

Curriculum Vitae

Dr. **YUN JIANG**

Mailing Address: Department of Physics, University of California, Davis
One Shields Avenue, Davis, CA 95616, United States
Email: yunjiang@ucdavis.edu; wing0214@gmail.com
Homepage: <http://particle.physics.ucdavis.edu/hefti/members/doku.php?id=students:jiang>
Phone Number: +1(530)-219-7538
Born: February 14, 1986 – Shanghai, China

EDUCATION

- 2010 - 2015 Ph.D. in Physics, **University of California, Davis**, California, USA (GPA: 4.00/4.00)
Thesis: *Higgs Physics Beyond the Standard Model*, Advisor: John F. Gunion
- 2008 - 2011 M.Sc. in Physics, **National University of Singapore**, Singapore (CPA: 5.00/5.00)
Thesis: *The Phases of Supersymmetric Black Holes in Five Dimensions*,
Supervisor: Edward Teo
- 2004 - 2008 B.S. in Physics, **Zhejiang University**, Hangzhou, P.R.China (GPA: 3.90/4.00)
Thesis: *NJL Model and its Application in the Mesons*, Advisor: Ding-hui Lu

PROFESSIONAL EXPERIENCE

- Sep. 2015 - Aug. 2018 Postdoctoral Fellow
Niels Bohr International Academy (NBIA) and Discovery Center
Niels Bohr Institute, Copenhagen University
- May 2013 - Apr. 2014 LHC Theory Initiative Graduate Fellow
- Jul. 2012 - July 2015 Research Assistant at the High Energy Frontier Theory Initiative
Department of Physics, University of California, Davis
- Sep. 2010 - June 2015 Teaching Assistant at the Department of Physics
University of California, Davis
- Jan. 2009 - Dec. 2009 Teaching Assistant in the Physics Department
National University of Singapore

AWARDS and HONORS (selected)

1. Academic Achievement Award for International Graduates, University of California, Davis (2015)
2. Ryan Couch Memorial Fund, Physics Department, University of California, Davis (2015)
3. 2014 National Award for Outstanding Chinese Students Abroad, China Scholarship Council (2015)
4. Post-Candidacy NRST Fellowship, University of California, Davis (2015)

-
5. PITT PACC Travel Awards (PHENO 2014)
 6. US NSF LHC-TI Graduate Fellowship (2013-2014)
 7. UC Davis Graduate Program Fellowship, University of California, Davis (2012)
 8. Block Grant Fellowship, University of California (2011)
 9. Research Scholarship, National University of Singapore (2008-2010)
 10. China–Singapore Undergraduate Exchange Program Fellowship (2007)
 11. Fudi Scholarship, Zhejiang University (2007)
 12. First-class Research Innovation Scholarship, Zhejiang Province, China (2007)
 13. Meritorious Winner, Mathematical Contest in Modeling (MCM), United States (2007)
 14. First-class Prize, China Undergraduate Mathematical Contest in Modeling (2006)

RESEARCH FIELDS

My research mainly focuses on LHC phenomenology and new physics implications, including

- Higgs boson physics beyond the standard model
- Supersymmetry
- Dark matter physics
- Extra dimensions
- Inflation of the early universe

I am also interested in Higgs triplet neutrino physics.

PUBLICATIONS

My profile on the [inSPIRE](#): 13 papers with a total of 475 citations, h-index: 8; these include **8 peer-reviewed journal articles with a total of 434 citations and 2 conference proceedings.**

1. A. Ahamd, B. Grzadkowski, J. F. Gunion, **Y. Jiang**, *Higgs dark matter from warped extra dimension - the truncated-inert-doublet model - [arXiv:1504.03706\[hep-ph\]](#)* (submitted to JHEP).
2. J. Bernon, J. F. Gunion, **Y. Jiang**, S. Kraml, *Light Higgs bosons in Two-Higgs-Doublet Models*, Phys. Rev. D **91** (2015) 075019 [arXiv:1412.3385\[hep-ph\]](#).
3. B. Dumont, J. F. Gunion, **Y. Jiang**, S. Kraml, *Addendum to “Constraints on and future prospects for Two-Higgs-Doublet Models in light of the LHC Higgs signal”*, [arXiv:1409.4088\[hep-ph\]](#).

