Eckhart Spalding

Contact Information

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Citizenship

U.S.A. & Germany

Academic Appointments

Postdoctoral Associate, University of Sydney –Supervisor: Peter Tuthill	Feb. 2023 to present
Postdoctoral Associate, University of Notre Dame –Supervisor: Jeff Chilcote	Oct. 2020 to Jan. 2023

Education

Ph.D., Astronomy & Astrophysics, University of Arizona Thesis: "Commissioning Fizeau Interferometry with the Large Binocular Telescope Interferometer" Advisors: Katie Morzinski, Phil Hinz	2020
M.S., Astronomy, University of Arizona	2017
M.S., Physics, University of Kentucky Advisor: Ron Wilhelm	2014
Non-degree physics student, University of Illinois at Urbana-Champaign	Spring 2008
B.S., Physics and History, Illinois College Year abroad at Université Marc Bloch and Université Robert Schumann (later merged into Université de Strasbourg) in Strasbourg, France, 2004 to 2005	2007

Teaching Experience

T.A., ASTR 202: Life in the Universe, University of Arizona	Spring 2020
T.A., ASTR 250: Fundamentals of Astronomy, University of Arizona	Fall 2019
T.A., MacAdam Student Observatory, University of Kentucky	Fall 2013 to Spring 2014
Grader, AST 191: The Solar System, University of Kentucky	Fall 2013
T.A., PHY 213: General Physics, University of Kentucky	Spring 2013
T.A., PHY 211: General Physics, University of Kentucky	Fall 2012
T.A., PHY 211: General Physics, University of Kentucky	Spring 2012
T.A., PHY 231: General Physics, University of Kentucky	Fall 2011
T.A., PHY 232: General Physics, University of Kentucky	Spring 2011

Other Professional Experience

U.S. Peace Corps Volunteer, Kenya, East Africa Taught physics and math at a secondary school in a desert region west of the town of Magadi, served as Health Club patron, taught computer skills, and assisted students participating in regional Science Congress	2008 to 2010
Intern, Southern Illinois School of Medicine Supervisor: Jeremy Turner	Summer 2008
Intern, Southern Illinois School of Medicine Supervisor: Kathleen Campbell	Summer 2007
Physics Tutor, Illinois College	2006 to 2007
Math Tutor, Illinois College	2004 to 2007

Observing Experience

Subaru Telescope (8.2 m), Mauna Kea, Hawaii	2 nights
Krizmanich Telescope (0.8 m), Notre Dame, Indiana	4 nights
Large Binocular Telescope (2×8.4 m), Mt. Graham, Arizona	≈160 nights
Vatican Advanced Technology Telescope (1.8 m), Mt. Graham, Arizona	3 nights
McDonald Observatory Otto Struve telescope (2.1 m), Mt. Locke, Texas	15 nights
MacAdam Student Observatory (0.5 m), Lexington, Kentucky	15-20 nights

(Note: some nights are full others partial; some are in-person, others remote)

Telescope time awarded

- Subaru Telescope, 2024B (≈0.5 night) (SCExAO engineering time)
- LBT, 2024B (1 night) (with S. Ertel)
- Subaru Telescope, 2024A (1 night) (with O. Guyon)
- LBT, 2024A (1 night) (with S. Ertel)
- LBT, 2023B (1 night) (with S. Ertel)
- LBT, 2023A (1 night) (with S. Ertel)
- LBT, 2020A (1 night)
- LBT, 2019B (1 night)
- LBT, 2019B (1/2 night)
- LBT, 2019A (1/2 night)
- LBT, 2019A (1 night)
- LBT, 2018B (1 night)
- LBT, 2018B (1/2 night)
- LBT, 2018A (1 night)
- LBT, 2016B (1/2 night) (with K. Wagner; Director's Time request)
- LBT, 2015B (1 night) (with A. Skemer)

(Some of the above allocations were not executed due to weather.)

