

– Curriculum Vitae –  
**ANDREAS SEIFAHRT**

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**PERSONAL INFORMATION:**

Citizenship: German  
Date of Birth: February 12, 1978 (Gotha, Germany)

**EDUCATION:**

02/2008 PhD in astrophysics, Friedrich-Schiller-Universität Jena  
*Integral field spectroscopy of the GQ Lup companion*  
Advisor: Prof. Dr. Ralph Neuhäuser  
09/2004 Physics Diploma, Friedrich-Schiller-Universität Jena

**CURRENT POSITION:**

08/2009 – Postdoctoral scholar, University of California, Davis

**RESEARCH INTERESTS:**

- Instrumentation (NIR and MIR high resolution spectroscopy, adaptive optics)
- Extrasolar planets (RV methods in the NIR,  $\mu$ arcsec astrometry)
- Low mass stars (rotation, magnetic fields and activity)
- Brown dwarfs (spectral modeling and physical properties, common proper motion surveys)
- Visual binaries (orbital modelling, photometry and mass determination)
- Young populations (direct detection of young brown dwarfs and planemos)
- Earth's atmosphere (spectral modelling of telluric features, site testing, spectral retrieval)

**PROFESSIONAL EXPERIENCE & PREVIOUS EMPLOYMENT:**

03/2008 – 07/2009 Postdoctoral researcher, Institut für Astrophysik, Göttingen  
08/2007 – 02/2008 Research assistant, Institut für Astrophysik, Göttingen  
01/2007 – 07/2007 PhD student, Astrophysikalisches Institut, FSU Jena  
10/2004 – 12/2006 PhD student, European Southern Observatory (ESO), Garching  
08/2003 – 09/2004 Student assistant, Astrophysikalisches Institut, FSU Jena  
07/2002 – 12/2002 Research scholar, instrumentation project (UHWFI),  
Institute for Astronomy (IfA), Hilo subdivision, Hawai'i, U.S.  
2002 – 2003 Contractor (data reduction and software analysis), ST-ECF Instrument  
Physical Modelling Group, European Southern Observatory (ESO)  
1999 – 2002 Student assistant on various projects at FSU Jena and for the  
SOFIA project, German Aerospace Center (DLR), Berlin

## AWARDS & FELLOWSHIPS:

2007 ESO Fellowship at Santiago/Chile (3+1 years) – declined  
10/2004 – 12/2006 ESO Studentship, European Southern Observatory, Garching

## OBSERVING EXPERTISE (\* visitor mode runs):

NIR wide-field imaging: UKIRT/UFTI\*, NTT/SOFI\*, UH88/QUIRC\*, UH88/ULBCAM\*,  
VLT/ISAAC, VLT/HAWKI  
MIR imaging: GEMINI/T-ReCS  
AO imaging: VLT/NACO\*, SUBARU/CIAO\*, VLT/MAD, CFHT/PUEO,  
GEMINI/HOKUPA'A, GEMINI/ALTAIR+NIRI  
AO spectroscopy: VLT/NACO\*, VLT/SINFONI, VLT/CRIRES\*  
Low-res spectroscopy: NTT/SOFI\*, NTT/EMMI\*, VLT/FLAMES  
High-res spectroscopy: GEMINI/PHOENIX, HST/STIS, VLT/UVES, KECK/HIRES  
MIR spectroscopy: VLT/VISIR\*, IRTF/TEXES\*  
Interferometry: HST/FGS

## TEACHING EXPERIENCE:

05/2009 Invited lecturer on observational astrophysics, OAN, Bogota, Colombia  
01/2009 Invited lecturer on observational astrophysics, University of Split, Croatia  
10/2008 – 02/2009 Lecturer on infrared astronomy, Universität Göttingen  
01/2007 – 07/2007 Teaching assistant, lab course in physics, FSU Jena  
08/2003 – 09/2004 Teaching assistant, lab course in astronomy, FSU Jena

