

Yanliang Shi

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CITIZENSHIP People's Republic of China (holder of student F1-visa for U.S.)

PROFESSIONAL POSITIONS Cold Spring Harbor Laboratory, New York, USA

Postdoctoral fellow

May 2018 - Present

Advisor: Professor Tatiana Engel

C. N. Yang Institute for Theoretical Physics, Stony Brook University, NY, USA

Ph.D. Thesis Student and Graduate Research Assistant

Aug 2014 - May 2018

Department of Physics and Astronomy, Stony Brook University, NY

Graduate Teaching Assistant

Aug 2012 - Aug 2014

EDUCATION **Ph.D., expected, Stony Brook University**, New York, USA

Ph.D. thesis student

Aug 2012 - May 2018

Advisor: Professor Robert Shrock

B. S., 2012, Nankai University, Tianjin, China

Bachelor of Science Major: Physics

Sep 2008 - Jun 2012

GPA: 91.8/100 Graduated 1st in Class

RESEARCH INTERESTS

Theoretical and Computational Neuroscience:

neural basis of cognitive function, dynamics of neural networks, vision and attention

Theoretical Particle Physics and Quantum Field Theory:

renormalization-group evolution and nonperturbative properties of quantum field theories, heavy-quark hadrons, exotic hadronic states

HONORS AND AWARDS

2017 Physics/Astronomy Dept. and YITP Travel Awards to participate in Simons Non-perturbative Bootstrap School at ICTP-SAIFR, São Paulo, Brazil and Higgs Centre School of Theoretical Physics 2017 at University of Edinburgh

2016 YITP Travel Award to attend and give talk at workshop, Johannes Gutenberg University, Mainz, Germany

2016 YITP Travel Award to attend and give talk at workshop, CP3-Origins, University of Southern Denmark, Denmark

2016 Di Tian Prize for Outstanding Scholarship and Departmental Citizenship, Stony Brook University

2011 The National Scholarship, China

2009 First-Grade Scholarship of Nankai University, China

- PUBLICATIONS**
1. H.-W. Ke, X.-Q. Li, Y.-L. Shi, G.-L. Wang and X.-H. Yuan, “Is $Z_b(10610)$ a Molecular State?”, JHEP **1204**, 056 (2012) [arXiv:1202.2178] (16 pages).
 2. H.-W. Ke, X.-Q. Li and Y.-L. Shi, “The Radiative Decays of 0^{++} and 1^{+-} Heavy Mesons”, Phys. Rev. D **87**, 054022 (2013) [arXiv:1301.4014] (6 pages).
 3. Y.-L. Shi and R. Shrock, “Renormalization-Group Evolution of Chiral Gauge Theories”, Phys. Rev. D **91**, 045004 (2015) [arXiv:1411.2042] (27 pages).
 4. Y.-L. Shi and R. Shrock, “Renormalization-Group Evolution and Nonperturbative Behavior of Chiral Gauge Theories with Fermions in Higher-Dimensional Representations”, Phys. Rev. D **92**, 125009 (2015) [arXiv:1509.08501] (21 pages).
 5. Y.-L. Shi and R. Shrock, “ $A_k \bar{F}$ Chiral Gauge Theories”, Phys. Rev. D **92**, 105032 (2015) [arXiv:1510.07663] (18 pages).
 6. Y.-L. Shi and R. Shrock, “Dynamical Symmetry Breaking in Chiral Gauge Theories with Direct-Product Gauge Groups”, Phys. Rev. D **94**, 065001 (2016) [arXiv:1606.08468] (25 pages).
 7. Y.-L. Shi, “Revisiting Radiative Decays of 1^{+-} Heavy Quarkonia in the Covariant Light-Front Approach” Eur. Phys. J. C **77**, 253 (12 pages) (2017) [arXiv:1611.09838] (12 pages).
 8. H.-Y. Cheng and Y.-L. Shi, “Lifetimes of Doubly Charmed Baryons,”, Phys. Rev. D **98**, 113005 (2018) [arXiv:1809.08102] (11 Pages).

