

# CURRICULUM VITAE

## Shufang Su

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### Research Area

Theoretical elementary particle physics focusing on new physics beyond Standard Model. Phenomenology of low energy supersymmetric models, collider searches, Higgs studies, top-quark physics, electroweak precision analyses, dark matter and particle cosmology.

### Chronology of Education

- 1995-2000      **Massachusetts Institute of Technology**  
Ph.D. in Physics, June, 2000.  
Thesis Advisor: Prof. Lisa Randall  
Thesis: *Search for Supersymmetry: New Physics beyond the Standard Model*
- 1990-1995      **University of Science and Technology of China**  
B.S. in Physics, June, 1995.  
Thesis Advisor: Prof. Yunxiu Ye  
Thesis:  *$\Lambda$  polarization in Relativistic Nucleus-Nucleus Collision*

### Chronology of Employment

- 1995–2000      Research Assistant and Teaching Assistant  
**Department of Physics, Massachusetts Institute of Technology**
- 2000–2003      John A. McCone Fellow  
**Department of Physics, California Institute of Technology**
- 2003–2009      Assistant professor  
**Department of Physics, University of Arizona**
- 2009–present   Associate professor  
**Department of Physics, University of Arizona**
- 2010–present   Visiting professor  
**Department of Physics and Astronomy, University of California, Irvine**

## Honors and Awards

- 2010      **Graduate Teaching Award**  
Department of Physics, University of Arizona
- 2001      **DPF/Snowmass Travel Fellowship**  
Division of Particles and Fields of the American Physical Society  
offered to 10 postdoctoral researchers in the United States.
- 1994      **Guo Moruo Scholarship**  
University of Science and Technology of China  
Outstanding senior student, highest honor for undergraduate students at the  
University.
- 1990–1993 **Zhang Zhongzhi Scholarship**  
University of Science and Technology of China  
Four years in a row, best student in the Department among the class of the  
same year.

## Mentoring

- **Faculty Mentor for post-doctoral researcher**
  - Hock-Seng Goh (2004 – 2007). He went to University of California, Berkeley for his second post-doctoral researcher position.
  - Brooks Thomas (2007 – 2010). He went to University of Hawaii for his second post-doctoral researcher position.
  - Vikram Rentala (2007 – present).
- **Ph.D advisee**
  - Ethan Dolle, graduated 2010.
  - Xinyu Miao, expected to graduate in 2011.
  - Jonathan Eckel, 3rd year graduate student.

## Publications/Creative Activity

The total count of my citation is about 2783, with  $h$  index ( $h$  papers with at least  $h$  citations) being 19 (for refereed journal articles only) or 21 (if workshop reports are included as well).

- **Chapters in scholarly books and monographs**

1. *Dark Matter: WIMP and beyond* (2005 Summer Institute lectures), S. Su, published in *Research in Particle Physics*, **112**, 2006, p45 – p55. This writeup is based on the invited lectures that I delivered at Summer Institute 2005, held at Fujiyoshida, Japan. It includes an overview of dark matter studies and original research on the superWIMP dark matter conducted by the author.
2. *Low Energy Precision Test of Supersymmetry*, M.J. Ramsey-Musolf, S. Su, *Phys. Rept.* **456** (2008) 1. This is a review paper (88 pages) that I was invited to write for Physics Report, based on my work on the supersymmetry contributions to the precision measurements at low energy experiments.

