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EDUCATION

Stanford University, Stanford, CA,
2002 Ph.D. in Physics

Chinese Academy of Sciences, Beijing, China, 1997
M.S. in Physics

Peking University, Beijing, China, 1994
B.S. in Physics.

EXPERIENCE

Associate Professor, Purdue University, West Lafayette, IN, April, 2009-present

Assistant Professor, Purdue University, West Lafayette, IN, September, 2004 – April 2009

Postdoctoral Fellow, University of California, Los Angeles, CA, September, 2002 -2004

Research Assistant, Stanford University, CA, September, 1997 -August, 2002

Research Assistant, Chinese Academy of Sciences, September, 1995 -July, 1997

RESEARCH

Research area

- Strongly correlated electron systems: High temperature superconductor, Fe-As based superconductors
- Frustrated magnet systems, Multiferroics

- Ultracold atomic system
- Higher dimensional quantum Hall effect, Topological quantum physics
- Spintronics, Graphene

PUBLICATIONS

Papers submitted:

56. Wei-Feng Tsai, Yan-Yang Zhang, Chen Fang and Jiangping Hu
 “Impurity-induced bound states in iron-based superconductors with s -wave $\cos k_x \cos k_y$ pairing symmetry”
 Submitted
55. Y. Zhang, B. Zhou, F. Chen, J. Wei, M. Xu, L. X. Yang, C. Fang, W. F. Tsai, G. H. Cao, Z. A. Xu, M. Arita, C.H. Hong, K. Shimada, H. Namatame, M. Taniguchi, J. P. Hu, D. L. Feng
 “*The orbital characters of bands in iron-based superconductor $BaFe_{1.85}Co_{0.15}As_2$* ”
 arXiv:0904.4022
54. Leland W. Harriger, Astrid Schneidewind, Shiliang Li, Jun Zhao, Zhengcai Li, Wei Lu, Xiaoli Dong, Fang Zhou, Zhongxian Zhao, Jiangping Hu, Pengcheng Dai
 “*Effect of electron-doping on spin excitations of underdoped $BaFe_{1.96}Ni_{0.04}As_2$* ”,
 arXiv:0904.3775
53. Cenke Xu, Jiangping Hu
 “*Field theory for magnetic and lattice structure properties of $Fe_{1+y}Te_{1-x}Se_x$* ”
 arXiv:0903.4477
52. Jun Zhao, D. T. Adroja, Dao-Xin Yao, R. Bewley, Shiliang Li, X. F. Wang, G. Wu, X. H. Chen, Jiangping Hu, Pengcheng Dai
 “*Spin Waves and Magnetic Exchange Interactions in $CaFe_2As_2$* ”,
 arXiv:0903.2686
51. Kangjun Seo, Chen Fang, B. Andrei Bernevig, Jiangping Hu
 “*Magnetic Properties of the Superconducting State of Iron-Based Superconductors*”
 arXiv:0903.2025
50. Yan-Yang Zhang, Jiangping Hu, X. C. Xie, and W. M. Liu
 “*Abnormal Electronic Transport in Disordered Graphene Nanoribbon*”;
 Submitted (2007), Arxiv: 0708.2305.
49. B. A. Bernevig and Jiangping Hu,
 “*Transport Equations for Massless Fermions in Graphene*”;
 Submitted (2007).
48. Trinanjan Datta, E. W. Carlson and Jiangping Hu
 “*The Luttinger Liquid Kink*”;
 Submitted (2007), cond-mat/0703101.

Paper published (including accepted for publication):

