

## Associate Professor Jay M. Hubisz

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CONTACT INFORMATION	Department of Physics Syracuse University Syracuse, NY 13244 USA	<i>Voice:</i> +1 315 443 2653 <i>Fax:</i> +1 315 443 9103 <i>E-mail:</i> jhubisz@syr.edu
POSITIONS	Associate Professor, Syracuse University, May 2014 - Present Assistant Professor, Syracuse University, Aug 2008 - May 2014 Director's Postdoctoral Fellowship - Argonne National Laboratory, Jan 2008 - Aug 2008 Postdoctoral Researcher - Fermi National Accelerator Laboratory, Sep 2005 - Dec 2007	
RESEARCH INTERESTS	Extensions of the Standard Model of particle physics: electroweak symmetry breaking, extra dimensions, little Higgs models, supersymmetry, composite Higgs models, conformal symmetry, AdS/CFT correspondence, particle cosmology, dark matter, precision electroweak constraints	
EDUCATION	<b>Cornell University</b> , Ithaca, New York USA Ph.D. in theoretical particle physics awarded January, 2006 <ul style="list-style-type: none"><li>• Advisor: Csaba Csáki</li></ul> <b>California Institute of Technology</b> , Pasadena, California USA B.S., Physics, May, 2001	
TEACHING EXPERIENCE (PAST 4 YEARS)	<ul style="list-style-type: none"><li>• Spring 2014 - Primary instructor for Phy 885 (Quantum Field Theory) at S.U. - Enrollment: 6</li><li>• Fall 2014 - Primary instructor for Phy 360 (Advanced Classical Mechanics) at S.U. - Enrollment: 15</li><li>• Spring 2015</li><li>• Fall 2015 - Primary instructor for Phy 360 (Advanced Classical Mechanics) at S.U. - Enrollment: 22</li><li>• Spring 2016 - Primary instructor for Phy 885 (Quantum Field Theory) at S.U. - Enrollment: 9</li><li>• Fall 2016 - Primary instructor for Phy 360 (Advanced Classical Mechanics) at S.U. - Enrollment: 16</li><li>• Spring 2017 - Independent Studies in Quantum field Theory Phy 690 - Enrollment 4</li><li>• Fall 2017 - Primary instructor for Phy 523 (Advanced Classical Mechanics) at S.U. - Enrollment: 8</li><li>• Spring 2018 - PHY 250 (Physics Journal Workshop) - Enrollment 5</li><li>• Spring 2018 - PHY 470 (Experience Credit) - Enrollment 1</li><li>• Summer 2018 - PHY 399 (Practicum and Seminar in Physics Education) - Enrollment 1</li><li>• Fall 2018 - CAS 101 (First year forum) Enrollment 16</li><li>• Fall 2018 - PHY 451 (Problems of Contemporary Physics) Enrollment 3</li></ul>	
OUTREACH	<ul style="list-style-type: none"><li>• Contributor to "Symmetry" magazine - "Explain it in 60 Seconds" - March 2006</li><li>• Contributor to "The Physics Teacher" magazine - book review of "The Theory of Almost Everything: The Standard Model, the Unsung Triumph of Modern Physics" by Robert Oerter - September 2006</li><li>• Contributor to "The Physics Teacher" magazine - book review: "Quantum Gravity sans Gravitax: Complete Idiot's Guide to String Theory": George Musser - Feb 2009</li><li>• Contributor to "The Physics Teacher" magazine - book review: "Massive": Ian Sample - Jan 2013</li></ul>	

- Organizer for annual elementary school "Physics Night" in Cortland, NY. , engaging S.U. Chapter of the Society of Physics Students: 2013-present

#### COMMITTEES

- Co-organizer of Monte Carlo for Beyond the Standard Model (MC4BSM) workshop - Fermi National Accelerator Laboratory, March 2006.
- Co-organizer of Monte Carlo for Beyond the Standard Model (MC4BSM) workshop - Princeton University, March 2007.
- Organizer of Syracuse Fall Harvest Ultra-Mini Workshop - "Dawn at the LHC" - Syracuse University, October 2008.
- Faculty Search Committee 2008-2009 - Syracuse University Cosmology and Astroparticle physics hire.
- Colloquium chair 2009-2010 - co-chair of Syracuse University Physics colloquium series
- Graduate admissions - 2010-2011 - served on the physics graduate admissions committee.
- Faculty Search Committee 2011-2012 - Syracuse University High Energy Particle Physics hire.
- Co-organizer of Monte Carlo for Beyond the Standard Model (MC4BSM) workshop - Cornell University, March 2012.
- Contact person for "New Physics In Top" subgroup for Snowmass - 2013
- Director of Undergraduate Studies in Physics. Fall 2014 - Present
- Member assessment committee (undergraduate programs) 2015 - present
- Member committee on undergraduate life - Fall 2016 - present
- Member committee on undergraduate physics curriculum - Fall 2016 - present
- Member A.&S. Committee on Admission - 2018
- Current Co-organizer for "Lattice for Beyond the Standard Model Physics 2019" to be held at Syracuse University, May 2-3, 2019.
- Currently serving on selection committee for Norma Slepecky Research Prize.
- Currently serving on selection and welcoming committee for incoming Coronat Scholars.

#### PUBLICATIONS AND PRE-PRINTS (PAST 4 YEARS)

- C. Eröncel, J. Hubisz and G. Rigo, "Self-Organized Higgs Criticality," arXiv:1804.00004 [hep-ph].
- C. Csáki, C. Eröncel, J. Hubisz, G. Rigo and J. Terning, "Neutron Star Mergers Chirp About Vacuum Energy," JHEP **1809**, 087 (2018) doi:10.1007/JHEP09(2018)087 [arXiv:1802.04813 [astro-ph.HE]].
- D. Bunk, J. Hubisz and B. Jain, "A Perturbative RS I Cosmological Phase Transition," Eur. Phys. J. C **78**, no. 1, 78 (2018) doi:10.1140/epjc/s10052-018-5529-2 [arXiv:1705.00001 [hep-ph]].
- C. Csáki, J. Hubisz, S. Lombardo and J. Terning, "Gluon versus photon production of a 750 GeV diphoton resonance," Phys. Rev. D **93**, no. 9, 095020 (2016) doi:10.1103/PhysRevD.93.095020 [arXiv:1601.00638 [hep-ph]].
- C. Csáki, J. Hubisz and J. Terning, "Minimal model of a diphoton resonance: Production without gluon couplings," Phys. Rev. D **93**, no. 3, 035002 (2016) doi:10.1103/PhysRevD.93.035002 [arXiv:1512.05776 [hep-ph]].
- B. Bellazzini, C. Csáki, J. Hubisz, S. J. Lee, J. Serra and J. Terning, "Quantum Critical Higgs," Phys. Rev. X **6**, no. 4, 041050 (2016) doi:10.1103/PhysRevX.6.041050 [arXiv:1511.08218 [hep-ph]].
- B. Bellazzini, C. Csáki, J. Hubisz, J. Serra and J. Terning, "Cosmological and Astrophysical Probes of Vacuum Energy," JHEP **1606**, 104 (2016) doi:10.1007/JHEP06(2016)104 [arXiv:1502.04702 [astro-ph.CO]].
- B. Bellazzini, C. Csáki, J. Hubisz, J. Serra and J. Terning, A Naturally Light Dilaton and a Small Cosmological Constant, Eur. Phys. J. C **74**, 2790 (2014) [arXiv:1305.3919 [hep-th]].