- **Refereed journal articles**

3. *Polarization of  $\Lambda$  in Relativistic Nucleus-Nucleus Collision*, Y. Ye, S. Su, G. Ji, *Chinese Science Bulletin* **40** (1995) 2046.
4. *Polarization of  $\Lambda$ 's Produced in S+Pb Collisions at 200 GeV/c Per Nucleon*, Y. Ye, S. Su, G. Ji, *Chin. Phys. Lett.* **13** (1996) 351.
5. *Supersymmetric Partners of Oblique Corrections*, E. Katz, L. Randall, S. Su, *Nucl. Phys.* **B536** (1998) 3.
6. *CP Violating Lepton Asymmetries from B Decays and Their Implication for Supersymmetric Flavor Models*, L. Randall and S. Su, *Nucl. Phys.* **B540** (1999) 37.
7. *Discovering Supersymmetry at the Tevatron in Wino LSP Scenarios*, J. L. Feng, T. Moroi, L. Randall, M. Strassler, S. Su, *Phys. Rev. Lett.* **83** (1999) 1731.
8. *Higgs Sector in Anomaly-Mediated Supersymmetry Breaking Scenario*, S. Su, *Nucl. Phys.* **B573** (2000) 87.
9. *Low-Energy Limits of Theories with Two Supersymmetries*, N. Polonsky and S. Su, *Phys. Rev.* **D63** (2001) 035007.
10. *More Corrections to the Higgs Mass in Supersymmetry*, N. Polonsky and S. Su, *Phys. Lett.* **B508** (2001) 103.
11. *Extra Families, Higgs Spectrum and Oblique Corrections*, H. J. He, N. Polonsky, S. Su, *Phys. Rev.* **D64** (2001) 053004.
12. *Supersymmetric Correction to Top Quark Pair Production near Threshold*, S. Su and M. Wise, *Phys. Lett.* **B510** (2001) 205.

13. *Implications of the Higgs Boson Searches on Different Soft SUSY-breaking Scenarios*,  
S Ambrosanio, A. Dedes, S. Heinemeyer, S. Su, G. Weiglein, *Nucl. Phys.* **B624** (2002) 3.
14. *Associated Production of  $H^\pm$  and  $W^\mp$  in High-energy  $e^+e^-$  Collisions in the Minimal Supersymmetric Standard Model*,  
H. E. Logan and S. Su, *Phys. Rev.* **D66** (2002) 035001.
15. *Top-Squark Study at a Future  $e^+e^-$  Linear Collider*,  
R. Kitano, T. Moroi, S. Su, *JHEP* **0212** (2002) 011.
16. *Variation of the Cross Section for  $e^+e^- \rightarrow W^+H^-$  in the Minimal Supersymmetric Standard Model*,  
H. E. Logan and S. Su, *Phys. Rev.* **D67** (2003) 017703.
17. *Supersymmetric Effects in Deep Inelastic Neutrino–Nucleus Scattering*,  
A. Kurylov, M. J. Ramsey-Musolf, S. Su, *Nucl. Phys.* **B667** (2003) 321.
18. *The Lightest Higgs Boson of  $mSUGRA$ ,  $mGMSB$  and  $mAMSB$  at Present and Future Colliders: Observability and Precision Analyses*,  
A. Dedes, S. Heinemeyer, S. Su, G. Weiglein, *Nucl. Phys.* **B674** (2003) 271.
19.  *$e^+e^- \rightarrow \nu\bar{\nu}A$  in the Two-Higgs-Doublet Model*,  
T. Farris, J. F. Gunion, H. Logan, S. Su, *Phys. Rev.* **D68** (2003) 075006.
20. *Probing Supersymmetry with Parity-Violating Electron Scattering*,  
A. Kurylov, M. J. Ramsey-Musolf, S. Su, *Phys. Rev.* **D68** (2003) 035008.
21. *Supersymmetric Effects in Parity-Violating Deep Inelastic Electron-Nucleus Scattering*,  
A. Kurylov, M. J. Ramsey-Musolf, S. Su, *Phys. Lett.* **B582** (2004) 222.
22.  *$e^+e^- \rightarrow H^+e^-\bar{\nu}$  in the Two Higgs-Doublet Model*,  
T. Farris, H. E. Logan, S. Su, *Phys. Rev.* **D69** (2004) 035005.
23. *SuperWIMP Gravitino Dark Matter from Slepton and Sneutrino Decays*,  
J. L. Feng, S. Su, F. Takayama, *Phys. Rev.* **D70** (2004) 063514.
24. *Supergravity with a Gravitino LSP*,  
J. L. Feng, S. Su, F. Takayama, *Phys. Rev.* **D70** (2004) 075019.
25. *Propagation of Supersymmetric Charged Sleptons at High Energies*,  
M.H. Reno, I. Sarcevic, S. Su, *Astropart. Phys.* **24** (2005) 107.
26. *Lower Limit on Dark Matter Production at the Large Hadron Collider and International Linear Collider*,  
J. L. Feng, S. Su, F. Takayama, *Phys. Rev. Lett.* **96** (2006) 151802.
27. *Phenomenology of the Left-Right Twin Higgs Model*,  
H. S. Goh and S. Su, *Phys. Rev.* **D75** (2007) 075010.
28. *Pion Leptonic Decays and Supersymmetry*,  
M.J. Ramsey-Musolf, S. Su, Sean Tulin, *Phys. Rev.* **D76** (2007) 095017.

