

## Kevin N. Hainline

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| CONTACT INFORMATION           | Department of Astronomy<br>University of California, Los Angeles<br>Physics and Astronomy Building<br>430 Portola Plaza, Box 951547<br>Los Angeles, CA 90095-1547   | Voice: 1-714-865-5339<br>Email: <a href="mailto:kevinhainline@astro.ucla.edu">kevinhainline@astro.ucla.edu</a><br>Website: <a href="http://astro.ucla.edu/~kevinhainline/">astro.ucla.edu/~kevinhainline/</a> |
| RESEARCH INTERESTS            | Galaxy Evolution, Active Galactic Nuclei, High-Redshift Galaxies, Science and Astronomy Education, Planetarium Education  |   |
| EDUCATION                     | <b>University of California, Los Angeles</b> , Los Angeles, CA USA<br>Ph.D. track, Astrophysics, September 2006 - June 2012 (expected graduation date) <ul style="list-style-type: none"><li>• Thesis Topic: <i>Understanding Star Formation and AGN Activity at <math>z \sim 2 - 3</math></i></li><li>• Adviser: Associate Professor Alice E. Shapley</li></ul> M.S., Astrophysics, May 2008 <ul style="list-style-type: none"><li>• Thesis Topic: <i>Mid-Infrared Line Diagnostics Of Seyfert Galaxies from the 12 <math>\mu</math>m Sample</i></li><li>• Adviser: Professor Matt A. Malkan</li></ul> <b>Harvey Mudd College</b> , Claremont, CA, USA<br>B.S., Physics, June 2006 <ul style="list-style-type: none"><li>• With High Honors in Humanities</li><li>• Astronomy specialization (emphasis on observational astronomy)</li></ul>   |   |
| REFEREED JOURNAL PUBLICATIONS | <b>Hainline, K.N.</b> , Shapley, A.E., Greene, J.E., Steidel, C.C. The Rest Frame Ultraviolet Spectra of UV-Selected Active Galactic Nuclei at $z \sim 2 - 3$ . <i>The Astrophysical Journal</i> . v.733, Issue 1, article id. 31 (2011).<br><b>Hainline, K.N.</b> , Shapley, A.E., Kornei, K.A., Pettini, M., Buckley-Geer, E., Allam, S.S.; Tucker, D.L., Rest-Frame Optical Spectra of Three Strongly Lensed Galaxies at $z \sim 2$ . <i>The Astrophysical Journal</i> . v.701, Issue 1, pp.52-65 (2009).<br>Kulas, K.R., Shapley, A.E., Kollmeier, J.A., Zheng, Z., Steidel, C.C., <b>Hainline, K.N.</b> The Kinematics of Multiple-Peaked Ly-alpha Emission in Star-Forming Galaxies $z \sim 2 - 3$ . <i>arXiv:1107.4367</i> . (2011).<br>Tommasin, S., Spinoglio, L., <b>Hainline, K.N.</b> , Malkan, M. A., Smith, H. Seyfert Galaxies in the Local Universe: Analysis of Spitzer Spectra of a Complete Sample. <i>Memorie della Societa Astronomica Italiana</i> . v.79, p.1275 (2008). |   |
| ACCEPTED OBSERVING PROPOSALS  | Keck Observatory, Keck II 10 m: 4 half nights using the NIRSPEC instrument to observe rest-frame optical emission lines. Observations largely successful except in a few cases where we were interrupted by bad weather.<br>Magellan Observatory, Baade 6.5 m: 3 nights using the newly commissioned FIRE instrument to observe rest-frame optical emission lines. One night's worth of data, the two final nights we were unable to observe due to high winds.<br>Gemini North, 8.1 m: 3 nights using the GNIRS instrument to observe rest-frame optical emission lines. Three night's worth of excellent quality data.  |   |

CONFERENCE  
PUBLICATIONS

**Hainline, K.N.**, Shapley, A.E., Greene, J.E., Steidel, C.C. The Rest Frame Ultraviolet Composite Spectrum of UV-Selected Active Galactic Nuclei at  $z \sim 2 - 3$ . In: *American Astronomical Society, AAS Meeting #217; Bulletin of the American Astronomical Society, Vol. 43*, (2011). Poster Abstract.

Kulas, K.; Shapley, A.; **Hainline, K.N.** The Kinematics Of Multiple-peaked Lyman $\alpha$  Emission In Star-forming Galaxies At  $z \sim 2 - 3$ . In: *American Astronomical Society, AAS Meeting #216*, (2010). Poster Abstract.

**Hainline, K.N.**, Shapley, A.E., Pettini, M., Allam, S.S., Tucker, D.L. Optical Spectra For Three Strongly Lensed Galaxies At  $z \sim 2$ . In: *American Astronomical Society, AAS Meeting #213; Bulletin of the American Astronomical Society, Vol. 41, p.249*, (2009). Poster Abstract.

Spinoglio, L., Tommasin, S., Malkan, M. A., **Hainline, K.N.** Spitzer Spectra of Seyfert Galaxies. In: *ASP Conference Series: The Starburst-AGN Connection*, (2009).

**Hainline, K.N.**, Malkan, M., Spinoglio, L., Smith, H. Mid-infrared Line Diagnostics Of Seyfert Galaxies From The 12  $\mu$ M Sample. In: *American Astronomical Society, AAS Meeting #211; Bulletin of the American Astronomical Society, Vol. 39, p.793*, (2007). Poster Abstract.

TALKS

**Hainline, K.N.**, Shapley, A.E., Greene, J.E. The Host Galaxies of Active Galactic Nuclei at  $z \sim 2 - 3$ . In: *American Astronomical Society, AAS Meeting #215; Bulletin of the American Astronomical Society, Vol. 42, p.597*, (2010).

