

## Curriculum Vitae

# YUN JIANG

*HEP Ph.D. Student of Physics, U.C. Davis*

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### EDUCATION

- 2004 - 2008 B.S. in Physics, Zhejiang University, China (GPA: 3.90/4.00)  
Thesis: *NJL Model and its Application in the Mesons*, Advisor: Ding-hui Lu
- 2008 - 2011 M.Sc. in Physics, National University of Singapore (CPA: 5.00/5.00)  
Thesis: *The Phases of Supersymmetric Black Holes in Five Dimensions*, [pdf~format](#)  
Supervisor: Edward Teo
- 2010 - 2014 Ph.D. in Physics, University of California, Davis (GPA: 4.00/4.00)  
Thesis: *Higgs Physics Beyond the Standard Model*, Advisor: John F. Gunion

### PROFESSIONAL EXPERIENCE

- Jan. 2008 - Dec. 2009 Teaching Assistant in the Physics Department  
National University of Singapore
- Sep. 2010 - Jun. 2012 Teaching Assistant at the Department of Physics  
University of California, Davis
- Jul. 2012 - present Research Assistant at the High Energy Frontier Theory Initiative  
Department of Physics, University of California, Davis

### AWARDS and HONORS

1. First-class Prize, China Undergraduate Mathematical Contest in Modeling (2006)
2. Meritorious Winner, Mathematical Contest in Modeling (MCM), United States (2007)
3. First-class Research Innovation Scholarship, Zhejiang Province, China (2007)
4. Fudi Scholarship, Zhejiang University (2007)
5. China–Singapore Exchange Program Fellowship (2007)
6. Research Scholarship, National University of Singapore (2008-2010)
7. Block Grant Fellowship, University of California (2011)
8. UC Davis Graduate Program Fellowship, University of California, Davis (2012)

9. US DOE Research Fellowship (2012-2013)

### RESEARCH FIELDS

My current research mainly focuses on LHC collider phenomenology beyond the Standard Model (BSM) physics:

- (multiple) Higgs bosons in the the next-to-minimal supersymmetric Standard Model
- two-Higgs-doublet model (2HDM) with scalar dark matter extension
- Higgs compositeness
- fourth generation fermion implementation in various BSM models
- exotic models with large/warped extra dimensions
- top quark physics

I am also interested in low-scale SUSY breaking model building, low-mass WIMP model building, and the studies on black holes related to the LHC physics.

### PUBLICATIONS

- (1) J. F. Gunion, Y. Jiang, S. Kraml, *The constrained NMSSM and Higgs near 125 GeV*, Phys. Lett. B **710** (2012) 454 [arXiv:1201.0982\[hep-ph\]](#)
- (2) J. F. Gunion, Y. Jiang, S. Kraml, *Could two NMSSM Higgs bosons be present near 125 GeV?* [arXiv:1207.1545\[hep-ph\]](#) (accepted by Phys. Rev. D rapid commu.)
- (3) J. F. Gunion, Y. Jiang, S. Kraml, *Diagnosing Degenerate Higgs at 125 GeV*, [arXiv:1208.1817\[hep-ph\]](#) (accepted by Phys. Rev. Lett.)
- (4) G. Belanger, U. Ellwanger, J. F. Gunion, Y. Jiang, S. Kraml, *Two Higgs Bosons at the Tevatron and the LHC?* [arXiv:1208.4952\[hep-ph\]](#) (submitted to JHEP)
- (5) G. Belanger, U. Ellwanger, J. F. Gunion, Y. Jiang, S. Kraml, J. Schwarz, *Higgs Bosons at 98 and 125 GeV from LEP and LHC*, [arXiv:1210.1976\[hep-ph\]](#) (submitted to JHEP)
- (6) A. Drozd, B. Grzadkowski, J. F. Gunion and Y. Jiang, *Two-Higgs Doublet Models and Enhanced Rates for a 125 GeV Higgs* (to be submitted to Phys. Rev. D)
- (7) J. F. Gunion, Y. Jiang, S. Kraml, *New 125 GeV-Higgs NMSSM Scenarios* (to appear soon)
- (8) D. Dominici, J. F. Gunion and Y. Jiang, *125 GeV Higgs Phenomenology in the Higgs-radion model* (in progress)
- (9) J. F. Gunion, Y. Jiang, S. Kraml, S. Sekmen, *The Current Status of pNMSSM in light of the Recent LHC8 and 2012 XENON100 Data* (in progress)

### TALKS and PRESENTATIONS

- (1) *The constrained NMSSM and Higgs near 125 GeV*, Implication of a 125 GeV Higgs Boson Workshop, LPSC-Grenoble, France, 01/30/2012 [Slides](#)
- (2) *125 GeV Higgs*, UCD HEFTI LHC Lunch Seminar, Davis, 02/22/2012 [Slides](#)

### CONFERENCES ATTENDED

1. Conference in honor of C.N.Yang's 85th Birthday, Nanyang Technological University, Singapore (Nov. 2007)
2. "Particle Physics, Astrophysics and Quantum Field Theory: 75 Years since Solvay, Institute of Advanced Study, Singapore (Nov. 2008)
3. Conference in honor of Murray Gell-mann's 80th Birthday, Institute of Advanced Study, Singapore (Feb. 2010)

### SUMMER SCHOOLS and WORKSHOPS ATTENDED

1. The Tau Portal Workshop, University of California, Davis (Apr. 2011)
2. SUSY Recast Workshop, University of California, Davis (Apr. 2011)
3. Hidden SUSY Workshop, University of California, Davis (Nov. 2011)
4. School and Workshop on Strongly Coupled Physics Beyond the Standard Model, The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy (Jan. 2012)
5. Implication of a 125 GeV Higgs Boson Workshop, LPSC-Grenoble, France (Jan. 2012)
6. Dark Matter in Collision Workshop, University of California, Davis (Apr. 2012)
7. SSI 2012 "The Electroweak Scale: Unraveling the Mysteries at the LHC", SLAC National Accelerator Laboratory, Stanford University (Jul. 2012)

### PROFESSIONAL MEMBERSHIPS

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

### COMPUTATIONAL SKILLS

- Coding: Fortran, C++, Python
- Editing: LaTeX, Vim
- Plotting: Mathematica, GNUPlot, JaxoDraw
- HEP Packages: NMSSMTools, micrOMEGAS, 2HDMC, FeynRules, MadGraph