29. *Dark Matter in the Left Right Twin Higgs Model*,  
E.M. Dolle, S. Su, *Phys. Rev.* **D77** (2008) 075013.
30. *B-Physics Observables and Electroweak Precision Data in the CMSSM, mGMSB and mAMSB*,  
S. Heinemeyer, X. Miao, S. Su, G. Weiglein, *JHEP* **08** (2008) 087.
31.  *$h \rightarrow \mu^+ \mu^-$  via  $t$  anti- $t$   $h$  Production at the LHC*, S. Su and B. Thomas, *Phys. Lett.* **B677** (2009) 296.
32. *The LHC Discovery Potential of a Leptophilic Higgs*,  
S. Su and B. Thomas, *Phys. Rev.* **D79** (2009) 095014.
33. *The Inert Dark Matte*,  
E. M. Dolle and S. Su, *Phys. Rev.* **D80** (2009) 055012.
34. *Dilepton Signals in the Inert Doublet Mode*,  
E. M. Dolle, X. Miao, S. Su, B. Thomas, *Phys. Rev.* **D81** (035003) 2010.
35. *Dark Matter-Motivated Searches for Exotic 4th Generation Quarks in Tevatron and Early LHC Data*,  
J. Alwall, J.L. Feng, J. Kumar, S. Su, *Phys. Rev.* **D81** (114027) 2010.
36. *Trilepton Signals in the Inert Doublet Mode*,  
X. Miao, S. Su, B. Thomas, *Phys. Rev.* **D82** (035009) 2010.
37. *Sbottom Signature of the Supersymmetric Golden Regio*,  
H. Li, W. Parker, Z. Si, S. Su, arXiv:1009.6042 [hep-ph], accepted for publication in European Physical Journal C.

- **Electronic publications**

These are my works contributed to *APS / DPF / DPB Summer Study on the Future of Particle Physics (Snowmass 2001)* (publications 38-39), *Les Houches 2007: Physics at TeV Colliders* (publication 40), and *Workshop on Topologies for Early LHC Searches*, SLAC, California, September, 2010 (publication 41-42).

They are original works and have not been published elsewhere.

38. *VLHC Predictions for  $H$  to  $\tau\tau$  in Weak Boson Fusion*,  
T. Plehn, S. Su, D. Zeppenfeld, hep-ph/0110364.
39. *Phenomenology of a Constrained Standard Model from an Extra Dimension*,  
M. Chertok, G. D. Kribs, Y. Nomura, W. Orejudos, B. Schumm, S. Su, hep-ph/0112001.
40. *LHC Studies of the Left-Right Twin Higgs Model*,  
X. Miao, S. Su, L. March, S. Conzalez de la Hoz, E. Ros, M. Vos,  
contribution to *New Physics at the LHC: A Les Houches Report. Physics at TeV Colliders 2007 – New Physics Working Group*, G. Brooijmans et al., arXiv:0802.3715 [hep-ph]. It will appear in the proceedings of *Les Houches 2007: Physics at TeV Colliders*, Les Houches, France, June 20 - 29, 2007.
41.  *$\tau^+ \tau^-$  Resonance*,  
A. Freitas, S. Su,

42. *Same Sign Dilepton Resonance*,  
V. Rentala, S. Su, contribution to “Workshop on Topologies for Early LHC Searches”, SLAC, California, September, 2010.