## ACTIVE CONFERENCE PARTICIPATION:

07/2008 Organiser of a splinter session on 'Observation and modelling of dusty, low gravity, L and M dwarfs' at the Cool Stars XV meeting, St. Andrews, Scotland  
06/2008 Contributed talk: 'Precise Modeling of Atmospheric Absorption Features in High-Resolution Astronomical Spectra' at the 10th biennial HITRAN database conference, CfA, Harvard, US  
10/2007 Contributed talk: 'Prospects and needs of micro-arcsecond astrometry' at the ESO workshop 'Science with the VLT in the ELT Era', Garching, Germany  
03/2007 Contributed talk: 'Astrometric and photometric monitoring of the GQ Lup companion' at the ESO workshop 'Observing planetary systems', Santiago, Chile  
01/2007 Contributed talk: 'Probing mu-arcsecond astrometry with NACO' at the 2007 ESO Instrument Calibration Workshop, Garching, Germany

## INVITED TALKS:

01/2009 Physics Department, University of Split, Croatia: *On the way to finding a second Earth*  
09/2008 Max-Planck-Institute for Astronomy (MPIA Heidelberg), Germany: *Measuring radial velocities with CRIRES*  
07/2008 Landessternwarte Tautenburg (TLS), Germany: *Modeling telluric features in high-resolution optical and near infrared spectra*  
06/2006 Sternwarte Bamberg, Germany: *CRIRES - High Resolution NIR Spectroscopy at the edge - Atmospheric modeling of low mass stars and brown dwarfs -*

## PUBLICATIONS (UNTIL AUGUST 2009):

### PUBLICATIONS IN REFEREED JOURNALS:

- (22) S. D. Huegelmeyer, S. Dreizler, P. H. Hauschildt, **A. Seifahrt**, D. Homeier, & T. Barman: *Radiative transfer in circumstellar disks - I. 1D models for GQ Lupi*, A&A, 498, 793
- (21) J. L. Bean & **A. Seifahrt**: *The architecture of the GJ876 planetary system. Masses and orbital coplanarity for planets b and c*, 2009, A&A, 496, 429
- (20) **A. Seifahrt** & H. U. Käuffl: *High precision radial velocity measurements in the infrared. A first assessment of the RV stability of CRILES*, 2008, A&A, 491, 929
- (19) J. L. Bean & **A. Seifahrt**: *Observational consequences of the recently proposed Super-Earth orbiting GJ 436*, 2008, A&A, 476L, 25
- (18) J. L. Bean, G. F. Benedict, D. Charbonneau, D. Homeier, D. C. Taylor, B. McArthur, **A. Seifahrt**, S. Dreizler, & A. Reiners: *A Hubble Space Telescope transit light curve for GJ 436b*, 2008, A&A, 486, 1039
- (17) T. O. B. Schmidt, R. Neuhäuser, **A. Seifahrt**, N. Vogt, A. Bedalov, Ch. Helling, S. Witte, & P. H. Hauschildt: *Direct evidence of a sub-stellar companion around CT Chamaeleontis*, 2008, A&A, 491, 311
- (16) **A. Seifahrt**, T. Röhl, R. Neuhäuser, A. Reiners, F. Kerber, H. U. Käuffl, R. Siebenmorgen, & A. Smette: *Improved orbital solution and masses for the very low-mass multiple system LHS 1070*, 2008, A&A, 484, 429
- (15) T. O. B. Schmidt, R. Neuhäuser, N. Vogt, **A. Seifahrt**, T. Roell, & A. Bedalov: *Confirmation of the binary status of Chamaeleon H $\alpha$  2 - a very young low-mass binary in Chamaeleon*, 2008, A&A, 484, 413
- (14) R. Neuhäuser, M. Mugrauer, **A. Seifahrt**, T. Roell, T. O. B. Schmidt, & N. Bedalov: *Astrometric and photometric monitoring of GQ Lupi and its sub-stellar companion*, 2008, A&A, 484, 281
- (13) A. Reiners, **A. Seifahrt**, K. G. Stassun, C. Melo, & R. D. Mathieu: *Detection of strong activity in the eclipsing binary brown dwarf 2MASSJ05352184-0546085 - A possible explanation for the temperature reversal*, 2007, ApJL, 671, L149
- (12) A. Reiners, **A. Seifahrt**, H. U. Käuffl, R. Siebenmorgen, & A. Smette: *Spectral-type dependent rotational braking and strong magnetic flux in three components of the late-M multiple system LHS 1070*, 2007, A&A, 471L, 5
- (11) T. H. Dall et al. (incl. **A. Seifahrt**): *VSOP: the variable star one-shot project. I. Project presentation and first data release*, 2007, A&A, 470, 1201
- (10) M. Mugrauer, **A. Seifahrt**, & R. Neuhäuser: *The multiplicity of planet host stars - new low-mass companions to planet host stars*, 2007, MNRAS, 378, 1328
- (9) S. Raetz, M. Mugrauer, T.O.B. Schmidt, T. Roell, T. Eisenbeiss, M. Hohle, **A. Seifahrt**, A. Koeltzsch, M. Vaňko, R. Neuhäuser: *First planetary transit observations with the AIU Jena telescope in Großschwabhausen*, AN, 328, 710

