

Joseph P. Day

Curriculum Vitae

Contact

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Citizenship

United States of America
United Kingdom

Education

Ph.D., Physics, in progress (expected Summer 2013)
Karl Franzens Universität Graz
Graz, Austria
M.S., Physics, May 2010
California State University Long Beach
Long Beach, CA
B.S., Physics, December 2006
University of California, Santa Barbara
Santa Barbara, CA

Honors

2012-2013 Stanford Visiting Scholar
Visiting Scholar in the Theory Group at SLAC National Accelerator Laboratory
SLAC, Stanford University, September 2012 - March 2013
2010 Outstanding Thesis Award
Thesis of the Year Award in Mathematics and Physical Sciences
California State University Long Beach, 2010
2010 Graduate Student Departmental Honors
Honor given to top 5% of graduate students in department
Physics Department, California State University Long Beach, 2010
Phi Kappa Phi
The National Honor Society of Phi Kappa Phi
Chapter at California State University Long Beach, 2009
AAPT Teaching Award
Outstanding Teaching Associate, 2009
American Association of Physics Teachers
Society of Rheology
Student Poster Finalist
78th Annual Meeting of the Society of Rheology, October 8-12 2006, Portland, ME

Employment

9/2010–Current	Doctoral Program "Hadrons in Vacuum, Nuclei, and Stars" Karl Franzens Universität Graz, Department of Theoretical Physics Graz, Austria
8/2007–7/2010	Teaching Associate California State University Long Beach, Department of Physics and Astronomy Long Beach, CA
6/2006–6/2007	Research Assistant Los Alamos National Laboratory, Institute of Multiscale Materials Studies Los Alamos, NM
1/2005–6/2005	Research Assistant University of California Santa Barbara, Materials Research Laboratory Santa Barbara, CA

Publications

Refereed Journals

- *Treatment of Broken Symmetry in the Faddeev Approach to the Strange Baryon Spectra*
Joseph P. Day and Zoltán Papp
Phys. Rev. D 85, 114042 (2012)
- *Spectroscopy of Baryons as Relativistic Three-Quark Systems*
Joseph P. Day, Ki-Seok Choi and Willibald Plessas
Few Body Systems (2012), DOI: 10.1007/s00601-012-0386-2
- *Reexamination of the $\alpha - \alpha$ fishbone potential*
Joseph P. Day, J.E. McEwen, M. Elhananfy, E. Smith, R. Woodhouse, Z. Papp
Phys. Rev. C 84, 034001 (2011)
- *Treatment of Confinement in the Faddeev Approach to Three-Quark Problems*
Joseph E. McEwen, Joseph P. Day, Arnulfo Gonzalez, Zoltán Papp, and Willibald Plessas
Few Body Systems (2010), DOI 10.1007/s00601-010-0087-7
- *Two-body Problems with Confining Potentials*
Joseph P. Day, Joseph E. McEwen, and Zoltán Papp
Few Body Systems (2009), DOI 10.1007/s00601-009-0063-2
- *Near Contact Interactions Between a Sphere and a Plane*
Cynthia E. Heath, Shihai Feng, Joseph P. Day, Alan L. Graham, and Marc S. Ingber
Phys. Rev. E 77, 026307 (2008)

Conference Proceedings

- Hadronic Resonances, July 1-8 2012, Bled, Slovenia
Unified Model for Light- and Heavy-Flavor Baryon Resonances
Joseph Day, Ki-Seok Choi, and Willibald Plessas
<http://www-f1.ijs.si/Bled2012/index.html>
- Sixth International Conference on Quarks and Nuclear Physics, April 16-20 2012, Paris, France
Relativistic Quark-Model Spectroscopy of Light and Heavy Baryons
Joseph Day and Willibald Plessas
http://pos.sissa.it/archive/conferences/157/078/QNP2012_078.pdf
- Understanding Hadronic Spectra 2011, July 3-10 2011, Bled, Slovenia
Spectroscopy of Heavy Baryons
Joseph Day, Ki-Seok Choi, and Willibald Plessas
<http://www-f1.ijs.si/Bled2011/index.html>
- Hadron 2011, June 13-17 2011, Munich, Germany
Effective Quark-Quark Interactions in Heavy Baryons
Joseph Day, Ki-Seok Choi, and Willibald Plessas
<http://arxiv.org/pdf/1108.3450v1.pdf>