Other research experience

Research Assistant, experimental particle research — Summer 2011
Supervisor: Michael Kovash
Manned pulsed proton beams runs with 7-MV Van de Graaff Accelerator

Grants and Awards

Postdocs Lightning Talk Competition, U. Notre Dame (1st place), 2022	$500
NASA ExoExplorer Science Series talk, 2022	$1,000
Presentation of funding proposals for K7UAZ ham radio club, 2019-2020	$1,588 (total)
Travel support to attend Sagan Exoplanet Summer Workshop 2019	$795

Talks

- "The GLINT interferometer: Pathfinding the technology for next-generation high-contrast imaging," 2024 Astronomical Society of Australia (remote conference; recorded talk) (June 2024)
- "The GLINT nulling interferometer: improving nulls for high-contrast imaging," SPIE Astronomical Telescopes + Instrumentation, Yokohama, Japan (17 June 2024)
- "Tech development for exoplanet science," Future Science Talks (public talk), Sydney, Australia (7 June 2023)
- "GPI: Pushing the frontier of exoplanet direct imaging," exoplanet group, Ohio State University, Columbus, OH (9 Dec. 2022)
- "The quest for exoplanet direct imaging with ELT apertures: A hunt for companions with the Large Binocular Telescope," NASA ExoExplorer Science Series (remote; 18 Mar. 2022)
- "Instrumentation for the Direct Imaging of Exoplanets," 2021 Colleges of Science and Engineering Joint Annual Meeting, University of Notre Dame, Notre Dame, IN (9 Dec. 2021)
- "Seeing the Light: Hunting for solar systems like our own," public 'Our Universe Revealed Lecture Series,' University of Notre Dame, Notre Dame, IN (30 Nov. 2021)
- "Baselining the GPI 2.0 Upgrade at Notre Dame," Great Lakes Exoplanet Area Meeting, University of Michigan, Ann Arbor, MI (Nov. 11-12, 2021)

- "Commissioning Fizeau Interferometry with the Large Binocular Telescope Interferometer," ESO Ground-based thermal infrared astronomy — past, present and future (remote, Oct. 2020; `10.5281/zenodo.4249961`; +1 poster)
- "High-contrast Interferometry with LBTI," Jet Propulsion Laboratory lunch talk, Pasadena, CA (22 July 2019)
- "Status of Imaging Interferometry with LBTI," NOAO 'FLASH' talk, Tucson, AZ (14 Dec. 2018)
- "Precision photometry redward of K- band with a 'wall-eyed' pointing mode," 2^{nd} LBTO User's Meeting, Florence, Italy, June 2017 (+2 posters)
- "Constraints on the Structure of Exozodiacal Dust Belts (Kirchschlager+ 2017)," Steward Observatory Journal Club, Tucson, AZ (29 Mar. 2017)
- "The bimodal initial mass function in the Orion Nebula Cloud (Drass+ 2016)," Steward Observatory Journal Club, Tucson, AZ (16 Nov. 2016)
- "Around the Catch-22: Differential Photometry Redward of K-band with 'Wall-eyed' Pointing at the LBT," NOAO 'FLASH' talk, Tucson, AZ (9 Sept. 2016)
- "The Exo-Starshade Exoplanet Imaging Concept," Steward Observatory Journal Club, Tucson, AZ (18 Nov. 2015)
- "RR Lyrae Spectroscopy: Improved Metallicity Tracing," University of Kentucky Physics and Astronomy Department colloquium, Lexington, KY (24 Oct. 2013)
- Short talks: "A USYD exoplanet CoE node," Origins Center of Excellence bid (remote, 24 Aug. 2023); "Hunting for exoplanets with tomorrow's technology," College of Science Postdocs Lightning Talk Competition (1st place), University of Notre Dame (22 Sept. 2022) and College of Science Advisory Council (4 Nov. 2022); Internal symposia, Physics Department, University of Notre Dame (31 Aug. 2021, 13 Sept. 2022); "Fizeau with LBTI," Center for Astronomical Adaptive Optics Retreat, Tucson, AZ (29 Aug. 2019); "Imaging Interferometry with the LBT," Steward Observatory internal symposium, Tucson, AZ (21 Sept. 2018); "Wall-eyed' Pointing with the LBT," Steward Observatory internal symposium, Tucson, AZ (16 Sept. 2016)

