=1.96\text{ TeV}$, Phys. Rev. D 80, 053012 (2009)
- V. M. Abazov *et al.* [D0 Collaboration], Measurement of the WW production cross section with dilepton final states n p-pbar collisions at $\sqrt{s}=1.96\text{ TeV}$ and limits on anomalous trilinear gauge couplings, Phys. Rev. Lett. 103, 191801 (2009)
- CMS Collaboration, EXO-08-002, Search for Heavy Stable Charged Particles, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, SBM-07-001, Searches for New Physics using high ET dijet events , <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, SBM-07-002, Zprime to mumu , <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, EXO-08-004, Search for Wprime to e nu, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, EXO-08-002, Search for Zprime to ee , <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, EXO-08-002, MUSIC deviations between data and Monte Carlo Simulation, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, EXO-08-002, Search for extra dimensions with mono-jets, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, EXO-08-002, Search for a bprime, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, EXO-09-019, Search for Second Generation Scalar Leptoquarks, <https://twiki.cern.ch/twiki/bin/view/CMS/PhysicsResults>
- CMS Collaboration, CFT-09-019, Anomalous Signals in HCAL

- CMS Collaboration, CFT-09-020, Commissioning of the CMS High-Level Trigger with Cosmic Rays
- D0 collaboration, Combination of CDF and D0 Results on the Width of the W boson, arXiv:1003.2826.
- “Measurement of the normalized $Z/\gamma^* \rightarrow \mu^+\mu^-$ transverse momentum distribution in $p\bar{p}$ collisions at $\sqrt{s}=1.96$ TeV”
V. M. Abazov *et al.* [D0 Collaboration]
Phys. Lett. B 693, 522 (2010) [arXiv:1006.0618 [Hep-ex]]

All Other Publications: See appendix.

Monographs, Reports, and Extension Publications none

Book Reviews, Other Articles, and Notes

- S. Eno, Review of Introduction to High Energy Physics, by D. H. Perkins, Physics Today, June, 2001, pg. 60.
- S. Eno, “Undergraduate Research at the LHC”, APS Forum on Education News Letter, Fall 2010.

Talks, Abstracts, and Other Professional Papers Presented

i. Invited Talks

- Invited Talk, Lake Louise Winter Inst., 1989
- Invited Talk, Aspen Winter Conf., 1992
- Invited Talk, APS/DPF, 1994
- Invited Talk, XXXth Recontres De Moriond, 1995
- Invited Talk, 14th Intl. Conf., Williamsburg, Virginia 1996
- Invited Talk, 28th Int. Conf. on HEP, 1996
- Seminar, Johns Hopkins U., 1996
- Seminar, Cornell, 1996
- Invited Talk, Tegernsee, Germany, 1997
- Colloquia, U. Maryland, 1997

- Colloquia, Brown University, 1997
- Seminar, Max Planck Institute, 1997
- Seminar, University of Maryland, 1997
- Seminar, DESY, 1997
- Seminar, APS New Faculty Workshop, 1997
- Invited Talk, APS, Spring, Columbus OH, 1998
- Invited Talk, APS, Spring, Columbus OH, 1998
- Colloquia, U. Maryland, 1998
- Invited Talk, Fermilab, Batavia, Il, 1998
- Seminar, APS New Faculty Workshop, 1998
- Invited Talk, Fermilab, Batavia, IL, 1999
- Invited Talk, LaThuile, Aosta Valley, Italy, 1999
- Invited Talk, Intl. Conf. on HEP, Amsterdam, Netherlands, 2002
- Invited Talk, D.I.S. Conference, Slovakia, 2004
- Colloquia, U. Maryland, 2004
- Seminar, Ohio State University, 2005
- Colloquia, U. Virginia, 2005
- Invited Talk, Foundations and Frontiers Series at UMD (for grad students), 2005
- Seminar, Yale, 2006
- Wine & Cheese colloquium, FNAL, 2006
- Summer School lecture, CTEQ school, Rhodes Greece, 2006
- Seminar, John Hopkins, 2008
- Seminar, Goddard Space Flight Center, 2008
- Colloquia, Boston University, 2009
- Invited talk, Dark Matter Workshop (MD), 2009
- School lectures (3), CERN/FNAL school (cern), 2009