• **Workshop reports - white papers**

43. *Linear Collider Physics Resource Book for Snowmass 2001*, American Linear Collider Working Group. I contributed to the chapter that overviews the status of supersymmetry searches at a linear collider.
44. *The Snowmass Points and Slopes: Benchmarks for SUSY Searches*,  
B. C. Allanach *et. al.*, *Eur. Phys. J.* **C25** (2002) 113.
45. *Report of the Subgroup on Alternative Models and New Ideas*,  
M. Chertok *et. al.*, hep-ph/0201126.
46. *Physics at Future Hadron Colliders*,  
U. Baur *et. al.*, hep-ph/0201227.

• **Conference proceedings**

47. *Supersymmetric Partners of Oblique Corrections*  
E. Katz, L. Randall, S. Su, *Nucl. Phys. Proc. Suppl.* **62** (1998) 299.
48. *Higgs Mass Revisited: in SM and in MSSM*  
S. Su, contributed to SUSY01 conference proceeding, Dubna, Russia, June 2001 published in *Dubna 2001, Supersymmetry and unification of fundamental interactions* 269.
49. *Soft SUSY-breaking Scenarios in the Light of Higgs Searches at LEP2*  
A. Dedes, S. Heinemeyer, S. Su, G. Weiglein, *eConf C010630* (2001) P305.
50. *Single Heavy MSSM Higgs Production at  $e+e-$  Linear Collider*  
S. Su, published in *Hamburg 2002, Supersymmetry and unification of fundamental interactions*, **vol. 2**, 799.
51. *Probing Supersymmetry with Neutral Current Scattering Experiments*  
A. Kurylov, M. J. Ramsey-Musolf, S. Su, *AIP Conf.Proc.*, **698** (2004), 168.
52. *Charged Current Universality Problem and NuTeV Anomaly: Is SUSY to Blame?*  
A. Kurylov, M. Ramsey-Musolf, S. Su, *AIP Conf.Proc.* **698** (2004), 188.
53. *SuperWIMP Dark Matter in Supergravity with a Gravitino*  
J. L. Feng, S. Su, F. Takayama, published in *Tsukuba 2004, Supersymmetry and unification of fundamental interactions*, 721.
54. *SuperWIMP Cosmology and Collider Physics*  
J. L. Feng, A. Rajaraman, B. T. Smith, S. Su, F. Takayama, published in *Tsukuba 2004, Supersymmetry and unification of fundamental interactions*, 279.
55. *Collider Signatures of the Left-Right Twin Higgs Model*  
H. S. Goh, S. Su, appeared in the proceedings of SUSY06: 14th International Conference on Supersymmetry and the Unification of Fundamental Interactions, Irvine, California, 12-17 Jun 2006.

## Press Articles

In 2006, my research results on dark matter production at colliders were reported in *World Science*, *PhysOrg.com* and *PhysicsWeb*.

## Scholarly Presentations

- **Invited Colloquia**

- Department of Physics, University of Arizona, February 2003
- Department of Physics, University of Wisconsin, Madison, May 2005
- Ningbo University, China, June 2009
- University of Arizona, Tucson, March 2010
- Shanghai Jiaotong University, China, June 2010

- **Invited talk in “Women in Theoretical Particle Physics Month” Seminar/Colloquium series**

- Department of Physics, University of Wisconsin, Madison, October 2007

- **Invited Lectures**

- Invited lecturer at Summer Institute 2005, held at FujiYoshida, Japan, August 2005. I was one of six lecturers and delivered a three hour lecture to about 70 participants.
- Invited lecturer at CCAST workshop: LHC and Dark Matter, held at Beijing, China, December 2005. I was one of two lecturers and delivered a series of two lectures (5 hours) to about 100 participants.
- Invited lecturer at TeV Physics Summer Institute, organized by the Center for High Energy Physics, Peking University in July, 2008. I was one of four lecturers and delivered one lecture to about 80 participants.
- In Aspen 2006 Summer workshop, I was asked to give a tutorial on program CalcHEP.
- During the Fall 2003 semester, I gave an informal series of two lectures as part of a dark matter discussion seminar series to participants from both the Physics Department and the Astronomy Department. My lectures provided an introduction to the issue of dark matter in supersymmetry.

