

**Andrew I. Sheinis**  
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**Madison WI 53706**  
**608-262-0492**

**Education:**

**Ph.D.** Astronomy and Astrophysics, U. of California, Santa Cruz CA, 2002  
**M.S.** Astronomy and Astrophysics, U. of California Santa Cruz CA, 1997  
**M.S.** Physics (Optics), Worcester Polytechnic Institute, Worcester MA., 1985  
**B.S.** Physics (with honors), University of Massachusetts, Amherst MA. 1982  
Postgraduate studies at the Tufts University Center for Electro-Optics, (Fourier Optics) 1986-1987

**Professional Experience:**

8/2005-present **Assistant Professor**, Astronomy Dept, University of Wisconsin, Madison WI  
2000-present **Consultant**, Optical Engineering, Bodkin Design & Engineering, Wellesley MA  
2002-2005 **NSF Postdoctoral Fellow**, Center for Adaptive Optics, Santa Cruz CA  
1996-2002 **Senior Development Engineer**, Lick Observatory, UC Santa Cruz, CA  
1991-1995 **Senior Electro-Optical Engineer**, University of Hawaii, IFA  
1989-1991 **Research Scientist/ Project Manager**, Pfizer Laser Systems, Irvine CA  
1986-1989 **Member Technical Staff**, Optikos Corporation, Cambridge MA  
1985-1986 **Optical Engineer**, Itek Optical Systems, Lexington MA

**Astronomical Instrumentation Experience:**

**PI: NIR Upgrade to the RSS Spectrograph**, Southern African Large Telescope (SALT)  
**Co-I: Extreme Adaptive Optics Planetary Imager (XAOPI)** CFAO  
**PI: Integral Field Unit (IFU) for ESI**, Keck/Lick Observatory.  
**Project Engineer: Echellette Spectrograph and Imager (ESI)**, Keck/Lick Observatory.  
**Optical Engineer (Camera testing): DEIMOS Spectrograph**, Keck/Lick Observatory  
**Co-I: AMOS Site Seeing Monitors**, Institute for Astronomy, University of Hawaii.  
**Slit Monitor Camera**, Institute for Astronomy, University of Hawaii.  
**PI: Micro-Thermal Measurement Towers**, Institute for Astronomy, University of Hawaii.

**Honors and Affiliations:**

National Science Foundation Postdoctoral Fellowship in Astronomy and Astrophysics 2002-2005  
Gemini Science Fellowship, Gemini Observatory (declined) 2002  
Bachmann Graduate Fellowship for Astronomical Instrumentation, UCSC 1998  
Regents fellowship, UCSC 1995  
Physics fellowship, University of Rochester (declined) 1995  
Departmental fellowship in Planetary Science, MIT (declined) 1995

**Public Service:**

Review Panelist: *NSF AAPF Review Panel 2007*  
External Reviewer : *NSF ATI Review Panel: 2007*  
Review Panelist: *NASA ASTID Review Panel 2006*  
External Reviewer : *NASA ASTID Review Panel: 2005*  
Panelist, Integrated Modeling Working Group *Thirty Meter Telescope (TMT) 2004*  
Panelist, Multi-Object Adaptive Optics IPT *Thirty Meter Telescope (TMT) 2004*  
Review Panelist: *NSF Advanced Technology and Instrumentation (ASTI): 2003*  
External Reviewer : *NSF CAREER Grant Program: 2002*  
Referee, several Applied Optics publications  
Committee Member, Gran Telescopio Canarias Design Review Committee, 4/2001, OSIRIS and ELMER Instruments  
Member, SPIE, OSA, ASP, AAS, IAU  
Councilor, New England section of OSA

### U.S. Patents:

Bodkin, W. Andrew, Sheinis, Andrew I. and Norton, Adam, Hyperspectral Imaging Systems  
Patent pending, docket #**439692**, submitted 9/6/2005

Sheinis Andrew I., Cozean Collette, Forkner John, Colles M. John, Optics for Medical Laser, US  
patent number **5289557**, Feb 22 1994

Sheinis Andrew I., Cozean Collette, Forkner John, Colles M. John, Optics for Medical Laser, US  
patent number **5198926**, Mar 30, 1993

### Previous Grants and Proposals:

P.I.	Air Force SBIR Phase II	FA8718-04-C-0053	(\$750K)
P.I.	Air Force SBIR Phase I	F041-207-1925	(\$100K)
P.I.	Air Force SBIR Phase II	FA8718-05-C-0002	(\$750K)
P.I.	MDA SBIR Phase I	W9113M-04-P-0073	(\$100K)
P.I.	MDA SBIR Phase I	HQ0006-05-C-711	(\$100K)
Co-I	Navy SBIR Phase I	N68936-02-C-0005	(\$100K)
Co-I	Navy SBIR Phase II	N68936-03-C-0013	(\$750K)
Co-I	Air Force SBIR Phase I	F19628-03-C-0079	(\$100K)
Co-I	XAOPI proposal funded by	CFAO	(\$600K)
P.I.	NSF, "Mems Devices and Astronomical Spectroscopy (#AST-0201657)",		(\$180K), awarded under the Astronomy and Astrophysics Post-Doctoral fellowship program (AAPF)
P.I.	Integral Field Unit for ESI, funded by Keck Observatory		(\$120K)
	Haleakala Site characterization study, funded by Airforce Phillips Lab		(\$400K)