- Wine & Cheese colloquium, FNAL, 2009
- talk, HEPAP, 2009
- Seminar, University of Pennsylvania, 2009
- School lectures (3), Tata Institute, Mumbai, India, 2009
- Colloquium, Tata Institute, Mumbai, India, 2009
- School lecture, FNAL, 2010
- Colloquium, FNAL, 2010
- Colloquium, U. Maryland, 2010
- Colloquium, Rutgers, 2010
- APS April meeting, plenary talk, Washington, D.C., 2010
- Town Hall Meeting, APS DPF, Washington, D.C., 2010
- Colloquium, SLAC, California, 2010
- Invited talk, Gordon Conference, Mount Holyoke, MA, 2010
- Colloquium, Texas A&M, 2010
- talk, LHC at BNL Workshop, Brookhaven National Lab, 2011
- Colloquium, Goddard Space Flight Center, 2011

ii. Contributed Talks (None)

iii. Unrefereed Conference Proceedings and Technical Notes

- S. Eno “Updated Measurements of the W Mass and Width from the Tevatron, Proceedings of the “International Conference on High Energy Physics, conference in Amsterdam, Netherlands, Elsevier, Science (2003).
- S. Eno, “Measurement of the Production and Decay Properties of Gauge Bosons from the Tevatron, Proceedings of the “Results and Perspective in Particle Physics, conference in La Thuile, Italy, M. Greco, editor, INFN Laboratori Nazionali di Frascati SIS Ufficio Pubblicazioni (1999).
- S. Eno and H. Baer, “Searching for Contact Interactions and Exotic new Particles at the VLHC, Proceedings of the VLHC Workshop, Fermilab, 1997.

- S. Eno, “Search for New Phenomena at D0, Proceedings of Beyond the Desert 1997: Accelerator and Non-Accelerator Approaches. H. V. Klapdor-Kleingrothaus and H. Pas, editors, Institute of Physics Publishing, Bristol and Philadelphia (1997).
- S. Eno, “Non-SUSY Particle Searches at D0, in Proceedings of the 28th International Conference on High Energy Physics, Z. Ajduk and A. K. Wroblewski, editors, World Scientific, Singapore (1996).
- S. Eno, “Probing the Standard Model at the Tevatron, in Proceedings of the 14th International Conference on Particles and Nuclei, Carl E. Carlson and John J. Domingo, editors, World Scientific, Singapore (1996).
- S. Eno, “D0 Search for New Phenomena, in Proceedings of the XXXth Recontres De Moriond, J. Tran Thanh Van, editor, Editions Frontiers, France (1995).
- S. Eno, “The D0 Upgrade Trigger, in Proceedings of the 8th Meeting of the Division of Particles and Fields of the American Physical Society, Sally Seidel, editor, World Scientific (Singapore (1994).
- S. Eno, “Recent Results from the AMY Experiment, in Proceedings of the Fourth Lake Louise Winter Institute, “Frontiers in Physics From Colliders to Cosmology, A. Astbury, B. A. Campbell, W. Israel, A. N. Kamal, and F. C. Khanna, Editors, World Scientific, Singapore (1989).
- S. Eno, “A Search for New Heavy Quarks Using Hadronic Events Containing Leptons, Proceedings of the 24th International Conference on High Energy Physics, Munich (1988).
- S. Eno, Recent QCD Results from the Tevatron, Proceedings of the 11th international Workshop on Deep Inelastic Scattering, Slovakia (2004).