-
4. A. Drozd, B. Grzadkowski, J. F. Gunion and **Y. Jiang**, *Extending Two-Higgs-Doublet Models by a Scalar Field - the Case for Dark Matter -*, JHEP **1411** (2014) 105 [arXiv:1408.2106\[hep-ph\]](#).
 5. B. Dumont, J. F. Gunion, **Y. Jiang**, S. Kraml, *Constraints on and future prospects for Two-Higgs-Doublet Models in light of the LHC Higgs signal*, Phys. Rev. D **90** (2014) 035021 (Editor's suggestion) [arXiv:1405.3584\[hep-ph\]](#).
 6. A. Drozd, B. Grzadkowski, J. F. Gunion and **Y. Jiang**, *2HDM and enhanced rates in $\gamma\gamma$ channel*, Acta Physica Polonica B **44** (2013) 1417.
 7. **Y. Jiang**, *125 GeV Higgs bosons in two-Higgs-doublet models*, [arXiv:1305.2988\[hep-ph\]](#) (Proceedings of the conference "Rencontres de Moriond EW 2013").
 8. A. Drozd, B. Grzadkowski, J. F. Gunion and **Y. Jiang**, *Two-Higgs-Doublet Models and Enhanced Rates for a 125 GeV Higgs*, JHEP **1305** (2013) 072 [arXiv:1211.3580\[hep-ph\]](#).
 9. G. Belanger, U. Ellwanger, J. F. Gunion, **Y. Jiang**, S. Kraml, J. Schwarz, *Higgs Bosons at 98 and 125 GeV from LEP and LHC*, JHEP **1301** (2013) 069 [arXiv:1210.1976\[hep-ph\]](#).
 10. G. Belanger, U. Ellwanger, J. F. Gunion, **Y. Jiang**, S. Kraml, *Two Higgs Bosons at the Tevatron and the LHC?* [arXiv:1208.4952\[hep-ph\]](#).
 11. J. F. Gunion, **Y. Jiang**, S. Kraml, *Diagnosing Degenerate Higgs at 125 GeV*, Phys. Rev. Lett. **110** (2013) 051801 [arXiv:1208.1817\[hep-ph\]](#).
 12. J. F. Gunion, **Y. Jiang**, S. Kraml, *Could two NMSSM Higgs bosons be present near 125 GeV?*, Phys. Rev. D **86** (2012) 071702(R) [arXiv:1207.1545\[hep-ph\]](#).
 13. J. F. Gunion, **Y. Jiang**, S. Kraml, *The constrained NMSSM and Higgs near 125 GeV*, Phys. Lett. B **710** (2012) 454 [arXiv:1201.0982\[hep-ph\]](#).

Working in progress

1. A. Drozd, B. Grzadkowski, J. F. Gunion and **Y. Jiang**, *Isospin-violating Dark Matter from Higgs portal* (appear soon).
2. J. Bernon, J. F. Gunion, H. E. Haber, **Y. Jiang**, S. Kraml, *Scrutinizing the alignment limit in two-Higgs-doublet models* (appear soon).
3. A. Ahamd, B. Grzadkowski, J. F. Gunion, **Y. Jiang**, *Could the anomalous magnetic moment of muon $(g - 2)_\mu$ be no longer anomalous?*

INVITED TALKS and SEMINARS

1. HAP Dark Matter 2015, KIT-Karlsruhe, 09/22/2015
Scalar dark matter from double-Higgs portal and the role of isospin-violating effect

-
2. Theory seminar, Niels Bohr Institute, 09/08/2015
TBA
 3. SUSY 2015, Tahoe City, 08/25/2015
Many light Higgs bosons
 4. Tsinghua seminar, Beijing, 07/28/2015
TBA
 5. INPAC Seminar, SJTU, Shanghai, 07/02/2015
TBA
 6. Joint theory seminar, UC Davis, 06/08/2015
Exotic (dark) Higgs bosons beyond the Standard Model
 7. PHENO 2015, Pittsburgh, 05/05/2015
Only one 125 GeV Higgs, is that all?
 8. BLV 2015 Workshop, Amherst, 04/28/2015
Scalar dark matter from a double Higgs portal
 9. UZH Seminar, Zurich, 12/15/2014
Two-Higgs doublet model and singlet scalar dark matter
 10. LPSC Seminar, Grenoble, 12/03/2014
Two-Higgs doublet model and singlet scalar dark matter
 11. IFIC-CSIC Seminar, Valencia, 11/27/2014
Two-Higgs doublet model and singlet scalar dark matter
 12. Seminar, Granada, 11/26/2014
Two-Higgs doublet model and singlet scalar dark matter
 13. IFT Seminar, Madrid, 11/24/2014
Two-Higgs doublet model and singlet scalar dark matter
 14. NUS Colloquium, Singapore, 09/24/2014
Focus on dark matter researches: confronting experiment with theory
 15. HKUST, Hong Kong, 09/18/2014
2HDM at future colliders and its scalar dark matter extension
 16. CEPC 2014, Shanghai, 09/12/2014
Two-Higgs-doublet models at future colliders
 17. PASCOS 2014, Warsaw, 06/25/2014
LHC8 constraints on and future prospects for two-Higgs-doublet models