**PUBLICATIONS IN REFEREED JOURNALS (CONTINUED):**

- (8) T. Eisenbeiss, **A. Seifahrt**, M. Mugrauer, T. O. B. Schmidt, R. Neuhäuser, & T. Roell: *Low-mass visual binaries in the solar neighbourhood: The case of HD 141272*, 2007, AN, 328, 521
- (7) **A. Seifahrt**, R. Neuhäuser, & P. H. Hauschildt: *Near-infrared integral-field spectroscopy of the companion to GQ Lupi*, 2007, A&A 463, 309
- (6) M. Mugrauer, **A. Seifahrt**, R. Neuhäuser, & T. Mazeh: *HD3651B: the first directly imaged brown dwarf companion of an exoplanet host star*, 2006, MNRAS, 373L, 31
- (5) K. W. Hodapp, **A. Seifahrt**, G. A. Luppino, R. Wainscoat, E.Y.H. Sousa, A. Ryan, R. Shelton, M. Inouye, A.J. Pickles, Y.K. Ivanov: *The University of Hawaii Wide-Field Imager (UHWF1)*, 2006, PASP, 118, 780
- (4) **A. Seifahrt**, M. Mugrauer, M. Wiese, R. Neuhäuser, & E. Guenther: *New brown dwarf companions to dM(e) stars*, 2005, AN, 326, 974
- (3) M. Mugrauer, R. Neuhäuser, **A. Seifahrt**, T. Mazeh, & E. Guenther: *Four new young binaries among exoplanet host stars*, 2005, A&A, 440, 1051
- (2) **A. Seifahrt**, E. Guenther, & R. Neuhäuser: *The dM4.5e star G124-62 and its binary L dwarf companion DENIS-P J1441-0945*, 2005, A&A, 440, 967
- (1) **A. Seifahrt**, M. Mugrauer, & R. Neuhäuser: *Astrometric proof of companionship for the L dwarf companion candidate GJ1048B*, 2004, A&A, 421, 255

**PUBLICATIONS IN NON-REFEREED JOURNALS AND PROCEEDINGS:**

- (26) T.O.B. Schmidt, R. Neuhäuser, **A. Seifahrt**: *Homogeneous comparison of planet candidates imaged directly until 2008*, Proceedings of the International Conference on Exoplanets and Disks: Their Formation and Diversity, 2009, AIPC Vol. 1158, 231-234
- (25) R. Neuhäuser, T.O.B Schmidt, **A. Seifahrt**, A. Bedalov, Ch. Helling, S. Witte, & P. Hauschildt: *Medium-resolution infrared integral field spectroscopy of the brown dwarf TWA 5 B*, Proceedings of the 15th Cambridge Workshop on Cool Stars, Stellar Systems and the Sun. AIP Conference Proceedings, 2009, AIPC Vol. 1094, 844
- (24) **A. Seifahrt**, T. Röhl, & R. Neuhäuser: *Prospects and Needs of Micro-arcsecond Astrometry, Science with the VLT in the ELT Era*, Astrophysics and Space Science Proceedings, Springer, 2009, p. 469
- (23) M. F. Nieva, N. Przybilla, **A. Seifahrt**, K. Butler, H. U. Käuffl, A. Kaufer: *Quantitative Near-IR Spectroscopy of OB Stars*, Science with the VLT in the ELT Era, Astrophysics and Space Science Proceedings, Springer, 2009, p. 499
- (22) N. Przybilla, **A. Seifahrt**, K. Butler, M. F. Nieva, H. U. Käuffl, A. Kaufer: *Near-IR Spectroscopy of Blue Supergiants*, Science with the VLT in the ELT Era, Astrophysics and Space Science Proceedings, Springer, 2009, p. 55