F. Films, Tapes, Photographs, etc. (None)

G. Exhibits, Performances, Demonstrations, and other Creative Activities (None)
 Press conference, APS meeting, Feb 2010

H. Original Designs, Plans, Inventions, and Patents (None)

J. Contracts and Grants

- Mou between University of Maryland and Notre Dame to send quarknet teacher to CERN: \$6000

- India-U.S. Professorship Travel Award, \$4000, 2009 (APS-IUSSTF India-U.S. Travel Program)
- Graduate Research Board Fellowship, University of Maryland, s08, teaching buyout + \$500
- DOE Grant “ High Energy Accelerator and Colliding Beam User Group at the University of Maryland, Aug. 1989-present, now at \$1.52 M/year
- DOE Grant “Physics with the D0 Detector and D0 Upgrade at the University of Maryland, \$75,000/year, 1995-1999
- DOE Grant “to Study and Develop a “Prototype for a Muon Scintillator Trigger for the D0 Experiment, \$29,250/year, 1996

J. Fellowships, Prizes, and Awards

- Phi Beta Kappa, junior standing, Gettysburg College
- Salutatorian, Gettysburg College, 1984
- Rush Rhees Fellowship, University of Rochester, Sept. 1985-June 1987
- Outstanding Junior Investigator, Department of Energy, 1995-1999
- 1999 Young Alumni Achievement Award, Gettysburg College
- Graduate Research Board Fellowship, 2007, U. Maryland
- India-U.S. Professorship Award in Physics, APS, 2009
- Fellow, American Physical Society (elected 2009)
- “One of the Most Valuable Reviewers” award, Nuclear Instruments and Methods, Section A, 2010 (\$60)

K. Editorships, Editorial Boards, And Reviewing Activities for Journals and Other Learned Publications

Referee for Physical Review Letters and Physical Review D

- 1999: 1 PRL
- 2002: 2 PRLs
- 2003: 2 PRLs

- 2004: 1 PRL
- 2005: 2 PRLs
- 2006: 1 PRL
- 2007: 1 PRL
- 2008: 2 PRLs and 1 PRD
- 2009 2 PRL and 1 Computer Physics Communications
- 2010 1 PRL and 1 NIM

L. Other (None)

III. Teaching

A. Courses

i. General

ii. Specialized (None)

iii. University Honors, College Park Scholars, and other Special Programs (None)

iv. Independent Study, Tutorial, Internship Supervision

- PHYS 499A, independent study in experimental particle physics (Shawn Kwang) (Spring, 1995)
- PHYS 399, independent study (Michael Kossin)
- I have employed the following students in my experimental particle physics lab, Michael Kossin (2010), Ethan Cowan (2010), Jonathan Wonders (2009,2010), Issac Carruthers (2009, winner Senior Summer Scholars fellowship from UMD), Christie Chew (2003), Juan Delgado (2000), Shawn Kwang (2000, 2001, 2002), Tommy Landers (1998), Kevin Scaldeferri (1996), and Anil Jayanna (1995).

B. Course or Curriculum Development

C. Manuals, Notes, Software, and Other Contributions to Teaching

- Revised Physics 107 lab manual, 1994, 1995
- created new Lab for Physics 174, 1999
- revised 174 Lab Manual, 1999
- updated lab manual for Physics 115 for new computer system, 1999
- revised lab manual for Physics 115 in general, 2001
- wrote instructors manual for lab manual for lab manual for Physics 115, 2001
- small revisions for 174 lab manual, 2003
- small revisions for 174 lab manual, 2004
- complete revision of 142 lab manual, s05 (only 2 labs from old manual retained)
- major rewrite (including new experimental apparatus) for lab 2 of 174 manual (F05)
- new lab on transistors for 276 (F2008)
- new review lab for first day of class for 276 (2008)
- major revision on Lab II with Tom Baldwin for 276 (2009)

D. Teaching Awards

- Recognition from Physics chair for excellent teaching (top 10 teachers), F10
- Recognition from Physics chair for excellent teaching (top 10 teachers), F09
- Honorable mention citation for teaching skills, University of Rochester, 1985.