47. Yan-Yang Zhang, Chen Fang, Xiaoting Zhou, Kangjun Seo, Wei-Feng Tsai, B. Andrei Bernevig, and Jiangping Hu
“*Quasiparticle Scattering Interference in Superconducting Iron-pnictides*”,
Accepted to PRB, arXiv:0903.1694.
46. Chen Fang, B. A. Bernevig and Jiangping Hu,
“*Theory of Magnetic Ordering in $Fe_{1+y}Te_{1-x}Se_x$* ”;
Accepted to EPL, arXiv: 0811.1294
45. Wei-Feng Tsai, Dao-Xin Yao, B. Andrei Bernevig, and Jiangping Hu
“ *Novel properties in Josephson junctions involving the $\cos(kx)\cos(ky)$ -pairing state in iron-pnictides* ”
Accepted to Phys Rev B (rapid communication) [arXiv: 0812.0661](https://arxiv.org/abs/0812.0661)
44. Congjun Wu, Jiangping Hu, and Shou-Sheng Zhang
“*Quintet Pairing and non-Abelian Vortex String in Spin-3/2 Cold Atomic Systems*”;
Accepted to Int. J. of Modern Phys B, Cond-mat/0512602,
- 43 Fengjie Ma, Wei Ji, Jiangping Hu, Zhong-Yi Lu and Tao Xiang
“*Bi-collinear Antiferromagnetic Order in the Tetragonal α -FeTe*”,
Phys. Rev. Lett. 102, 177003 (2009). arxiv:0809.4732 (2008).
42. Yan-Yang Zhang, Jiangping Hu, B.A. Bernevig, X.R. Wang, X.C Xie and W.M Liu
“*Localization and Kosterlitz-Thouless Transition in Disordered Graphene*”,
Phys. Rev. Lett. 102, 106401 (2009).
41. Songxue Chi, Astrid Schneidewind, Jun Zhao, Leland W. Harriger, Linjun Li, Yongkang Luo, Guanghan Cao, Zhu'an Xu, Micheal Loewenhaupt, Jiangping Hu and Pengcheng Dai
“ *Three-dimensional Resonance in superconducting $BaFe_{1.9}Ni_{0.1}As_2$* ”
Phys. Rev. Lett. 102, 107006 (2009).
40. Chen Fang, Trinanjan Datta and Jiangping Hu,
“*The Magnetoelectric Coupling in the Multiferroic Compound $LiCu_2O_2$* ”;
Phys. Rev. B. 79, 014107 (2009).
39. Shiliang Li, Clarina de la Cruz, Q. Huang, Y. Chen, J. W. Lynn, Jiangping Hu, Yi-Lin Huang, Fong-chi Hsu, Kuo-Wei Yeh, Maw-Kuen Wu and Pengcheng Dai:
“*First-Order Magnetic and Structural Phase Transitions in $Fe_{1+y}Se_xTe_{1-x}$* ”;
Phys. Rev. B 79, 054503 (2009).
38. B. A. Bernevig and Jiangping Hu
“*Diffusive-Ballistic Crossover and the Persistent Spin Helix*”;
Phys. Rev. B 78, 245123 (2008).

37. Kangjun Seo, A. B. Bernevig and JiangPing Hu
“*Pairing Symmetry in a Two-Orbital Exchange Coupling Model of Oxypnictides*”;
Phys. Rev. Lett. 101, 206404 (2008).
36. Jun Zhao, Dao-Xin Yao, Shiliang Li, Tao Hong, Y. Chen, S. Chang, W. Ratcli II, J. W. Lynn, H. A. Mook, G. F. Chen, J. L. Luo, N. L. Wang, E. W. Carlson, Jiangping Hu, and Pengcheng Dai
“*Low Energy Spin Waves and Magnetic Interactions in SrFe₂As₂*”;
Phys. Rev. Lett. 101, 167203-167207 (2008).
35. Meera M. Parish, Jiangping Hu and B. Andrei Bernevig
“*Experimental Consequences of the S-wave $\cos(kx)\cos(ky)$ Superconductivity in the Iron-Pnictides*”,
Phys. Rev. B 78, 144514-144523 (2008).
34. Jun Zhao, W. Ratcliff II, J. W. Lynn, G. F. Chen, J. L. Luo, N. L. Wang, Jiangping Hu, and Pengcheng Dai
“*Spin and Lattice Structure of Single Crystal SrFe₂As₂*”;
Phys. Rev. B (Rapid Communication) 78, 140504-140508 (2008).
33. Kangjun Seo, Han-Dong Chen, Jiangping Hu
“*Complementary Pair Density Wave and d-wave Checkerboard Order in High Temperature Superconductors*”;
Phys. Rev. B 78, 094510-094521 (2008).
32. Chen Fang, Hong Yao, Wei-Feng Tai, Jiangping Hu and S. Kivelson
“*Theory of Electron Nematic Order in LaOFeAs*”;
Phys. Rev. B 77, 224509-224517 (2008).
31. Yan-Yang Zhang, Jiang-Ping Hu, B.A. Bernevig, X. R.Wang, X. C. Xie, and W. M. Liu
“*Quantum Blockades and Loop Currents in Graphene with Topological Defects*”;
Phys. Rev. B 78, 155413-155417 (2008).
30. Yongjin Jiang, Daoxin Yao, Erica Carlson, Hand-Dong Chen and Jiangping Hu
“*d+id-wave Superconducting State in Graphene*”;
Phys. Rev. B 77, 235420-235424 (2008).
29. JiangPing Hu
“*Microscopic Origin of Magnetic Ferroelectrics in Nonlinear Multiferroics*”;
Phys. Rev. Lett.100, 077202-077206 (2008).
28. Chen Fang and Jiangping Hu
“*Effective Theory of Magnetoelectricity in Frustrated Magnets RMn₂O₅*”;
Europhys. Lett, 82, 57005-57009 (2008).
27. Han-Dong Chen and Jiangping Hu
“*Majorana Fermions, Exact Mappings between Classical and Topological Orders*”;
Phys. Rev. B, 76, 193101-193105, (2007).
26. Jiangping Hu, Congjun Wu and Xi Dai