Talks

Invited Talks

- California State University Long Beach, Theoretical Physics Colloquium
February 10 2012, Long Beach, California
Spectroscopy and Structure in Two Flavor QCD
- University of Valencia, Department of Theoretical Physics
October 27 2011, Valencia, Spain
Baryon Properties in a Relativistic Constituent-Quark Model
- California State University Long Beach, Theoretical Physics Colloquium
February 11 2011, Long Beach, California
Faddeev Approach to Heavy Baryon Problems

Conference Talks

- Hadronic Resonances, July 1-8 2012, Bled, Slovenia
Unified Model for Light- and Heavy-Flavor Baryon Resonances
Joseph Day, Ki-Seok Choi, and Willibald Plessas
- Sixth International Conference on Quarks and Nuclear Physics, April 16-20 2012, Paris, France
Relativistic Quark-Model Spectroscopy of Light and Heavy Baryons
Joseph Day and Willibald Plessas

- "Strong Interaction Days" - Jena Graduate Workshop 2011, September 28-30 2011, Jena, Germany
Baryon Spectroscopy and Electromagnetic Structure
Joseph Day, Ki-Seok Choi, and Willibald Plessas
- Asian Pacific Conference on Few-Body Problems in Physics 2011, August 22-26 2011, Seoul, Korea
Spectroscopy of Baryons as Relativistic Three-Quark Systems
Joseph Day, Ki-Seok Choi, and Willibald Plessas
- Understanding Hadronic Spectra 2011, July 3-10 2011, Bled, Slovenia
Spectroscopy of Heavy Baryons
Joseph Day, Ki-Seok Choi, and Willibald Plessas
- Hadron 2011, June 13-17 2011, Munich, Germany
Effective Quark-Quark Interactions in Heavy Baryons
Joseph Day, Ki-Seok Choi, and Willibald Plessas
- Todtmoos Graduate Workshop 2010, September 27-30 2010, Todtmoos, Germany
Relativistic Few-Body Problems with Continued-Fraction Methods
Joseph Day, Joseph McEwen, Arnulfo Gonzalez, and Zoltán Papp
- American Physical Society California Section 2009, November 13-14 2009, Monterey, CA
Exact Treatment of Confinement in the Relativistic Faddeev Approach to Three- Quark Problems
Joseph Day, Joseph McEwen, Zoltán Papp, and Willibald Plessas

Conference Poster Presentations

- Schladming Winter School, February 25 - March 3 2012, Schladming, Austria
Towards a Universal Model for Baryons
Joseph Day and Willibald Plessas
- Vienna Central European Seminar on Particle Physics and Quantum Field Theory, November 25 - 27 2011, Vienna, Austria
Heavy Baryons in a Relativistic Constituent-Quark Model
Joseph Day and Willibald Plessas
- Schladming Winter School, February 26 - March 5 2011, Schladming, Austria
Spectroscopy of Light and Heavy Baryons with Relativistic Constituent-Quark Models in the Faddeev Approach
Joseph Day, Zoltán Papp, and Willibald Plessas
- California State Long Beach Research Symposium, September 2009, Long Beach, CA
Semirelativistic Two-Body Problems with Confining Potentials
Joseph Day, Joseph McEwen, Arnulfo Gonzalez, and Zoltán Papp
- 78th Annual Meeting of the Society of Rheology, October 8-12 2006, Portland, ME
Cavitation Between a Sphere and a Plane in Near Contact Hydrodynamic Flow
Joseph Day, Shihai Feng, Cynthia Heath, and Alan Graham

Memberships

2009–present	Honor Society of Phi Kappa Phi
2009–present	American Association of Physics Teachers
2006–present	American Physical Society

Technical Skills

Fortran, C++ , Mathematica, Maple, Unix/Linux, LaTeX, Labview, Microsoft Office, Dreamweaver, Illustrator, Photoshop

Miscellaneous

Teaching

- I have taught algebra based (Physics 100A) and calculus based (Physics 151(Mechanics and Heat) and Physics 152(Electrodynamics)) physics labs for undergraduates at California State University Long Beach
- Teaching Assistant for a Atomistic and Particle Modeling course while at Los Alamos. This is a course aimed at graduate students and colleagues from Los Alamos.

Wolfram Demonstration Project

- I was invited by Wolfram Research to build a demonstration for their physics repository. It has been accepted for publication and can be found at:
"Coulomb-Sturmian Functions in Configuration Space" from The Wolfram Demonstrations Project
<http://demonstrations.wolfram.com/CoulombSturmianFunctionsInConfigurationSpace/>

November 26, 2012