- **Invited Seminars**

- Florida State University, December 1999
- California Institute of Technology, March 2001
- University of California at San Diego, April 2001
- University of Pennsylvania, December 2001

- Brookhaven National Laboratory, December 2001
- Massachusetts Institute of Technology, December 2001
- Institute for High Energy Physics, Beijing, China, July 2002
- Stanford Linear Accelerator Center (SLAC), Stanford, January 2003
- University of Arizona, Tucson, February 2003
- University of California at Irvine, February 2003
- University of Wisconsin, Madison, September 2003
- University of Arizona, October 2003
- California Institute of Technology, November 2003
- University of Arizona, April 2004
- Ohio State University, March 2005
- Yukawa Institute for Theoretical Physics, Japan, August 2005
- University of Oregon, April 2006
- Los Alamos National Laboratory, June 2006
- National Tsing Hua University, Taiwan, July 2006
- Theoretical Institute of Physics, China, August 2006
- National Observatory of China, China, August 2006
- University of California at Davis, October 2006
- University of California, Berkeley, March 2007
- Cornell University, April 2007
- Theory group, CERN, July 2007
- University of Minnesota, October 2007
- Arizona State University, April 2008
- Fudan University, June 2008
- Institute of High Energy Physics, Beijing, October, 2008
- Shandong University, Jinan, October, 2008
- Beijing Normal University, October 2008
- University of California, Irvine, November, 2008
- Zhejiang University, June 2009
- Los Alamos National Laboratory, October, 2009
- University of California, Berkeley, November, 2009
- Harvard University, May, 2010
- Massachusetts Institute of Technology, May 2010
- Texas A&M University, Nov, 2010
- California Institute of Technology, January, 2011



- **Presentation at Conferences and Workshops**

- SUSY99, “7th International Conference on Supersymmetries in Physics”, Fermi National Accelerator Laboratory, Batavia, Illinois, June 14 – June 19, 1999. *Submitted presentation.*
- SUSY2K, “8th International Conference on Supersymmetries in Physics”, CERN, Geneva, Switzerland, June 26 – July 1, 2000. *Submitted presentation.*
- Workshop on the Future of Higgs Physics, Fermi National Accelerator Laboratory, Batavia, Illinois, May 3 – May 5, 2001. *Submitted presentation.*
- Pheno 2001 Symposium, University of Wisconsin, Madison, Wisconsin, May 7 – May 9, 2001. *Submitted presentation.*
- SUSY 01, “The 9th International Conference on Supersymmetry and Unification of Fundamental Interactions”, Dubna, Russia, June 11 – June 27, 2001. *Submitted presentation.*
- Snowmass 2001, “The Future of Particle Physics”, Snowmass Village, Colorado, June 30 – July 21, 2001. *Submitted presentation.*
- SUSY 02, “The 10th International Conference on Supersymmetry and Unification of Fundamental Interactions”, DESY Hamburg, Germany, June 17 – June 23, 2002. *Submitted presentation.*
- Theory Institute 2002, “Supersymmetry, Higgs and Extra Dimensions”, Argonne National Lab, Argonne, Illinois, September 9 – September 13, 2002. *Invited presentation.*
- Workshop, “Fundamental Symmetries and Weak Interactions”, Institute for Nuclear Theory, University of Washington, Seattle, Washington, November 11 – November 15, 2002. *Invited presentation.*
- Pheno 2003 Symposium, University of Wisconsin, Madison, Wisconsin, May 5 – May 7, 2003. *Submitted presentation.*
- LoopFest II: Precision Measurements and Radiative Corrections at a Future Linear Collider: SUSY, QCD, New Physics, Brookhaven National Laboratory, Upton, New York, May 2003. *Invited presentation.*
- CIPANP 2003: Conferences on the Intersections of Particle and Nuclear Physics, Grand Hyatt Hotel, New York City, New York, May 2003. *Invited presentation.*
- Pheno 2003 Symposium, University of Wisconsin, Madison, Wisconsin, May 2003. *Submitted presentation and session chair.*
- SUSY 2003: the 11th International Conference on Supersymmetry and the Unification of the Fundamental Interactions, University of Arizona, Tucson, Arizona, June 2003. *Submitted presentation.*
- ALCPG 2004: American Linear Collider Physics Working Group Winter Workshop, SLAC, California, January 2004. *Submitted presentation.*
- LOOPFEST III: Radiative Corrections for the Linear Collider: Multi-loops and Multi-legs, Santa Barbara, California, April 2004. *Invited presentation.*