Conferences and workshops (without talks)

- 10th Australian Exoplanet Workshop, Brisbane, Australia, Nov. 6-8, 2024
- 9th Australian Exoplanet Workshop, Sydney, Australia, Sept. 27-28, 2023 (SOC)
- 2023 Astronomical Society of Australia, Sydney, Australia, July 3-7 2023 (1 poster)
- SPIE Astronomical Telescopes + Instrumentation, Montréal, Québec, July 17-22 2022 (1 poster + conf. proc.)
- Spirit of Lyot, Leiden University, Leiden, The Netherlands, June 27 – July 1, 2022 (1 poster)
- Exoplanets III (July 2020; remote participant only)
- SPIE Optical Engineering + Applications, San Diego, CA, Aug. 11-15, 2019 (1 poster + conf. proc.)
- Sagan Exoplanet Summer Workshop, Pasadena, CA, July 15-19, 2019 ('pop' talk and poster)
- Adaptive Optics Summer School, Center for Adaptive Optics, University of California, Santa Cruz, July-Aug. 2018 (lab facilitator)
- SPIE Astronomical Telescopes + Instrumentation, Austin, TX, USA, June 2018 (1 poster + conf. proc.)
- CyVerse Container Camp, Tucson, AZ, Mar. 2018 (participant)
- Xinglong Optical Observational Astrophysics Workshop (National Astronomical Observatories, Chinese Academy of Sciences), Beijing and Xinglong, China, July-Aug. 2017 (participant + mini-talk at Dept. of Physics, Tsinghua University)
- SPIE Astronomical Telescopes + Instrumentation, Edinburgh, UK, June-July 2016 (1 poster + conf. proc.)
- Dunlap Institute Instrumentation Summer School (University of Toronto), Toronto, Canada, July 2015 (participant)
- SPF 1: Star and Planet Formation in the Southwest, Tucson, AZ, Mar. 2015 (1 mini-talk)
- American Astronomical Society, Washington, D.C., Jan. 2014 (1 poster)
- 40 Years of Variable Stars, East Lansing, MI, May 2013 (1 poster + 1 pop talk)

Outreach & Recognitions

AAT Open Day volunteer, Oct. 4, 2024 Science Extension Outreach (local high schools), Sydney, Australia	Oct. 2023
Member of 2022 Exoplanet Explorers cohort (NASA ExoPAG)	2022
Ed and Jill Bessey Scholarship in Astrobiology	2020
NASA Honor Group Achievement Award (LBTI HOSTS Survey)	2020
NASA Honor Award (to LBTI group in 'Group Achievement' category)	2019
Astrobites.org writer (monthly)	2017 to 2019
Annual College of Science 'Service' award, Dept. of Astronomy, U Arizona	2018
Annual College of Science 'Service' award, Dept. of Astronomy, U Arizona	2017

Professional service

Australian Astronomy Decadal Plan (2026-2035)

- Working Group 2.4: Instrumentation

Co-organizer of Astralis consortium instrumentation seminar series	2023-
Organizer of Sydney Astrophotonic Instrumentation Laboratory / Astralis group meetings, USYD	2023-present
Early and Mid-Career Researchers Committee, School of Physics, USYD	2023-
Co-Chair, SOC, 9th Australian Exoplanet Workshop	2023
Observing proposal evaluations, European Southern Observatory, Cycle P112	2023
Diversity Committee, Notre Dame Dept. of Physics & Astronomy	2022 to 2023
Co-host of 3× per week `astro-ph`, Dept. of Astronomy, U Arizona	2016 to 2019
Graduate Student Council, Dept. of Astronomy, U Arizona	2016 to 2018
U Arizona Graduate and Professional Student Council travel grant judge	2016
Graduate Student Council, Dept. of Physics and Astronomy, U Kentucky	2013