E. Advising: Other Than Research Direction (None)

i. Undergraduate:

- Faculty Advisor for approximately 4 undergraduate physics students per year, 1996-present

- Faculty Advisor of approximately 3 Letters and Sciences students per year as part of the “Advise-5 program, 1994-1999

ii. Graduate:

- faculty advisor for incoming graduate students , Fall 1998 (4 students), Fall 2000 (3 students), Fall 2005 (4 students)

F. Advising in Research Direction

i. Undergraduate:

- Shawn Kwang, 1995

ii. Masters: (None)

- Jay Han, MA 1995
- Emmanuel Gouveia, MA 1998

iii. Doctoral:

- Gervasio Gomez, Ph.D, 1999
- Xiaohang Zha, Ph.D., left without Ph.D.
- Junjie Zhu, Ph.D, 2004 (joint with N. Hadley)
- Lei Wang, Ph.D., 2007
- Matt Wetstein, Ph.D. 2009
- Dinko Ferencek, current Ph.D. student
- Ken Rossato, current Ph.D. student (with Andris Skuja)
- Ellie Lockner, Ph.D. 2010 (with Drew Baden)

iv. Postdoctoral:

- Joey Thompson (1993-1999)
- Greg Graham (1999-2000)
- Marco Verzocchi (2001 June, 2005)
- Isa Dumanoglu (2002)
- Salavat Abdullin (2001-2004)
- Michiel Sanders (Fall 2004-Oct. 2006)
- Terry Toole (2004-2007)
- Jeff Temple (April 2007 present)
- Francesco Santanastatio (Nov 2007 present)
- Paolo Rumerio (Nov 2007 present)

G. Extension Activities

- Reviewed research papers for 1995 Maryland junior science and humanities symposium
- allow high schoolers to interview me as school project 2009, 2010

IV. Service

A. Professional Service

i. Offices and Committee Memberships Held In Professional Organizations

- Elected to the APS Division of Particles and Fields executive committee, to serve from fall 2004 to fall 2007.
- Member of American Physical Society and Div. of Particles and Fields

ii. Reviewing Activities For Agencies

- Member of Review Panel for NSF/DOE for “Quarknet, an outreach program for high school teachers.

- Reviewer for three DOE “Outstanding Junior Investigator applications, 2002.
- Reviewer for DOE grants, 1 in 2002, 2 in 2003, 1 in 2004, 2 in 2005, 2 in 2006, 3 in 2007, 2 in 2008, 5 in 2009
- Reviewer for NSF grants, 2 in 2004, 2 in 2007, 2 in 2009, 1 in 2010
- Reviewer for PPARC grants (British): 1 in 2007
- Reviewer for ORAU EPSCOR: 1 in 2007
- Selection committee for the DOE Outstanding Junior Investigator award (select approximately 6 awardees out of approximately 70 proposals), Spring 2005 and Spring 2006
- Selection Committee for joint DOE/NSF Linear Collider Detector R&D proposals, spring 2005 (2 day selection meeting)
- Fermi National Accelerator Laboratory Program Advisory Panel, s05-2009
- Federal High Energy Physics Advisory Panel (HEPAP), DOE s07-2009
- Committee to select recipient of the LHC Theory initiative Fellowships, F06 and F07
- Chair of the federal High Energy Physics Advisory Panel (HEPAP) Informal Working Group of University Issues, 2009

iii. Other Unpaid Services To Local, State, and Federal Agencies (None)

iv. Other Non-University Committees, Commissions, Panels, etc.

- Co-convener of the W mass sub-group, CDF collaboration (1992). This group contained approximately 10 members.
- Co-convener of the Electroweak studies group, CDF collaboration (1993). This group contained approximately 50 member.
- International Advisory Committee, International Symposium on Vector Boson Self- Interactions, UCLA (1995)
- Member of the Organizing Committee of SUSY conference at Maryland, 1996
- Co-convener of the Exotics subgroup of the Very Large Hadron Collider Workshop, Fermilab (1997)