- From Zero to  $Z^0$ , a Workshop on Precision Electroweak Physics, Fermilab, Illinois, May 2004. *Invited presentation.*
- Pheno 2004 Symposium, University of Wisconsin, Madison, Wisconsin, May 2004. *Submitted presentation and session chair.*
- Theory Institute 2004: Supersymmetry, Higgs and Extra Dimensions, Argonne National Lab, Argonne, Illinois, May 2004. *Submitted presentation.*
- SUSY 04: the 12th International Conference on Supersymmetry and the Unification of Fundamental Interactions, Tsukuba, Japan, June 2004. *One submitted presentation, one invited presentation.*
- ALCPG 2004, Victoria Linear Collider Workshop, Victoria, Canada, July 2004. *Submitted presentation.*
- Santa Fe 2004 Summer Workshop: Beyond the Higgs, Santa Fe, New Mexico, August 2004. *Submitted presentation.*
- 2005 Aspen Winter Conference: the Highest Energy Physics, Aspen, Colorado, February 2005. *Invited presentation.*
- LCWS05: 2005 International Linear Collider Workshop, Stanford, California, March 2005. *Submitted presentation.*
- Pheno 2005 Symposium, University of Wisconsin, Madison, Wisconsin, May 2005. *Submitted presentation.*
- Aspen Workshop: New Approaches to Electroweak Symmetry, Aspen Center for Physics, Aspen, Colorado, June 2005. *Invited presentation.*
- SUSY 05: the 13th International Conference on Supersymmetry and the Unification of Fundamental Interactions, IPPP Durham, England, July 2005. *Submitted presentation.*
- MC4BSM: Monte Carlo Tools for beyond the Standard Model Physics, Fermilab, Illinois, March 2006. *Invited presentation.*
- West Coast LHC Theory Network, University of California at San Diego, San Diego, California, May 2006. *Submitted presentation.*
- The Workshop on Collider Physics, Argonne National Laboratory, Argonne, Illinois, May 2006. *Submitted presentation.*
- SUSY 06: the 14th International Conference on Supersymmetry and the Unification of Fundamental Interactions, Irvine, California, June 2006. *Submitted presentation and session chair.*
- OCPA5, International Conference on Physics Education and Frontier Physics, Taipei, Taiwan, June 2006. *Invited presentation.*
- 2006 Summer Institute on Collider Phenomenology, National Tsing Hua University, Taiwan, June 2006. *Invited presentation.*
- US-China Medium Energy Symposium, Beijing, August 2006. *Invited presentation.*