**PUBLICATIONS IN NON-REFEREED JOURNALS AND PROCEEDINGS (CONTINUED):**

- (21) M. Vaňko, S. Raetz, M. Mugrauer, T.O.B. Schmidt, T. Roell, T. Eisenbeiss, M. Hohle, **A. Seifahrt**, A. Koeltzsch, Ch. Broeg, J. Koppenhoefer, R. Neuhäuser: *Transit observation at the observatory in Großschwabhausen: XO-1b and TrES-1*, *Transiting Planets*, Proceedings of the International Astronomical Union, IAU Symposium, Volume 253, 440
- (20) S. Raetz, M. Mugrauer, T.O.B. Schmidt, T. Roell, T. Eisenbeiss, M. Hohle, **A. Seifahrt**, A. Koeltzsch, M. Vaňko, Ch. Broeg, J. Koppenhoefer, R. Neuhäuser: *Observations of the transiting planet TrES-2 with the AIU Jena telescope in Großschwabhausen*, *Transiting Planets*, Proceedings of the International Astronomical Union, IAU Symposium, Volume 253, 436
- (19) **A. Seifahrt**, Ch. Helling, A. J. Burgasser, K. N. Allers, K. L. Cruz, M. C. Cushing, U. Heiter, D. L. Looper, & S. Witte: *Observation and modelling of dusty, low gravity L, and M dwarfs*, 2009, Proceedings of the 15th Cambridge Workshop on Cool Stars, Stellar Systems and the Sun. AIP Conference Proceedings, Volume 1094, 283
- (18) **A. Seifahrt**, A. Reiners, A. Scholz, & G. Basri: *Activity and rotation of low mass stars in young open clusters*, 2009, Proceedings of the 15th Cambridge Workshop on Cool Stars, Stellar Systems and the Sun. AIP Conference Proceedings, Volume 1094, 373
- (17) M. Tresselt, **A. Seifahrt**, K.-W. Hodapp, A. Bedalov, & M. Mugrauer: *A search for wide brown dwarf companions to stars within 10pc*, 2009, Proceedings of the 15th Cambridge Workshop on Cool Stars, Stellar Systems and the Sun. AIP Conference Proceedings, Volume 1094, 565
- (16) **A. Seifahrt**, S. Thorwirth, H. Beuther, S. Leurini, C. L. Brogan, T. R. Hunter, K. M. Menten, & B. Stecklum: *Synergy of multi-frequency studies from observations of NGC 6334I*, 2008, JPhCS, 131a2030S
- (15) H. U. Käuff et al. (incl. **A. Seifahrt**): *CRIRES: commissioning and first science results*, 2008, SPIE, 7014E, 29
- (14) M. Kissler-Patig et al. (incl. **A. Seifahrt**): *Hawk-I - First Results from Science Verification*, 2008, The Messenger, 132, 7
- (13) T. Röhl, **A. Seifahrt**, & R. Neuhäuser: *Search for extrasolar planets with high-precision relative astrometry by ground-based and single-aperture observations*, 2008, IAUS, 249, 57, astro-ph 0803.4159
- (12) T. Röhl, **A. Seifahrt**, & R. Neuhäuser: *Micro-arcsecond relative astrometry by ground-based and single-aperture observations*, 2008, IAUS, 248, 48, astro-ph 0803.4159
- (11) M. Mugrauer, **A. Seifahrt**, R. Neuhäuser, T. Mazeh, & T. O. B. Schmidt: *Multiplicity Study of Exoplanet Host Stars: the HD 3651 AB System*, 2007, IAUS, 240, 638
- (10) R. Neuhäuser, M. Mugrauer, & **A. Seifahrt**: *GQ Lup, 2M1207, and AB Pic: Planet companion candidates imaged directly and their relevance in orbital dynamics and mass estimation via theoretical models*, 2007, IAUS, 240R, 327
- (9) R. Neuhäuser, **A. Seifahrt**, T. Röhl, A. Bedalov, & M. Mugrauer: *Detectability of Planets in Wide Binaries by Ground-Based Relative Astrometry with AO*, 2007, IAUS, 240, 261