-
18. Lecture on special topics, UCD, 05/27/2014
Motivation and realization of isospin-violating dark matter
 19. Lecture on special topics, UCD, 05/12/2014
Higgs boson physics
 20. PHENO 2014, Pittsburgh, 05/06/2014
2HDM fate after LHC8
 21. Lecture on special topics, UCD, 04/28/2014
Higgs boson phenomenology
 22. Lecture on special topics, UCD, 04/25/2014
Supersymmetric dark matters
 23. Xiamen Univ., Xiamen, 02/19/2014
Higgs boson and incorporated studies on dark matter after LHC8, Planck and LUX 2013
 24. ITP-CAS Seminar, Beijing, 01/15/2014
Fate of the 2HDM after the LHC8, Planck and LUX 2013
 25. NKU Seminar, Tianjin, 01/10/2014
Fate of the 2HDM after the LHC8, Planck and LUX 2013
 26. INPAC Seminar, SJTU, Shanghai, 09/27/2013
Global fitting with LHC Higgs signals in the 2HDMs
 27. SCALARS 2013, Warsaw, 09/18/2013
Global fitting with LHC Higgs signals in the 2HDMs
 28. International Workshop on Particle Physics and Cosmology after Higgs and Planck, Chongqing, 09/08/2013
Global fitting with LHC Higgs signals in the 2HDMs
 29. TeV Physics Workshop, Dalian, 08/25/2013
Global fitting for the 2HDMs.
 30. MITP Workshop “Cosmic-Rays and Photons from Dark Matter Annihilation: Theoretical Issues”, Mainz, 07/02/2013
(Very) light scalar dark matter in the Higgs models
 31. NUS Colloquium, Singapore, 04/02/2013
Implication of ~ 125 GeV LHC Higgs signal towards the standard model beyond
 32. 1st IAS-CERN Workshop, Singapore, 03/27/2013
125 GeV Higgs bosons in two-Higgs doublet models after Moriond 2013

-
33. Rencontres de Moriond 2013 “Electroweak Interactions and Unified Theories”, La Thuile, Italy, 03/04/2013
125 GeV Scalar bosons in 2 Doublet Models (2DMs)
 34. UCD, Davis, 02/21/2013
Enhanced rates for 125 GeV 2HDM Higgs(es)
 35. Henan Normal University, Xinxiang, 01/11/2013
125 GeV Higgs scenarios in the NMSSM perspective
 36. Henan Normal University, Xinxiang, 01/09/2013
Enhanced rates for a 125 GeV Higgs scenarios in the 2HDM
 37. PKU, Beijing, 01/08/2013
Enhanced rates for a 125 GeV Higgs scenarios in the 2HDM
 38. ITP-CAS, Beijing, 01/07/2013
125 GeV Higgs scenarios in the NMSSM perspective
 39. ITP Seminar, ZJU, Hangzhou, 12/21/2012
125 GeV Higgs scenarios in the NMSSM and 2HDM perspectives
 40. INPAC Seminar, SJTU, Shanghai, 12/14/2012
125 GeV Higgs scenarios in the NMSSM and 2HDM perspectives
 41. LHC Lunch Seminar, UC Davis, 11/21/2012
Multiple/Degenerate 125 GeV Higgs scenarios within the NMSSM perspective
 42. LHC Lunch Seminar, UC Davis, 02/22/2012
Higgs at 125 GeV and the NMSSM
 43. Implication of a 125 GeV Higgs Boson Workshop, LPSC-Grenoble, France, 01/30/2012
The constrained NMSSM and Higgs near 125 GeV

CONFERENCES ATTENDED

1. SCALARS 2015, Warsaw, Poland (Dec. 2015)
2. 23rd International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY 2015), Tahoe City, USA (Aug. 2015) *Converner for Higgs session*
3. Phenomenology 2015 Symposium (PHENO 2015), Pittsburgh, USA (May 2015)
4. 20th International Symposium on Particles, Strings and Cosmology (PASCOS 2014), Warsaw, Poland (June 2014)
5. Phenomenology 2014 Symposium (PHENO 2014), Pittsburgh, USA (May 2014)
6. SCALARS 2013, Warsaw, Poland (Sep. 2013)