- Aspen Workshop: Particle Theory in the Anticipation of LHC, Aspen Center for Physics, Aspen, Colorado, August 2006. *Invited presentation.*
- Jefferson Lab Hall C August 2006 Summer Workshop, Jefferson Lab, August 2006. *Invited presentation.*
- MC4BSM II: Monte Carlo Tools for Beyond the Standard Model Physics, Princeton University, March 2007. *Invited presentation.*
- 2007 Phenomenology Symposium: Prelude to the LHC, University of Wisconsin, Madison, May 2007. *Invited plenary talk.*
- The Hunt for Dark Matter: a Symposium on Collider, Direct and Indirect Searches, Fermilab, May 2007. *Submitted presentation.*
- International workshop on the interconnection between Particle Physics and Cosmology, Texas A&M University, College Station, TX, May 2007. *Invited presentation.*
- Les Houches 2007, Physics at TeV Colliders, Les Houches, France, June 2007. *Submitted presentation.*
- Fundamental Symmetries: from Nuclei and Neutrino to the Universe, European Center for Theoretical Studies in Nuclear Physics and Related Areas, Trento, Italy, June 2007. *Invited presentation.*
- Anticipating Physics at the LHC, Kavli Institute of Theoretical Physics, Santa Barbara, June 2008. *Invited presentation.*
- 2nd Forum on High Energy Physics and Workshop on TeV Physics: LHC Physics, Shandong University, Weihai, China, July 2008. *Invited presentation.*
- New Physics beyond the Standard Model, Kavli Institute of Theoretical Physics, Beijing, July, September – October, 2008. *Invited presentation.*
- Cosmo 08, Frank Lloyd Wright Monona Terrace Convention Center, Madison, Wisconsin, August 2008. *Invited plenary talk.*
- TeV Particle Astrophysics, IHEP, Beijing, China, September 2008. *Invited plenary talk.*
- Low Energy Precision Electroweak Physics in the LHC Era, Institute for Nuclear theory, Washington, December, 2008. *Invited plenary talk.*
- Collider Physics 2009: Joint Argonne and IIT Theory Institute, Argonne National Laboratory, Argonne, IL and Illinois Institute of Technology, Chicago, IL, May, 2009. *Invited plenary talk.*
- The 4th International Symposium on Symmetries in Subatomic Physics, National Taiwan University, Taiwan, June, 2009. *Invited presentation.*
- International Workshop on Dark Matter and Double Beta Decay, Shanghai Jiaotong University, June, 2009. *Invited presentation.*
- Four Corners Section of the APS: Annual Meeting, Colorado School of Mines, Golden, CO, October, 2009. *Invited plenary talk.*

- GGI conference: The Dark Matter Connection: Theory and Experiment, the Galileo Galilei Institute for theoretical Physics, Florence, May, 2010. *Invited presentation.*
- Frontier Physics Working Month, Shanghai Jiaotong University, Shanghai, June, 2010. *Invited presentation.*
- Precision Tests of the Standard Model: from Atomic Parity Violation to Parity-Violating Lepton Scattering, ECT\*, Trento, Italy, Nov, 2010. *Invited presentation.*
- West Coast LHC Theory Network, University of California, Irvine, December 10, 2010. *Invited presentation.*

## Service/Outreach

- **Local/state outreach:**

- In Fall 2004, I participated in the WISE High School Mentoring program, whose purpose is to encourage young women to consider careers in mathematics, science, engineering and other non-traditional areas. I am the faculty mentor of a high school student.
- In Fall 2005, Fall 2006 and Fall 2009, I participated in physics PHUN night organized by the Department of Physics, and demonstrated the Chaladni plate experiment.

- **National outreach:**

- In Spring, 2008, I participated in a Teacher’s Conference “Particle Physics in the Age of the Large Hadron Collider”, organized by KITP at Santa Barbara. This is a one-day conference designed to bring secondary school science teachers into close contact with some of the world’s leading experts in the most exciting areas of forefront physics research. I talked to teachers during lunch time about exciting physics that can be done at the LHC and particle physics in general.