- Member of the D0 software review committee (1997)
- Co-convener of the New Phenomena group, D0 collaboration (1996-1998). This group contained approximately 50 members
- Member of D0 Authorship Committee (1993-2001)
- Representative to the D0 Institutional Board (1997-2009)
- Convener of the W and Z cross section group, D0 collaboration (1998-1999). This group contains approximately 10 members
- Fermilab Users Executive Committee, 1998-2000, Elected Committee that represents the users of the Fermilab accelerator complex.
- Member of the Dzero trigger review panel (1999)
- Convener of the Jets and Missing Et group, CMS Collaboration (1999-2002). This group is one of five groups responsible for the physics output of the CMS collaboration. There are approximately 1500 members of the CMS collaboration
- Member of the American computing and software review board for the CMS collaboration (1999-2001)
- Co-head of the Dzero Collaboration W mass working group, (Feb. 2004 - Jun. 2005)
- Head of the Dzero Collaboration, Fast Monte Carlo simulation group (Dec. 2000- present)
- Head of the Dzero Collaboration simulation group (Mar 2003-Jun 2005)
- Sorting committee for APS HEP abstractions, S02, S03, S04, S05
- Head of Dzero Collaboration Video Task Force (winter 2002)
- Presentation for NSF review on LHC participation
- Representative to the Southern Region (URA (Universities Research Association) group from MD, 2002-present
- Head of jet energy scale review group for 2002-2003
- Sorter for APS Abstracts, April meeting, 2003, 2004, 2005, 2006, 2008
- Co-Head of the LHC Physics Center, Jan 04-July 07. In charge of organizing U.S. participation in the analysis of Physics Data taken with the CMS experiment at the LHC. There are over 800 physicists in the US working on this experiment.

- Internal FNAL review of US CMS computing and software project, January 2005
- Federal High Energy Physics Advisory Panel, s07-f09
- US CMS Physics Coordinator 2005-2007
- Co-convener of the CMS collaboration SUSY/Beyond-the-standard Model search group, s06-f07. The CMS collaboration contains over 2000 physicist. The analysis is done in 5 of these physics groups.
- CMS exotica convener, 2007-2008
- Cms hcal noise task force chair spring 2009
- Chaired internal review committee for CMS public document on studies of trigger from CRAFT data.
- Chaired internal review committee for CMS public document on 2nd generation leptiquarks
- On internal review committee for CMS public document on studies of W and Z to muons
- On internal review committee for papers from D0 on dibosons
- On advisory committee for Study Abroad committee, 2010
- Selection committee for “Panofsky” prize of the DPF division of APS 2010 and 2011
- head of CMS subgroup for studying MET 2010 and 2011

v. International Activities Not Listed Above (None)

vi. Paid Consultancies

- High Energy Theory Faculty Search Committee, Michigan State University; 1994
- Fermi National Accelerator Laboratory Program Advisory Committee, 2004-2009

B. University Service

i. Departmental

- Ph.D. Thesis Committee; 1995 (Cynthia Dion), 1997 (Adam Lyon), 1998 (Matt Herndon), 1999 (Mel Sabela), 2003 (Amir Farbin), 2004 (Leslie Atkins), 2007 (Ken Hsieh), 2008 (Ralf Ehrlich)
- Wrote Qualifier Problem: 1995, 2001, 2004, S06
- Qualifier Oral Exams: 1994, 1996, 1998, 2000, 2004
- Physics Council: 1995-1996, 1998
- Laboratory Committee, S99, F99, S00, F05, F08
- Graded qualifier problem, winter 1998, winter 1999, winter 2003, fall 2008, winter 2010
- Graduate Committee: 1997-1999
- Expanded Qualifier Committee: 1996-1998, 2001, 2002
- Salary Committee: 1995 and 1996, 2007, 2008
- Teaching review committees: 2001 (Michael Fuhrer), 2003 (Doug Roberts), 2004 (Wolfgang Losert), 2005 (Kara Hoffman), Arthur La Porta (2010)
- Appointments, Promotions and Tenure committee: Spring, 2005
- Organized HEP seminars, Fall 1996, Fall 2001, Fall 2003, F06
- Physics 161 Text Book Review: 1996
- I attended the pizza lunches for women physics students (1994-2001, 2007)
- On committee to award the “George Snow award (1 of 3 members): 2001, 2005
- Recruitment phone calls to 7 prospective women Undergrads: 2001
- Lead HEP group “Quarknet project. Quarknet is a project to involve high school teachers in HEP research. We had two teachers during the summer of 2002. I personally supervised one, and also designed and arranged speakers for a weekly lecture series. During Fall 2002, I co-organized two workshops for high school teachers. For Quarknet project, organized and planned agenda for a 2-week workshop for 5 high school teachers during the summer of 2003 and gave 2 presentations at this workshop. In 2007, I ran 1 day of the summer program for the Quarknet teachers.
- On committee to do Teaching Interviews for new faculty candidates. Interviewed 3 candidates in 2004. Interviews 14 candidates in 2005. 1 Interview in 2007.
- Committee to award George Snow Award, S04