**Hainline, K.N.**, Shapley, A.E., Greene, J.E., Steidel, C. The Host Galaxies of Active Galactic Nuclei at  $z \sim 2 - 3$ . In: *Keck Science Meeting, California Institute of Technology*, (2011).

**Hainline, K.N.**, Shapley, A.E., Greene, J.E., Steidel, C. The Host Galaxies of Active Galactic Nuclei at  $z \sim 2 - 3$ . In: *Keck Science Meeting, California Institute of Technology*, (2011).

REFeree SERVICE

- *Astrophysical Journal*

TEACHING  
EXPERIENCE

**University of California, Los Angeles**

As a teachers assistant, I oversaw two to three discussion sections a week, depending on the course. I was also responsible for examination and some homework grading, as well as assisting students outside of class with extensive office hours. I oversaw examination review sessions, created study guides, and in some cases, conducted lectures for professors.

*Teaching Assistant*

**September 2010 to December 2010**

- Astro 4: Black Holes and Cosmic Catastrophes

*Teaching Assistant*

**September 2008 to December 2008**

- Astro 4: Black Holes and Cosmic Catastrophes

*Teaching Assistant*

**June 2008 to August 2008**

- Astro 5: Life in the Universe

*Teaching Assistant* **January 2008 to March 2008**

- Honors 35: A Critical Inquiry into the Question of Extraterrestrial Life

*Teaching Assistant* **September 2007 to December 2007**

- Astro 4: Black Holes and Cosmic Catastrophes

*Teaching Assistant* **March 2007 to June 2007**

- Astro 3: Nature of the Universe

*Teaching Assistant* **January 2007 to March 2007**

- Astro 6: Cosmology: Our Changing Concepts of the Universe

*Teaching Assistant* **September 2006 to December 2006**

- Astro 4: Black Holes and Cosmic Catastrophes

RESEARCH  
EXPERIENCE

**University of California, Los Angeles**

*Graduate Research* **September 2006 to present**

- For the first two years at UCLA, I used Spitzer data of local active galactic nuclei in order to understand their mid-infrared properties with Prof. Matt Malkan. After this I moved to the high-redshift universe, using near-infrared data from the NIRSPEC spectrograph on the Keck II telescope in Hawaii, the PANIC near-IR imager on the Magellan telescope in Chile, and the FIRE spectrograph on the Magellan telescope. These data were reduced and used to investigate star-formation and AGN activity at a redshift of 2 to 3.

**Harvey Mudd College**

*Undergraduate Research* **June 2004 to June 2006**

- Using the Table Mountain 1 meter telescope operated by Pomona College and Harvey Mudd College, I took optical data of a young open cluster Berkeley 87. Using this data, I created a color-magnitude diagram of the stars, allowing me to calculate the age and distance to the cluster. I also created computer scripts that would allow for me to find variable stars in a large cluster data set, and used them on another cluster in order to find potential T Tauri stars in young clusters.

SERVICE  
EXPERIENCE

**University of California, Los Angeles**

*UCLA Planetarium Coordinator* **2008 to present**

- The planetarium coordinator is responsible for the UCLA Planetarium, which involves both planetarium upkeep and administering shows. The planetarium offers free weekly public shows, as well as private shows for school groups throughout the year. I had to coordinate with parents and teachers interested in shows, as well as with our graduate student presenters. I also developed multiple new educational planetarium shows on a variety of topics (star clusters, AGN, telescopes and light, astronomical imaging, among others), and delivered hundreds of shows.

*UCLA TA Coordinator*

**2007 - 2008**

- I was partly responsible for making sure that new Teaching Assistants in the astronomy department were trained. This involved helping to coordinate a training course with the physics department, as well as personal coaching with the individual graduate students.

*Judge, Intel International Science and Engineering Fair*

**May 2011**

- I was one of three judges responsible for awarding the Astronomical Society of the Pacific Bart and Priscilla Bok Award.

## **826LA**

*Workshop Creation*

**2008 to present**

- Through 826LA, a non-profit writing and tutoring center, I have created and run multiple science and writing workshops for youth of various ages. These workshops, which were written and run by myself and the aid of volunteers, were attended by 20 to 30 participants each.

REFERENCES  
AVAILABLE TO  
CONTACT

**Dr. Alice E. Shapley** (e-mail: [aes@astro.ucla.edu](mailto:aes@astro.ucla.edu); phone: +1-310-206-3768; WWW: <http://www.astro.ucla.edu/~aes/>)

- Associate Professor, Department of Astronomy, University of California, Los Angeles
- ◇ UCLA Department of Physics and Astronomy, 430 Portola Plaza, Los Angeles, CA 90095-1547
- ★ *Dr. Shapley is my graduate adviser.*

**Dr. Jenny Greene** (e-mail: [jgreene@astro.princeton.edu](mailto:jgreene@astro.princeton.edu); phone: +1-609-258-0764; WWW: <http://www.princeton.edu/astro/people/faculty/jenny-greene/>)

- Assistant Professor, Department of Astrophysical Sciences, Princeton University, Princeton
- ◇ Department of Astrophysical Sciences, 4 Ivy Lane, Princeton, NJ 08544
- ★ *Dr. Greene is a frequent collaborator.*

**Dr. Matthew A. Malkan** (e-mail: [malkan@astro.ucla.edu](mailto:malkan@astro.ucla.edu); phone: +1-310-825-3404; WWW: <http://www.astro.ucla.edu/~malkan/>)

- Professor, Department of Astronomy, University of California, Los Angeles
- ◇ UCLA Department of Physics and Astronomy, 430 Portola Plaza, Los Angeles, CA 90095-1547
- ★ *Dr. Malkan sits on my thesis committee.*