“A Josephson Diode”;
Phys. Rev. Lett. 99, 067004-067008, (2007).

25. Han-Dong Chen, Chen Fang, Jiangping Hu and Hong Yao
“Nature of the Quantum Phase Transition in Quantum Compass Model”;
Phys Rev B 75, 144401-144409 (2007).

24. Yanxia Xing, Qing-feng Sun, Liang Tang and JiangPing Hu
“Opposite Spin Accumulations on the Transverse Edges by the Confining Potential”;
Phys. Rev. B 74, 155313-155317 (2006).

23. Kangjun Seo, Han-Dong Chen and Jiangping Hu
“d-wave Checkerboard Order in Cuprates”;
Phys. Rev. B (Rapid Communication) 76, 020511-020515 (2007).

22. Fang Chen, Jiangping Hu, Steven Kivelson, and Stuart Brown
“A Magnetic Model of the Tetragonal-Orthorhombic Transition in the Cuprates”;
Phys. Rev. B 74, 094508 -094512 (2006).

21. Jiang-Ping Hu and Kangjun Seo
“Competing Order and Asymmetric Tunneling Spectrum”;
Phys. Rev. B 73, 094523-094527 (2006).

20. Jiangping Hu, D. W. Shen and D.L. Feng
“Spin Polarization and Dichroism Effects by Electric Field”;
Phys. Rev. B 73, 085325-085329 (2006).

19. Cristina Bena, Sudip Chakravarty, Jiangping Hu and Chetan Nayak
“Quasiparticle Scattering and Local Density of States in the d-Density Wave States”;
Phys. Rev. B 69, 134517-134522 (2004).

18. Han-Dong Chen, Chyh-Hong Chern, Congjun Wu, Jiangping Hu and Shou-Sheng Zhang
“Berry Phase and Chern Numbers in Superconductors”;
Phys. Rev. B 69, 214512-214518 (2004).

17. B.A. Bernevig, Jiangping Hu, E. Mukamel, S.C. Zhang
“Dissipationless Spin Current in Anisotropic p-Doped Semiconductors”;
Phys. Rev. B 70, 113301-113306 (2004).

16. Jiangping Hu, B.A. Bernevig and Congjun Wu
“Spin Current in Spin Orbital-Coupling Systems”;
Inter. J. Modern Phy. B, 17, 5991-5999 (2003).

15. B.A. Bernevig, Jiangping Hu, N. Toumbas and Shou-Cheng Zhang
“The Eight Dimensional Quantum Hall Effect and the Octonions”;
Phys. Rev. Lett. 91, 236803-236807 (2003).