Peer-Reviewed Publications

22. **Spalding, E.**, R. Wilhelm, N. De Lee et al. 2024. `rrlfe`: Software for Generating and Applying Metallicity Calibrations for RR Lyrae Variable Stars Across a Wide Range of Phases and Temperatures. *MNRAS* 527:828.
21. Wagner, K., J. Stone, A. Skemer et al. 2023. (with **E. Spalding**). Direct images and spectroscopy of a giant protoplanet driving spiral arms in MWC 758. *Nature Astronomy* 7:1208.
20. **Spalding, E.**, K. Morzinski, P. Hinz et al. 2022. High contrast imaging with Fizeau interferometry: The case of Altair. *AJ* 163:62.
19. de Kleer, K., M. Skrutskie, J. Leisenring et al. (with **E. Spalding**). 2021. Resolving Io's Volcanoes from a Mutual Event Observation at the Large Binocular Telescope. *Planetary Science J*, 2:227.
18. Defrère, D., P. Hinz, G. Kennedy et al. (with **E. Spalding**). 2021. The HOSTS survey: Evidence for an extended dust disk and constraints on the presence of giant planets in the habitable zone of beta Leo. *AJ* 161:186.
17. Musso, A., R. Launhardt, A. Müller et. al. (with **E. Spalding**). 2021. LIStEN - the L' band imaging survey for exoplanets in the North. *A&A* 645:A88.
16. Sallum, S., J. Eisner, J. Stone et al. (with **E. Spalding**). ELT imaging of MWC 297 from the 23-m LBTI: Complex disk structure and a companion candidate. 2021. *AJ* 161:28.
15. Stone, J., T. Barman, A. Skemer et al. (with **E. Spalding**). 2020. High contrast thermal infrared spectroscopy with ALES: The 3-4μm spectrum of κ Andromedae b. *AJ* 160:262.
14. Lazzoni, C., A. Zurlo, S. Desidera (with **E. Spalding**). 2020. Looking for disks or planetary objects around directly imaged companions: a candidate around DH Tau B. *A&A* 641:A131.
13. Ertel, S., D. Defrère, P. Hinz et al. (with **E. Spalding**). 2020. The HOSTS survey for exozodiacal dust: Observational results from the complete survey. *AJ* 159:177.

12. Wagner, K., J. Stone, **E. Spalding** et al. 2019. Thermal infrared imaging of MWC 758 with the Large Binocular Telescope: Planetary-driven spiral arms? *ApJ* 882:20.
11. Borgniet, S., K. Perraut, K. Su et al. (with **E. Spalding**). 2019. Constraints on HD 113337 fundamental parameters and planetary system. *A&A* 627:A44.
10. Briesemeister, Z.W., A. Skemer, J. Stone et al. (with **E. Spalding**). 2019. High spatial resolution thermal-infrared spectroscopy with ALES: resolved spectra of the benchmark brown dwarf binary HD 130948BC. *AJ* 157:244.
9. Gordon, M.S., T. Jones, R. Humphreys et al. (with **E. Spalding**). 2019. Thermal Emission in the Southwest Clump of VY CMa. *AJ* 157:57.
8. Stone, J., A. Skemer, P. Hinz et al. (with **E. Spalding**). 2018. The LEECH exoplanet imaging survey: Limits on planet occurrence rates under conservative assumptions. *AJ* 156:286.
7. Crepp, J.R., E. Gonzales, B. Bowler et al. (with **E. Spalding**). 2018. The TRENDS high-contrast imaging survey. VII. Discovery of a nearby Sirius-like white dwarf system. *ApJ* 864:42.
6. Schindler, J.T., X. Fan, I. McGreer et al. (with **E. Spalding**). 2018. The extremely luminous quasar survey in the SDSS footprint. II. The north galactic cap sample. *ApJ* 863:144.
5. Ertel, S., D. Defrère, P. Hinz et al. (with **E. Spalding**). 2018. The HOSTS survey − exozodiacal dust measurements for 30 stars. *AJ* 155.5:194.
4. **Spalding, E.**, P. Hinz, A. Skemer et al. 2017. Precision time-series photometry in the thermal infrared with a "wall-eyed" pointing mode at the Large Binocular Telescope. *PASP* 130:014504.
3. de Kleer, K., M. Skrutskie, J. Leisenring et al. (with **E. Spalding**). 2017. Multi-phase volcanic resurfacing at Loki Patera on Io. *Nature* 545:199.
2. Defrère, D., P. Hinz, B. Mennesson et al. (with **E. Spalding**). 2016. Nulling data reduction and on-sky performance of the Large Binocular Telescope Interferometer. *ApJ* 824.2:66.
1. Sallum, S., K. Follette, J. Eisner et al. (with **E. Spalding**). 2015. Accreting protoplanets in the LkCa 15 transition disk. *Nature* 527:342.