**PUBLICATIONS IN NON-REFEREED JOURNALS AND PROCEEDINGS (CONTINUED):**

- (8) **A. Seifahrt**, T. Röhl, R. Neuhäuser. Probing micro-arcsec astrometry with NACO. *Proceedings of the ESO Instrument Calibration Workshop*, June 2007
- (7) R. Siebenmorgen, A. Smette, H. U. Käufl, & **A. Seifahrt**. Exploring the Near-Infrared at High Spatial and Spectral Resolution: First Results from CRIFES Science Verification, *The Messenger* 128, 17S, June 2007
- (6) H. U. Käufl et al. (incl. **A. Seifahrt**): *Good Vibrations: Report from the Commissioning of CRIFES*, 2006, *The Messenger* 126, 32
- (5) G. Pinzón, **A. Seifahrt**, & R. de La Reza: *Accretion in young low intermediate mass stars*, 2006, *Revista Mexicana de Astronomia y Astrofisica Conference Series*, 26, 41
- (4) R. Neuhäuser, **A. Seifahrt**, P. Hauschildt, J. Alves, & E. Guenther: *The deuterium test for exo-planet candidates detected directly*, 2005, *High Resolution Infrared Spectroscopy in Astronomy*, proceedings of the ESO Workshop, Eds. Hans Ulrich Kaufl, Ralf Siebenmorgen and Alan Moorwood
- (3) R. Neuhäuser, A. Hatzes, C. Broeg, **A. Seifahrt**, J. Weiprecht, & E. Guenther: *Jena/Tautenburg-German Center for Exoplanet Research: exoplanet.de*, 2003, *ANS*, 324, 119
- (2) K. Hodapp, A. J. Pickles, G. A. Luppino, **A. Seifahrt**, & R. J. Wainscoat: *The University of Hawaii Wide-Field Imager*, 2003, *SPIE*, 4841, 280
- (1) F. Kerber, B. Wills, A. Alexov, P. Bristow, **A. Seifahrt**, & M. R. Rosa: *Science from the refurbished FOS/BLUE archive: Interstellar absorption lines in a sample of low red-shift quasars*, *AAS*, 200, 4018

**MISCELLANEOUS PUBLICATIONS:**

- (5) **A. Seifahrt**. Atlas Coelestis : Himmelsatlanten aus drei Jahrhunderten. Brochure to the exhibition of the Thüringer Universitäts- und Landesbibliothek Jena sowie des Astrophysikalischen Instituts und der Universitäts-Sternwarte Jena, 2004, Thulb: 2005 SA 1133
- (4) Contributions for: V. Witt. *Astronomische Reiseziele*, Elsevier, 2004
- (3) **A. Seifahrt**. Mauna Kea - Weißer Berg im Licht. *Sterne und Weltraum*, July 2003
- (2) Editor for the German Edition of: J. Foust, R. Lafon. *PC-Astronomie*, mitp, 2000
- (1) D. Först, F. Hunger, L. Meyer, M. Reble, O. Schwarz, **A. Seifahrt**, K. Ullerich, B. Zill. *Lehrerhandbuch Astronomie Sekundarstufe I*, Berlin, PAETEC Gesellschaft für Bildung und Technik, 2000