- Promotion committee for Michael Fuhrer (wrote Service portion of packet) 2004
- Graduate admissions committee, s06 (read all graduate admissions folders)
- Faculty search committee for theory high energy physicist, f06 and s07
- Arbitrary and capricious grading committee: 1 case in 2007
- Chair of the Appointments, Promotions, and Tenure committee, F09,S10
- Promotion committee for Alessandra Buonanna, F09
- Committee to consider hiring of R. Sundrum, F09
- member of Appointments, Promotions, and Tenure committee, F10,S11
- got grant to allow a high school teacher to go to CERN for the summer via the quarknet program (Ryan Casavant)

ii. College

- Deans Teaching Award Committee: 1996
- College Senate F99
- Department of Education Accrediation visit (April 13, 1999)
- College Appointments, Promotions, and Tenure committee, F05,S06, F06, S07
- Physics chair reappointment committee, F10

iii. University

- Letters and Sciences Advise-5 Advisor: 1994-1999
- Panelist for The Digital Village: 1995
- College Park Senate Executive Committee: 2000
- Group leader for the fall new faculty orientation: fall 2000
- Human Relations Committee of Senate: fall 2002, Spring 2001
- Senate Executive Committee: F00 and S01

- Senate Member: F99-F01
- Presidents Commission on Womens Issues: F01-S04
- Part of a Senate Grievance committee: F01
- Senate nominations committee: F02
- CORE review committee for CMPS courses: 2003
- NSF Fellowship representative to the National Scholarships Advisory Committee (organized a workshop in the fall, advised and read applications of students) F05-F08
- Dissertation committee: Zheng Wang (Accounting)

iv. Special Administrative Assignments (None)

v. Other (None)

C. Communal, State, National (None)

D. Service Awards and Honors (None)

Semester	Course
Spring 94	107 Laboratory on Light & Optics for Liberal Arts Students
Fall 94	107 Laboratory on Light & Optics for Liberal Arts Students
Spring 95	107 Laboratory on Light & Optics for Liberal Arts Students
Fall 95	420 Quantum Mechanics for Engineering Majors
Spring 96	161 Mechanics for Engineering Majors
Fall 96	117A Physics for Elementary Education Majors
Spring 97	117A Physics for Elementary Education Majors
Fall 97	117A Physics for Elementary Education Majors
Spring 98	107 Laboratory on Light Optics for Liberal Arts Students
Fall 98	117A Physics for Elementary Education Majors
Spring 99	174 Physics Laboratory Introduction
Fall 99	174 Physics Laboratory Introduction
Fall 00	115 Physics for Elementary Education Majors
Spring 01	115 Physics for Elementary Education Majors
Spring 02	115 Physics for Elementary Education Majors
Fall 02	115 Physics For Elementary Education Majors
Spring 03	142 Principles of Physics, II
Fall 03	174 Physics Laboratory Intro.
Spring 04	142 Principles of Physics, II
Fall 04	174 Physics Laboratory Intro.
Spring 05	142 Principles of Physics, II
Fall 05	174 Physics Laboratory Intro.
Spring 06	142 Principles of Physics, II
Fall 06	276 Experimental Physics II: Electricity and Magnetism
Fall 07	276 Experimental Physics II: Electricity and Magnetism
Spring 07	276 Experimental Physics II: Electricity and Magnetism
Fall 08	276 Experimental Physics II: Electricity and Magnetism
Spring 08	did not teach
Fall 09	276 Experimental Physics II: Electricity and Magnetism
Spring 09	141 Principles of physics
Spring 10	141 - Principles of Physics
Fall 10	751 - Elementary Particle Physics Survey
Fall 10	399 - Special problems in Physics