Conference proceedings

30. Isbell, J., S. Ertel, K. Wagner, H. Rousseau (with **E. Spalding**. 2024. The LBTI: pioneering the ELT era. *Proc. SPIE*, doi:10.1117/12.3027270.
29. **Spalding, E.**, E. Arcadi, G. Douglass et al. 2024. The GLINT nulling interferometer: improving nulls for high-contrast imaging. *Proc. SPIE* 13095-6.
28. Lilley, L., B. Norris, P. Tuthill et al. (with **E. Spalding**) 2024. Polarimetric, non-redundant aperture masking with next generation VAMPIRES: new instrumental capabilities. *Proc. SPIE* 13095-35.
27. Taras, A.K., B. Norris, S. Chhabra et al. (with **E. Spalding**) 2024. Kernel nulling at VLTI with photonic lanterns for optimal fibre injection. *Proc. SPIE* 13095-30.
26. Arcadi, E. et al. (with **E. Spalding**) 2024. Design, fabrication and characterisation of a 3-baseline, achromatic integrated optics beam combiner for nulling interferometry with simultaneous fringe tracking using tricouplers. *Proc. SPIE* 13095-94.
25. Arcadi, E. et al. (with **E. Spalding**) 2024. Optimisation of laser-written tricouplers for nulling interferometry in the J- and H-band. *Proc. SPIE* 13100-247.
24. Gouglass, G. et al. (with **E. Spalding**) 2024. Ultrafast laser inscription of achromatic phase shifters for the GLINT integrated nulling interferometer. *Proc. SPIE* 13100-95.
23. Rossini-Bryson, S. et al. (with **E. Spalding**) 2024. Realtime control for the GLINT photonic nulling interferometer. *Proc. SPIE* 13095-70.

22. Guyon et al. (with **E. Spalding**) 2024. Self-calibrating photonic nulling systems for exoplanet imaging and spectroscopy. *Proc. SPIE* 13092-67.

21. Peng, D. et al. (with **E. Spalding**) 2024. GPI 2.0: systems testing of upgrades to the Gemini Planet Imager. *Proc. SPIE* 13097-65.

20. Perera, S. et al. (with **E. Spalding**) 2024. GPI 2.0: Pre-integrated pyramid wavefront sensor results. *Proc. SPIE* 13096-350.

19. Do 'O, C.R. (with **E. Spalding**) 2024. GPI 2.0: exploring the impact of different readout modes on the wavefront sensor's EMCCD. *Proc. SPIE* 13096-293.

18. Do 'O, C.R., S. Pereraa, J. Maire et al. (with **E. Spalding**) 2023. GPI 2.0: Performance Evaluation of the Wavefront Sensor's EMCCD. *AO4ELT7*, Avignon.

17. Chilcote, J., Q. Konopacky, J. Fitzsimmons et al. (with **E. Spalding**) 2022. GPI 2.0: upgrade status of the Gemini Planet Imager. *Proc. SPIE* 121841T-1.

16. Perera, S., J. Maire, C. do Ó et al. (with **E. Spalding**). 2022. GPI 2.0: Pyramid Wavefront Sensor status. *Proc. SPIE* 121854C-1.

