Résumé of Kevin Krisciunas

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Present Employment (since 1 November 2006):

Instructional Associate Professor, Texas A&M University. My prime task is teaching astronomy to undergraduates. In the past 14 years I have had approximately 4800 students. My main area of research continues to be optical and infrared photometry of Type Ia supernovae.

Previous Employment:

Academic Director, Summer Science Program, summer 2008. This was an intense 6 week program for very talented high school juniors and seniors. Two other instructors and I taught astronomy, physics, calculus, computer programming, and data analysis as it pertains to observational astronomy. We observed Near Earth Asteroids and derived their orbital elements. We also carried out observations of supernova 2008ds.

Research Assistant Professor, University of Notre Dame (2004-2006). I worked with Peter Garnavich on analysis of high redshift supernovae discovered with the CTIO 4-m telescope (the ESSENCE project, whose purpose was to measure the equation of state parameter of the universe).

Research Associate, Cerro Tololo Inter-American Observatory, and Las Campanas Observatory, La Serena, Chile. (2000-2003). This was 3 year position jointly funded by an HST grant to Nick Suntzeff, along with Carnegie funding arranged by Mark Phillips.

Primarily I worked on optical and infrared observations of nearby supernovae. I was a member of the High Redshift Supernova Team.

Research assistant for Department of Astronomy, University of Washington, Seattle, WA 98195, working for Prof. Christopher Stubbs (1997-2000). Activities included commissioning a CCD camera for the Lowell Observatory Near Earth Object Search, photometric calibration of CCD data for the Sloan Digital Sky Survey, and CCD and infrared photometry of supernovae. I also worked for one academic year as a teaching assistant.

Joint Astronomy Centre, 660 N. A'ohōkū Place, University Park, Hilo, HI 96720 (1982-1996). Activities included: 1) software development for data acquisition and analysis for United Kingdom Infrared Telescope and James Clerk Maxwell Telescope; 2) research on the Galactic center and various kinds of variable stars; 3) public relations for Joint Astronomy Centre; 4) taking care of JAC technical library

Part time astronomy instructor, University of Hawaii, Hilo, HI 96720 (summers 1994, 1995, 1996).

Computer programmer and on board operator for NASA's Kiper Airborne Observatory (1977-1982). Employed by Informatics Inc. (later Sterling Software), 1121 N. San Antonio Rd., Palo Alto, CA 94303.

Part time astronomy instructor, West Valley Community College, 14000 Fruitvale Ave., Saratoga, CA 95070 (1978-1981).

Education:

University of Washington, Seattle, WA (1996-2000) – MS, December 1997. Ph. D. December 2000.

Stanford University, Palo Alto, CA (1977-1978). Summer school courses in Electrical Engineering Department.

University of Chicago (1975-1976) – MA, August, 1976.

University of California, Santa Cruz, Lick Observatory/Board of Studies in Astronomy and Astrophysics (1974-1975).

University of Illinois at Urbana-Champaign (1971-1974) – BS, astronomy and physics, January, 1974.

NSF Grants Awarded

"Collaborative Research: Three Dimensional Simulations of Type Ia Supernovae: Constraining Models with Observations," NSF grant AST-0708873, August 15, 2007, through August 15, 2015 ($665,346).

"Collaborative Research: The Carnegie Supernova Project - Pushing the Precision of Type Ia Supernovae as Cosmological Standard Candles," NSF grant AST-1613455, August 15, 2016, through August 15, 2019 ($325,000).

Memberships in Professional Organizations:

International Astronomical Union, member of Commissions 27 (Variable Stars) and 41 (History of Astronomy)

American Astronomical Society (full member). Also member of Historical Astronomy Division.

Academic Awards:

Undergraduate degree was earned with High Honors and Highest Distinction in Astronomy, January, 1974

ARCS Fellow (Achievement Rewards for College Scientists), University of Washington, 1996-1998

Distinguished New Faculty Award, given at the 21st International Conference on College Teaching and Learning, Ponte Vedra Beach, Florida, April, 2010

Research Interests:

• Determination of accurate luminosities/distances of supernovae and other standard candles

• Refining models of supernovae using observational data

• What is the Dark Energy?

• Discovery and understanding of unusual variable stars (one class of which I helped discover)

• Testing and preservation of astronomical sites

• Communicating astronomy to the public

• The history of astronomy

Other service:

At present I am Vice Chair of the Historical Astronomy Division of the American Astronomical Society. In January of 2021 I advance to become the Chair, for two years.

Other notable accomplishments:

- In 1991 I appeared in episode 1 of the six part PBS series, *The Astronomers*.

Recent Notable Publications

Three papers coauthored with undergraduates (in bold):

"The first three rungs of the cosmological distance ladder," by K. Krisciunas, **E. DeBenedictis, J. Steeger**, A. Bischoff-Kim, **G. Tabak, and K. Pasricha**, *American J. of Physics*, **80**, no. 5, pp. 429-438 (May 2012).

"Fixing the U-band photometry of Type Ia supernovae," by K. Krisciunas, **D. Bastola**, J. Espinoza, D. Gonzalez, L. Gonzalez, S. Gonzalez, M. Hamuy, N. Morrell, M. M. Phillips, and N. B. Suntzeff, *Astron. J.*, **145**, article 11, 7 pp. (January 2013).

"Spectrophotometry of Very Bright Stars in the Southern Sky," by Kevin Krisciunas, Nicholas B. Suntzeff, **Bethany Kelarek, Kyle Bonar, and Joshua Stenzel**, *Publications of the Astronomical Society of the Pacific*, **129**, 054504 (May 2017).

My latest book, used as supplementary reading for basic astronomy classes.

A Guide to Wider Horizons, 2nd edition, by Kevin Krisciunas, ISBN 978-1-5249-0115-8, Dubuque, Iowa: Kendall-Hunt, 2016, 146 pp.

A mammoth paper that just was published. The full preprint runs to 393 pages.

"The Carnegie Supernova Project. I: Third Photometry Data Release of Low-Redshift Type Ia Supernovae and Other White Dwarf Explosions," Kevin Krisciunas and 29 coauthors, *Astron. J.*, **154**, article 211, 34 pp. (November 2017).