-
7. Rencontres de Moriond 2013 “Electroweak Interactions and Unified Theories”, La Thuile, Italy (Mar. 2013)
 8. Conference in honor of Murray Gell-mann’s 80th Birthday, Institute of Advanced Study, Singapore (Feb. 2010)
 9. “Particle Physics, Astrophysics and Quantum Field Theory: 75 Years since Solvay, Institute of Advanced Study, Singapore (Nov. 2008)
 10. Conference in honor of C.N.Yang’s 85th Birthday, Nanyang Technological University, Singapore (Nov. 2007)

SUMMER SCHOOLS and WORKSHOPS ATTENDED

1. International Workshop on Baryon & Lepton Number Violation (BLV 2015), Amherst, USA (Apr. 2015)
2. The Fourth International Workshop on Future High Energy Circular Colliders (CEPC 2014), Shanghai, China (Sep. 2014)
3. International Workshop on Particle Physics and Cosmology after Higgs and Planck, Chongqing, China (Sep. 2013)
4. 2013 TeV Physics Workshop, Dalian, China (Aug. 2013)
5. MITP Workshop “Cosmic-Rays and Photons from Dark Matter Annihilation: Theoretical Issues”, Mainz, Germany (June 2013)
6. Les Houches Workshop ”Physics at TeV Colliders” Session II, France (June 2013)
7. The LHC Higgs Signal: Fits, Models and BSM Implications, University of California, Davis (Apr. 2013)
8. 1st LHC-IAS Workshop on Particle Physics and Cosmology - Status, Implications and Technology, NTU-IAS, Singapore (Mar. 2013)
9. Mini Higgs Boson Workshop, LPSC-Grenoble, France (Mar. 2013)
10. SLAC Summer Institute 2012 “The Electroweak Scale: Unraveling the Mysteries at the LHC”, SLAC National Accelerator Laboratory, Stanford University (Jul. 2012)
11. Dark Matter in Collision Workshop, University of California, Davis (Apr. 2012)
12. Implication of a 125 GeV Higgs Boson Workshop, LPSC-Grenoble, France (Jan. 2012)
13. School and Workshop on Strongly Coupled Physics Beyond the Standard Model, The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy (Jan. 2012)
14. Hidden SUSY Workshop, University of California, Davis (Nov. 2011)
15. SUSY Recast Workshop, University of California, Davis (Apr. 2011)

16. The Tau Portal Workshop, University of California, Davis (Apr. 2011)

TEACHING ACTIVITIES

Undergraduate Levels

- Level 2 Physics Lab (Spring 2009-PC2193 Demonstrator; Fall 2009-PC2193 Demonstrator)
- General Physics for Science (Fall 2010-7A; Summer 2011-7B/7C)
- Classical Physics (Spring 2014-9A Reader; Winter 2012-9C Reader; Summer 2012-9D; Winter 2015-9C Lab; Spring 2015-9D Reader)
- Quantum Mechanics (Fall 2013-115B)
- Nuclear Physics (Spring 2011-129A)
- Particle Physics (Winter 2011-130A Reader; Spring 2011-130B)

Graduate Levels

- High Energy Physics (Fall 2011-245A Reader)
- Quantum Field Theory (Spring 2012-230A Reader; Fall 2011-230B; Spring 2013-230C)

COMPUTATIONAL SKILLS

- Computer languages: Fortran, C++, Shell, Python
- Word processing: LaTeX, MS Office
- Software packages: Mathematica, GNUPlot, ROOT, Vim, JaxoDraw
- Operating systems: Macintosh, Linux, Windows, Ubuntu
- Program usage: NMSSMTools, micrOMEGAs, 2HDMC, SusHi, FeynRules¹, RGErun

PROFESSIONAL MEMBERSHIPS

2012 - 2013 High Energy Frontier (HEF)-THEORY Division, North American Study
2012 - 2013 2013 SNOWMASS-Young Particle Physicists list

PROFESSIONAL SERVICES

Aug. 2015 Convener for Higgs session in SUSY 2015, Davis, CA
Jan. - Feb. 2010 Student Helper Leader for Gell-mann's Conference, IAS, Singapore
Sep. - Nov. 2008 Student Assistant for PAQFT Conference, IAS, Singapore

¹ Our 2HDMs model files and Mathematica notebook for the FeynRules program will be available in the model database soon.