15. Peng, D., M. Curliss, M.A. Limbach et al. (with **E. Spalding**). 2022. GPI 2.0: performance of upgrades to the Gemini Planet Imager CAL and IFS. *Proc. SPIE* 1218443.

14. **Spalding, E.**, C. do Ó, D. Peng et al. 2022. GPI 2.0: Baseline testing of the Gemini Planet Imager before the upgrade. *Proc. SPIE* 1218448-1.

13. Ertel, E., K. Wagner, J. Leisenring et al. (with **E. Spalding**). 2022. Imaging nearby, habitable-zone planets with the Large Binocular Telescope Interferometer. *Proc. SPIE*, submitted.

12. Chilcote, J., Q. Konopacky, J. Fitzsimmons et al. (with **E. Spalding**). 2022. GPI 2.0: Upgrade Status of the Gemini Planet Imager. *Proc. SPIE*, submitted.

11. Ertel, S. et al. (with **E. Spalding**). 2020. Overview and prospects of the LBTI beyond the completed HOSTS survey. In *Proc. SPIE* 1144607.

10. **Spalding, E.**, P.M. Hinz, K. Morzinski et al. 2019. Status of commissioning stabilized infrared Fizeau interferometry with LBTI. In *Proc. SPIE* 1111171S.

9. **Spalding, E.**, P.M. Hinz, S. Ertel, et al. 2018. Towards controlled Fizeau observations with the Large Binocular Telescope. In *Proc. SPIE* 107010J.

8. Ertel, S., G. Kennedy, D. Defrère et al. (with **E. Spalding**). 2018. The HOSTS survey for exo-zodiacal dust: preliminary results and future prospects. In *Proc. SPIE* 106981J.

7. **Spalding, E.**, A. Skemer, P.M. Hinz, & J.M. Hill. 2016. Infrared photometry with 'wall-eyed' pointing at the Large Binocular Telescope. In *Proc. SPIE* 99083C.

6. Defrère, D., P. Hinz, E. Downey et al (with **E. Spalding**). 2016. Simultaneous water vapor and dry air optical path length measurements and compensation with the Large Binocular Telescope Interferometer. In *Proc. SPIE* 99071G.

5. Hinz, P.M., D. Defrère, A. Skemer et al. (with **E. Spalding**). 2016. Overview of LBTI: a multipurpose facility for high spatial resolution observations. In *Proc. SPIE* 990704.

4. Sallum, S., J. Eisner, L. Close et al. (with **E. Spalding**). 2016. Imaging protoplanets: observing transition disks using non-redundant masking. In In *Proc. SPIE* 99070D.

3. Defrère, D., P. Hinz, A. Skemer et al. (with **E. Spalding**). 2015. Exoplanet science with the LBTI: instrument status and plans. *Proc. SPIE* 96051G

2. **Spalding, E.**, R. Wilhelm, and N. De Lee. 2013. A New RR Lyrae Metallicity Calibration Including High-Temperature Phase Regions, pp. 198-201 in *40 Years of Variable Stars: A Celebration of Contributions by Horace A. Smith*, East Lansing, MI. (Available at `http://arxiv.org/pdf/1310.0590.pdf` and on the *JINA Segue Virtual Journal* 8 (40), 4 Oct. 2013)

1. Wilhelm, R., **E. Spalding**, N. De Lee. 2013. Panning for RRL Nuggets in the SDSS-DR9, Single Epoch Spectra, pp. 113-121 in *Ibid.* (Available at `http://arxiv.org/pdf/1310.0550.pdf`)

White papers

2. McDermid, R., K. Bannister, J. Cooke, C. D'Orgeville (with **E. Spalding**). "2026-2035 Decadal Plan White Paper: Working Group 2.4: Instrumentation", 2024, for Australian Decadal.

1. **E. Spalding**. "A USYD exoplanet CoE [Center of Excellence] node," 2023, Australian Research Council Center of Excellence call.