- **Departmental committees**

- Graduate Admissions and Recruitment Committee (2003–present)
- Theoretical Astrophysics Faculty Search Committee (2004)
- Colloquium Committee [2004–2005 (head), 2005–2006, 2008–2009]
- Department Head Search Committee (2004)
- Teaching Improvement and Evaluation Committee (2004–2006)
- Awards and Prizes Committee [2006–2007, 2007–2008 (head)]
- Undergraduate Curriculum Committee (2007–2008)
- Graduate Advisory Committee (2008–2010)
- Graduate Curriculum Committee (2009–2010)
- Diversity Committee (2009–2011)
- CAPE Committee (2009–2011)
- Served on approximately fifteen graduate oral comprehensive exam committees
- Served on six graduate thesis committees
- Faculty mentor of eight graduate students

- **Other intramural service**

- Initiated and co-organized a High Energy Theory Seminar Series (2003–2005). Co-organized Particle and Nuclear Theory Seminars (2005–present).

- **Organized conferences and workshops**

- Served on the organization committee and also as session convener for workshop: *From Zero to  $Z^0$ , a Workshop on Precision Electroweak Physics*, held at Fermi National Accelerator Laboratory (Fermilab), Illinois, May 2004.
- Convener for ALCPG07, *American Linear Collider Physics Group*, physics working group: *Charged Particle Momentum Measurement,  $V0$  Reconstruction, and Identification of Stable Charged Particles*. The conference was held at Fermilab, Illinois, October 2007.
- Currently serving as co-organizer for Kavli Institute of Theoretical Physics-China 2008 program: *New Physics beyond the Standard Model*. The total budget for the workshop is RMB1,000,000, which is about \$140,000.
- Served as co-organizer for international conference: *Going beyond the SM, Marching into the LHC Era*, which was held in Beijing, Oct 20–24, 2008.
- Co-organizer for Aspen Summer 2009 program: *Beyond the Standard Model at the Threshold*.
- Convener for ALCPG09, *American Linear Collider Physics Group*, physics working group: *Charged Particle Momentum Measurement,  $V0$  Reconstruction, and Identification of Stable Charged Particles*, Albuquerque, New Mexico, September 29–October 3, 2009.
- Convener for Muon Collider Workshop, physics working group: *Higgs Physics*. The workshop was held at Fermilab, Illinois, November 2009.
- Serve as coordinators for the group: *Connection to Astro and Cosmo* of LHC wiki page (<http://wiki.pheno.wisc.edu/lhc>).
- Convener for *SUSY and New Physics at the Terascale* sessions for LCWS 2010, the World-wide Study organized Linear Collider Workshop, which will be held in Beijing, March 26–30, 2010.
- Co-organizer for *Frontier Physics Working Month*, which was held in Center for High-Energy Physics, Peking University and Institute of Nuclear, Particle, Astronomy and Cosmology, Shanghai JiaoTong University from May 24 to June 18, 2010.
- Served as co-organizer for Kavli Institute of Theoretical Physics-China 2011 program: *Dark Matter and New Physics*, which will be held in Beijing, September 19–November 2, 2011.
- Convener for ALCPG11, *American Linear Collider Physics Group*, physics working group: *SUSY/Beyond the SM New Physics/Higgs/Dark Matter*, Eugene, Oregon, March 19–23, 2011.
- Co-organizer for *Frontier Physics Working Month*, which will be held in Center for High-Energy Physics, Peking University and Institute of Nuclear, Particle, Astronomy and Cosmology, Shanghai JiaoTong University from May 25–June 17, 2011.

- Serve as coordinators for the group: *Connection to Astro and Cosmo* of LHC wiki page (<http://wiki.pheno.wisc.edu/lhc>).

- **Other extramural service**

- Serve on High Energy Physics Theory and Cosmology Panel for the U.S. National Science Foundation.
- Review grant proposals in high-energy physics for the U.S. National Science Foundation, and U.S. Department of Energy.
- Serve as referee for *Physics Review Letters*, *Physical Review D*, *Nuclear Physics B*, *Journal of High Energy Physics*, and *European Physical Journal C*.
- Serve as book proposal reviewer for Cambridge University Press.