PAPERS IN PREPARATION 9. Y.-L. Shi, N. Steinmetz, T. Moore, K. Boahen and T. Engel, “Attentional modulation of noise correlations reflects On-Off dynamics in interacting columns”, in preparation.

SEMINARS “UV to IR Evolution of Asymptotically Free Chiral Gauge Theories”, C. N. Yang ITP, Stony Brook University, Apr. 21, 2014

“Renormalization-Group Evolution of Asymptotically Free Chiral Gauge Theories”, C. N. Yang ITP, Stony Brook University, Aug. 9, 2015

“Renormalization-Group Evolution of Asymptotically Free Chiral Gauge Theories”, Center for Cosmology and Particle Physics Phenomenology (CP3)-Origins, University of Southern Denmark, Odense, Denmark, May 30, 2016

“Renormalization-Group Evolution and Nonperturbative Behavior of Chiral Gauge Theories”, Mainz Institute for Theoretical Physics (MITP) Workshop on Effective Field Theories, Johannes Gutenberg University, Mainz, Germany, Aug 30, 2016

“Recent Results on Nonperturbative Behavior of Chiral Gauge Theories”, verbal presentation, Higgs Centre School of Theoretical Physics 2017, University of Edinburgh, UK, May 30, 2017

CONFERENCES AND WORKSHOPS Workshop on Neutrino Physics in the Daya Bay Era, Chinese Academy of Sciences, Beijing, China Nov. 2010 (undergraduate participant)

7th International Workshop on the Dark Side of the Universe, Kavli Institute for Theoretical Physics, Chinese Academy of Sciences, Beijing, China, Sep. 2011 (undergraduate participant)

International Workshop for the Next Nucleon Decay and Neutrino Detector (NNN15), Stony Brook University, Oct. 2015

Unification Day Workshop, Stony Brook University, Oct. 2015

Origin of Mass 2016, Center for Cosmology and Particle Physics Phenomenology (CP3)-Origins, University of Southern Denmark, Odense, Denmark, May, 2016 (gave talk)

Effective Field Theories as Discovery Tools, Mainz Institute for Theoretical Physics (MITP), Johannes Gutenberg University of Mainz, Aug, 2016 (gave talk)

New Developments in Conformal Field Theory Above Two Dimensions, The Princeton Center for Theoretical Science (PCTS), Princeton University, March 6-8, 2017

Simons Non-perturbative Bootstrap School, ICTP-SAIFR (International Centre for Theoretical Physics, South American Institute for Fundamental Research), São Paulo, Brazil, May 22-29, 2017

Higgs Centre School of Theoretical Physics 2017, University of Edinburgh, UK, May 29-June 2, 2017

Simons Summer Workshop on Strings and Quantum Field Theory without Supersymmetry, Simons Center for Geometry and Physics, Stony Brook, July 17-August 11, 2017

REFERENCES Prof. Tatiana Engel (Postdoctoral advisor), Cold Spring Harbor Laboratory

Prof. Robert Shrock (Ph.D. thesis advisor), Yang Institute for Theoretical Physics and Dept. of Physics and Astronomy, Stony Brook University

Prof. Jacobus Verbaarschot (Director of Graduate Studies), Dept. of Physics and Astronomy, Stony Brook University

Prof. Yuefan Deng, Dept. of Applied Mathematics and Statistics, Stony Brook University

TEACHING EXPERIENCE **Stony Brook University**, New York, USA

Teaching Assistant, PHY 123: Physics for Life Sciences Laboratory I Fall 2012.

Course Grader, PHY 431: Nuclear and Particle Physics Spring 2013.

Course Grader, PHY 505: Classical Electrodynamics Fall 2013.

Teaching Assistant, PHY 124: Physics for Life Sciences Laboratory II Spring 2014.

Course Grader, PHY 503: Mathematical Physics Fall 2017.