Translations

2. Fischer, G.A. "Report of the Journey into Massai-Land, taken under commission for the Geographical Society in Hamburg," *Mittheilungen der Geographischen Gesellschaft in Hamburg, 1882-83*, pp. 36-99, 275-279. Transl. from the German by **E. Spalding** and A. Spalding. [Link]
   - In press at *Old Africa* magazine

1. Krapf, J.L. "A Short Description of the Masai and Wakwafi tribes in southeast Africa," *Das Ausland* (30), 1857, pp. 437-442, 461-466. Transl. from the German by **E. Spalding** and A. Spalding. [Link]
   - Published in *Old Africa* magazine, issues 112 (Apr.-May 2024), p. 26-30; 113 (June-Jul 2024), p. 26-29; 114 (Aug-Sept 2024), p. 26-29; 115 (Oct.-Nov. 2024), p. 26-28.

Expository & Other Writing

8. Li, Sarah, **E. Spalding**, H. Paige et al. "Student Club Members Update Their University Station," *QST*, April 2023, pp. 74-5.

7. **Spalding, E.**, D. Defrère, and S. Ertel. "Unveiling exozodiacal light," *Physics Today*, April 2022, pp. 46-52.

6. Reprints and 'emeritus' contributions, *Astrobites.org*:
   - "Rise of the First-Gens," *Astrobites.org*, May 2023.
   - "It's a Bird, it's a Planet, it's a ... Speckle?" *AAS Nova*, Oct. 2018.
   - "Optics to Outrace them All" *AAS Nova*, May 2018.
   - "The African Connection," South African amateur astronomy journal *Nightfall*, Oct. 2017.

5. **Spalding, E.** 2015. "In Pursuit of RR Lyraes," *Griffith Observer*, Nov. 2015. (Honorable mention in Joan and Arnold Seidel *Griffith Observer* Science Writing Contest.)

4. **Spalding, E.** and J. Turner. 2011. *Grandeur in this View of Life: A Brief Introduction to Evolution.* Ronkonkoma, NY: Linus Publications.

3. **Spalding, E.** 2011. "Wanderlust," *Illinois College Quarterly* (Apr.), p. 40.

2. **Spalding, E.** 2008. "Eudos Gene oder: Die trügerische väterliche Linie" [Eudo's genes and the deceptive paternal branch.] In German. *Computergenealogie*, 23 (1), pp. 23-24.

1. **Spalding, E.** 2005. "IC Students Go on a Whirlwind Tour," *Illinois College Quarterly* (Jan.).

Software

Spalding, E., R. Wilhelm, N. De Lee et al. 2024. *RRLFE: Metallicity calibrations for RR Lyrae variable stars.* Astrophysics Source Code Library, `ascl:2312.029`.

Spalding, E. and J. Stone. 2019. *Dewarp: Distortion removal and on-sky orientation solution for LBTI detectors.* Astrophysics Source Code Library, `ascl:1907.008`.

Computer Skills

- Languages (in decreasing order of versatility): Python, IDL, Matlab, C++, SQL
- LaTeX, Zemax, SolidWorks, reStructuredText, Git, PBS, Slurm, Hugo, Travis CI, Jupyter, Binder, Docker, Singularity, Matlab, Mathematica, Adobe Photoshop, Adobe Acrobat, Aquamacs, Atom, Inkscape, ArcMap, Anaconda, IRAF, Windows, Linux, MS (Word, Excel, PowerPoint), Keynote, Google (Drive, Docs, Sheets), VNC, Linux Vi editor, Markdown, bulk file transfer (with rsync, scp, Globus, rclone), 3d printing, cloud computing, high performance computing

Other certifications

- Work Safely at Heights, RIIWHS204E (national standard, Australia, 2024)
- Elevated Work Platform ("Yellow Card") for boom lift, scissor lift, and vertical lift operation (national standard, Australia, 2024)

Spoken Languages

- English (fluent)
- German (maternal language)
- French (conversational)
- Kiswahili/Swahili (conversational)