Kevin Charles Schlaufman PhD 70 N Catalina Ave. Apt. 206, Pasadena, CA 91106-2354

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Individual Contributor Experience

Carnegie-Princeton Fellow and Data Scientist, Carnegie Observatories and Princeton University 2015-Present **Kavli Fellow and Data Scientist**, Kavli Institute for Astrophysics and Space Research, MIT 2012-2015 Designed new supervised learning algorithm to identify ancient stars, saving the community >$*2,000,000* Designed new algorithm to measure population average stellar mass, previously thought to be impossible **Senior Data Scientist**, LinkedIn 2011-2012 Improved subscriber acquisition and retention through collaborative effort with premium subscription and business analytics teams. Analyzed impact of possible new premium subscription features. Drove monetization and promotion reporting analytics that provided actionable insight. Phone screened and interviewed *58* candidates. **NSF Graduate Research Fellow**, Astronomy and Astrophysics Department, UC Santa Cruz 2006-2011 Created new technique to identify spin-orbit misalignment, saving the community >$*1,000,000* Created new technique to identify a connection between stellar composition and exoplanets, saving >$*100,000* Designed unsupervised learning algorithm to find the debris of galactic collisions in our own Milky Way Galaxy **Graduate Research Assistant**, KIPAC, Stanford University 2004-2006 Modeled the formation of a star using an astrophysical hydrodynamics code **Summer Intern**, Lawrence Livermore National Laboratory 2004 Modeled the effects of atmospheric turbulence on ground-based astronomical imaging

Management Experience

Kavli Fellow and Data Scientist, Kavli Institute for Astrophysics and Space Research, MIT 2013 Mentored small team to follow-up on my individual discoveries

Selected Skills

Data science: general analytics, dashboarding, reporting, predictive modeling, social network analysis **Computational statistics**: data analysis, data mining, machine learning, Monte Carlo Simulations, multivariate methods, spatial statistics, time series, very-large databases, visualization **Mathematical statistics**: confidence intervals, inference, linear regression, logistic regression, maximum likelihood, model selection, nonlinear regression, tests of hypotheses **Bayesian statistics**: Markov Chain Monte Carlo, Bayesian model diagnostics, Bayesian model selection **Applied mathematics**: ODEs, PDEs, and optimization **Computing**: intermediate object-oriented programming and scripting (python), SQL and hadoop/hive/pig; advanced R and MATLAB **Language**: native English and conversational German

Education and Certifications

UC Santa Cruz, MS and PhD in Astronomy and Astrophysics · GPA: 4.00 2006-2011 **Stanford University**, MS in Scientific Computing and Computational Mathematics · GPA: 3.67 2004-2006 Statistics Concentration **Penn State**, BS in Mathematics and BS in Astronomy and Astrophysics · GPA: 3.94 2000-2004 Honors and High Distinction plus minor in Physics **Coursera, edX, and Stanford Online Certifications**: 2012-Present Data science, social network analysis, python programming, machine learning, big data in education, databases, mining massive

datasets, computational investing

Selected Honors and Awards

Carnegie-Princeton Fellowship, Carnegie Observatories and Princeton University 2015-2019 Awarded $*268,000* grant **Infinite Kilometer Award**, School of Science, MIT 2013 Recognized for routinely working beyond my assigned responsibilities and for exceptional contributions to the community **Kavli Fellowship**, Kavli Institute for Astrophysics and Space Science, MIT 2012-2015 Awarded $*250,000* grant

Chancellor's Dissertation-Year Fellowship, Graduate Division, UC Santa Cruz 2010-2011 Recognized as part of the top *10*% of my PhD graduating class and awarded $*35,000* grant **Graduate Research Fellowship**, National Science Foundation 2007-2010 Recognized as part of the top *5*% of all science and engineering PhD students nationwide and awarded $*121,500* grant **Whitford Prize**, Astronomy and Astrophysics Department, UC Santa Cruz 2008 Recognized as outstanding overall student in the first two years of the PhD program **Marshall Award**, Astronomy and Astrophysics Department, Penn State 2004 Recognized as the top undergraduate major in my graduating class **Evan Johnson Award**, Mathematics Department, Penn State 2003 & 2004 Recognized as one of the top students in the mathematics major **Kermit C. Anderson Scholarship**, Mathematics Department, Penn State 2003 Recognized as one of the top students in the mathematics major **Evan Pugh Scholar Award**, Penn State 2003 Recognized as top *0.5*% percent of graduating class **Elected to** *fpK*, Penn State 2003

Selected Volunteer and Leadership Activities

Co-Organizer, MIT MKI IAP Activities 2014 **Co-Organizer**, MIT MKI Postdoc Symposium 2013 **Lecturer**, MIT MKI IAP Lecture Series 2013 **Referee**, Astrophysical Journal, A&A, NASA, NSF, and Science Magazine 2011-Present **Admissions Committee**, Astronomy and Astrophysics Department, UC Santa Cruz 2011 Reviewed *176* applications and interviewed *30* applicants **Science Speaker**, Lick Observatory 2008-2011 Delivered two hour-long popular talks about recent developments in astronomy and astrophysics **Graduate Representative**, Academic Senate Committee on Planning and Budget, UC Santa Cruz 2008-2010 Monitored all aspects of university budget **Committee Chair**, Graduate Student Health Insurance Committee, UC Santa Cruz 2008-2009 Lead committee efforts to improve graduate student health care

Selected Peer-Reviewed First-Author Publications

9. **Schlaufman, K.C.** & Casey, A.R. 2014, "The Best and Brightest Metal-poor Stars", Astrophysical Journal, 797, 13

8. **Schlaufman, K.C.**, 2014, "Tests of In-Situ Formation Scenarios for Compact Multiplanet Systems", Astrophysical Journal, 790, 91

7. **Schlaufman, K.C.**, & Winn, J.N. 2013, "Evidence for the Tidal Destruction of Hot Jupiters by Subgiant Stars", Astrophysical Journal, 772, 143

6. **Schlaufman, K.C.**, Rockosi, C.M., Lee, Y.S., Beers, T.C., Allende Prieto, C., Rashkov, V., Madau, P., & Bizyaev,

D. 2012, "Insight Into the Formation of the Milky Way Through Cold Halo Substructure. III. Statistical Chemical Tagging in the Smooth Halo", Astrophysical Journal, 749, 77

5. **Schlaufman, K.C.**, & Laughlin, G. 2011, "Kepler Exoplanet Candidate Host Stars Are Preferentially Metal Rich", Astrophysical Journal, 738, 177

4. **Schlaufman, K.C.**, Rockosi, C.M., Lee, Y.S., Beers, T.C., & Allende Prieto, C. 2011, "Insight Into the Formation of the Milky Way Through Cold Halo Substructure. II. The Elemental Abundances of ECHOS", Astrophysical Journal, 734, 49

3. **Schlaufman, K.C.**, Lin, D.N.C., & Ida, S. 2010, "A Population of Very Hot Super-Earths in Multiple-Planet Systems Should be Uncovered by Kepler", Astrophysical Journal Letters, 724, L53

2. **Schlaufman, K.C.**, & Laughlin, G. 2010, "A Physically-Motivated Photometric Calibration of M Dwarf Metallicity", Astronomy & Astrophysics, 519, A105

1. **Schlaufman, K.C.**, 2010, "Evidence of Possible Spin-Orbit Misalignment Along the Line of Sight in Transiting Exoplanet Systems", Astrophysical Journal, 719, 602