### Selected Publications:

1. Sheinis, A. I., Nigra L, Kuhlen M. MEMS-based Speckle Spectrometer, *Proc. SPIE* Vol. **6727-171**, 2006 (astro-ph/0606179)
2. Sheinis, A.I., The Integral Field Unit for the Echellette Spectrograph and Imager at Keck II, *Proc. SPIE* Vol. **6269-118**, 2006 (astro-ph/0606176)
3. Sheinis, A.I., Wolf, M. J., Bershad, M.A., Buckley, D.A., Nordsieck, K.H. and Williams, T.B. The NIR Upgrade to the SALT Robert Stobie Spectrograph *Proc. SPIE* Vol. **6269-177**, 2006 (astro-ph/0606095)
4. Sivaramakrishnan, Anand; Makidon, Russell B.; Soummer, Remi; Macintosh, Bruce A.; Troy, Mitchell; Chanan, Gary A.; Lloyd, James P.; Perrin, Marshall D.; Graham, James R.; Poyneer, Lisa; Sheinis, Andrew I., Coronagraph design for an extreme adaptive optics system with spatially filtered wavefront sensing on segmented telescopes 2004SPIE.**5490**..535S
5. Dunn, Angeli, Brase, Dekaney, Fitzsimmons, Konstantinos, MacMartin, and Sheinis, Modelling Tools to Estimate the Performance of the Thirty Meter Telescope (TMT) *Proc. SPIE* Vol. **AS04-AS11-87**, Glasgow 2004
6. Sheinis Andrew I., and Miller Joseph, Keck spectroscopy of four QSO host galaxies, *Astrophysical Journal Letters* **588 2003 L9-12** (astro-ph/0303506)
7. Sheinis Andrew, Laiterman Lee, Hilyard Dave, The Integral Field Unit for The Keck Echellette Spectrograph and Imager, *Proc. SPIE* Vol. **4814-116**, 2002
8. Sheinis A. I., Miller J., Bigelow B., Bolte M., Epps H., Kibrick R., Radovan M. and Sutin B., ESI, the new Keck Observatory echellette spectrograph and imager, *PASP*, **114 (2002)** (astro-ph/0204297)

9. Wilhelmsen, J. et Al., Extreme adaptive optics testbed: results and future work, *Proc. SPIE* Vol. **5490,954**, 2004
10. Sheinis Andrew et Al., An Optical design for the extreme Adaptive Optics Planetary Imager (XAOPI), *Proc. SPIE* Vol. **AS04-AS04-165**, Glasgow 2004
11. Sivaramakrishnan et Al, Coronagraph design for an extreme adaptive optics system with spatially filtered wavefront sensing on segmented telescopes, *Proc. SPIE* Vol. **5490-535S**, 2004
12. Macintosh, B. A et al, Direct detection of extrasolar planets with the eXtreme Adaptive Optics Planet Imager, American Astronomical Society, DPS meeting #35, #07.07
13. Sheinis A. I., Miller J., Bigelow B., Bolte M., Epps H., Kibrick R., Radovan M. and Sutin B., Lick Observatory Technical Report Number 90, ESI the Echellette Spectrograph and Imager
14. Sheinis A. I. Lick Observatory Technical Report Number 91, The ESI Alignment Report.
15. Sheinis A., Optical Spectroscopy of Four QSO Host Galaxies, *B.A.A.S.*, **198**
16. Sheinis Andrew I., Spatially resolved spectroscopy of emission-line gas in QSO Host galaxies Proceedings of *Workshop on QSO Hosts and their environments*, Instituto de Astrofísica de Andalucía Granada (Spain) 10-12 January 2001.
17. Sheinis Andrew I., Miller Joseph, Spectroscopy of four QSO host galaxies presented at the workshop on *QSO Hosts and their environments*, Instituto de Astrofísica de Andalucía Granada (Spain) 10-12 January 2001.
18. Sheinis Andrew I., Miller Joseph, Bolte Mike, Sutin Brian, Performance characteristics of the new Keck Observatory echelle spectrograph and imager *Proc. SPIE* Vol. **4008-60**, 2000.
19. Sheinis, et al, Section 9.4 of Design and mounting of prisms and small mirrors in optical instruments, Paul Yoder, *tutorial texts in Optical Engineering* Vol. **TT32**, SPIE engineering press.
20. Sheinis, Andrew I., Nelson, Jerry E., James, Eric C., Radovan, Matthew V., Kinematic translation mechanism for moderate-sized optics *Proc. SPIE* Vol. **3786**, p. 350-361,1999.
21. Sheinis, Andrew I., Sutin, Brian M., Epps, Harland W., Schier, J. A.; Hilyard, David F.; Lewis, Jeffrey, Assembly and testing of the ESI camera *Proc. SPIE* Vol. **3786**, p. 413-426.1999.
22. Sheinis, Andrew I., Nelson, Jerry E., Radovan, Matthew V., Large-prism mounting to minimize rotation in Cassegrain instruments *Proc. SPIE* Vol. **3355**, p. 59-69,1998.
23. Radovan, Matthew V., Bigelow Bruce C., Nelson Jerry E., Sheinis Andrew I., Design of a collimator support to provide flexure control on Cassegrain spectrographs *Proc. SPIE* Vol. **3355**, p. 155-163, 1998.
24. Miller J. S., Tran H., Sheinis A. I., Keck Spectra of Host Galaxies and Companions of QSOs. *B.A.A.S.*, **189**