14. N.P. Armitage and Jiangping Hu,
“On the Detection of Time-Reversal Symmetry Breaking by ARPES with Circularly Polarized Light in Bi2212”;

Phil. Mag. Lett. 84, 105107-105111 (2004)

13. Congjun Wu, Jiangping Hu, and Shou-Sheng Zhang
“*Exact $SO(5)$ Symmetry in Spin 3/2 Fermionic System*”;
Phys. Rev. Lett, 91, 186402-186406(2003).

12. Congjun Wu, Han-dong Chen, Jiangping Hu, and Shou-Sheng Zhang
“*Superfluid Vortex with Mott Insulating Core*”;
Phys. Rev. A 69, 43609-43615 (2004).

11. Han-Dong Chen, Jiang-Ping Hu, Sylvain Capponi, Enrico Arrigoni and Shou-Sheng Zhang,
“*Antiferromagnetism and Hole Pair Checkerboard in the Vortex State of High T_c Superconductors*”;
Phys. Rev. Lett. 89, 137004-137008 (2002).

10. B. Andrei Bernevig, Chyh-Hong Chern, Jiang-Ping Hu, Nicolaos Toumbas and Shou-Sheng Zhang
“*Effective Field theory Description of the Higher Dimensional Quantum Hall liquid*”;
Annals of Physics 300, 185-205 (2002).

9. Jiang-Ping Hu and Shou-Sheng Zhang
“*Collective Excitation at the Boundary of a 4D Quantum Hall Droplet*”;
Phys. Rev. B 66, 125301-125310 (2002).

8. Jiang-Ping Hu and Shou-Sheng Zhang
“*Theory of Static and Dynamic Antiferromagnetic Vortices in LSCO Superconductor*”;
J. Phys. Chem. of Solids, 63, 2277-2281 (2002).

7. Shou-Sheng Zhang and Jiangping Hu
“*A Four Dimensional Generalization of the Quantum Hall Effect*”;
Science, 294, 823-828 (2001).

6. D.L.Feng , N.P.Armitage, D.H.Lu, A.Damascelli, J.P. Hu, P.Bogdanov, A.Lanzara, F.Ronning, K.M.Shen,H.Eisaki, C.Kim and Z.X.Shen
“*Bilayer Splitting in the Electronic Structure of Heavily Overdoped $Bi_2Sr_2CaCu_2O_8$* ”;
Phys. Rev. Lett 86, 5550-5554 (2001)

5. Jiang-Ping Hu and Shou-Sheng Zhang
“*Dispersion of the π Resonance in the Superconducting State of the Cuprates*”;
Phys. Rev. B 64, R100502 -100506 (2001).

4. Jiang-Ping Hu and Shou-Sheng Zhang
“ *$SO(5)$ Superconductors in a Zeeman Magnetic Field*”;
Phys. Rev. B 62, R791-795 (2000).

3. Jiang-Ping Hu and Shou-Sheng Zhang
“*How to Experimentally Measure the Number 5 of the $SO(5)$ Theory*”;
Physica C, 341, 93-97 (2000).

2. Shou-Sheng Zhang, Jiang-Ping Hu, E.Arrigoni, W.Hanke and A.Auerbach

“*Projected $SO(5)$ Models*”;
Phys. Rev. B 60, 13070-13099 (1999).

1. Jiang-Ping Hu and Meng Ding

“*Phase Representation and its Application in the Analytical Treatment of the Theoretical Sandpile*”,
Phys. Rev. E 49, R5-9, (1994).

Book chapters:

1. Wenjun Zheng*, Jiangping Hu, and Congjun Wu

“*Dynamic Stripes, RVB Spin Liquid and High T_c Superconductivity - a Game of Two Players*”;
Chapter 10 in “*Models and Methods of High- T_c Superconductivity*”, edited by J.K. Srivastava,
Sadasiva Madiraju Rao, published by Nova Publishers, 2003

Other preprint:

2. Jiangping Hu, “*Topological Orbital Angular Momentum Hall Current*”;

Cond-mat/0503149, originally submitted to The Phys. Rev. B in 2005 (Cited 3 times)

3. Cristina Bena, Sudip Chakravarty, Jiangping Hu, Chetan Nayak

“*Fourier Transformed Scanning Tunneling Peaks in the d -Density Wave Phase*”;

Cond-mat/0405468, originally submitted to The Phys. Rev. B in 2004. (Cited 4 times)