Samuel K. Grunblatt

Contact Information & Citizenship	Office 520, Bloomberg Center of Physics and Astronomy Johns Hopkins University ORCID # 0000-0003-4976-9980	sgrunbl2@jhu.edu skgrunblatt.github.io Citizen of Germany and U.S.A.

Employment

University of Alabama, Tuscaloosa, AL
Assistant Professor, Department of Physics and Astronomy, 2024–

Johns Hopkins University, Baltimore, MD
Assistant Research Scientist, Department of Physics and Astronomy, 2022–2024

American Museum of Natural History/Flatiron Institute, New York, NY
Research Associate, Department of Astrophysics, 2022–2024
Kalbfleisch Fellow, Department of Astrophysics, 2019–2022
Guest Researcher, Center for Computational Astrophysics, 2019–2023

Education

University of Hawaii–Manoa, Honolulu, HI
Ph.D., Astronomy, August 2019
M.S., Astronomy, Dec 2015

Columbia University, New York, NY
B.A., Astrophysics, May 2013

Recent Grants, Awards and Telescope Time

Planetary architectures of evolved..., *TESS* Space Telescope, **$70,000, PI**	Sep 2024
Constraining heating mechanisms of evolved..., WIYN/NEID, **2n, PI**	2024B
Testing (re)inflation of planets..., TNG/HARPS, **3n, Science PI**	2024A–
Measuring the Mass of a Benchmark Hot Jupiter, Magellan/PFS, **1n, PI**	2024A
Checkmate: atmospheres of planets.., VLT/ESPRESSO, **1.6n, Co-I**	2023B
Investigating Planet (Re-)Inflation..., CTIO/CHIRON, **4n, PI**	2023A–2024A
TESS's Ear on the Metal-Poor Milky Way, **$70,000, Co-I**	May 2022
Planetary Archaeology:..., NASA-Keck I/HIRES, **6n, $70,512, PI**	2021A–2023A
Planetary Archaeology:..., *TESS* Space Telescope, **$70,000, PI**	May 2021
Constraining Orbits of Hot Jupiters Around Evolved Stars, TESS DDT, **PI**	Feb 2021
Planetary Archaeology:..., *TESS* Space Telescope, **$50,000, PI**	Jun 2020
Measuring Long Rotation..., *TESS* Space Telescope, **$200,000, Co-I**	Jun 2020
RV Follow-up..., SALT/HRS, **2n, PI**	Nov 2019–
Planetary Archaeology:..., *TESS* Space Telescope, **$50,000, Science PI**	Jun 2019
UH–Manoa Student Excellence in Research Award, Honolulu, HI	Apr 2018

Publication Summary

39 publications in peer-reviewed journals (10 1st-author, 7 2nd-author)
400+ first-author citations, 750+ total citations, h-index=18, 1st-author h-index=8
My full bibliography is available on NASA ADS.

Recent Invited Conference Talks and Seminars

Astronomy Dept. Colloquium, University of Massachusetts–Amherst	Nov 2024
Physics and Astronomy Dept. Colloquium, University of Alabama	Feb 2024
Astronomy Colloquium, Rochester Institute of Technology	Nov 2023
Exoplanet Lunch, Princeton University	Oct 2023
Exoplanet Seminar, Ohio State University	Sep 2023
European Astronomical Society Annual Meeting, Krakow, Poland	July 2023
Roman Science Inspired by Emerging JWST Results Meeting, STScI	June 2023
Astrophysics Seminar, George Washington University	May 2023
Exoplanet Seminar, NASA Goddard Space Flight Center	Apr 2023

	SES Brownbag Seminar, JHU Applied Physics Laboratory	Apr 2023
	Center for Theory and Computation Seminar, University of Maryland	Apr 2023
	Dept. of Physics & Astronomy Seminar, Johns Hopkins University	Oct 2022
	Exoplanets Seminar, The Ohio State University	May 2022
	Astronomy Seminar, Carnegie Earth and Planets Laboratory	Nov 2021
	Tea Talk Seminar, Caltech Dept. of Astronomy	Oct 2021
	Monday Science Seminar, U. Wisconsin Dept. of Astronomy	Nov 2020
Selected Press	"Mysterious 'Phoenix' World Challenges Theories...," Newsweek	Jun 2024
	"Spunky Exoplanet Inexplicably Survives...," Gizmodo	Jun 2024
	"This Fiery Jupiter-Sized World...,"Inverse	Jan 2022
	"When Giant Planes Orbit Evolved Stars," AAS Nova	Jul 2018
	"How Old Stars Make Hot Jupiter Exoplanets So Huge," IB Times	Nov 2017
	"Puffed-up exoplanets inflate with heat from their stars alone," New Scientist	Sep 2016
	"New Step Toward Finding Earth 2.0," EOS	Jan 2016
Teaching and Mentoring Experience	AY203: Observational Astronomy, U. Alabama	Fall 2024
	Guest Lecturer, *Planets, Life, and the Universe*, Johns Hopkins U.	Sep 2023
	Guest Lecturer, *Language of Astrophysics*, Johns Hopkins U.	Nov 2022
	Guest Lecturer & Course Designer, *Astronomy Lab for Majors*, U. Hawaii	2016-2018
	Postgraduate	
	Advisor to E. Page, PhD, Lehigh University	Aug 2022–
	Advisor to N. Saunders, PhD/MSc, UH–Manoa (NSF Graduate Fellow)	Sep 2019–
	Co-Advisor to F. Pereira, PhD, U. Porto, Portugal	Sep 2019–Dec 2021
	Undergraduate	
	Advisor to B. Nnadi, JHU Rowland Summer Research Fellow	2023
	Advisor to N. Sodickson, ISEF/JSHS (now UChicago)	Jun 2023–
	Advisor to K. Gary, AMNH REU (now OSU, NSF Honorable Mention)	Jun 2020–
	Advisor to S. Yoshida, ISEF/JSHS (now Harvard)	Jun 2017–Jan 2023
Professional Service and Outreach	Discussion Leader, Building Bridges Workshop, U. Maryland	Sep 2023
	Science Advisor to Buble Studios, InStep LTD	2023–
	Panel Reviewer for NASA, NSF, STScI	2023–
	TESS Science Conference II Splinter Session Lead Organizer	Aug 2021
	Proposal Reviewer for the Czech Science Foundation	2020
	Seminar Organizing Committee, American Museum of Natural History	2019–2022
	Lead Co-Organizer, CCA Stars and Exoplanets Meeting	2019–2022
	Referee for *A&A, AJ, ApJ, ApJL, ApJS, PASJ, MNRAS*	2016–
	American Astronomical Society Member	2015–

References

Daniel Huber
Associate Professor — Phone: 808-956-8573
Institute for Astronomy — E-mail: huberd@hawaii.edu
University of Hawaii/University of Sydney

Ruth Angus
Associate Curator (faculty) — Phone: 212-313-3581
Department of Astrophysics — E-mail: rangus@amnh.org
American Museum of Natural History

Kevin Schlaufman
Associate Professor — Phone: 410-516-3295
Department of Physics and Astronomy — E-mail: kschlaufman@jhu.edu
Johns Hopkins University

Selected First and Second Author Journal Publications

† indicates projects led by students under my supervision

1. † Saunders, N., **Grunblatt, S.**, Page, E., Huber, D., Chontos, A., et al. "Giants Transiting Giants VII: A Hot Saturn Orbiting an Oscillating Red Giant Star," *submitted.*

2. † Sodickson, N., & **Grunblatt, S.**, "In Search of Decay: An Updated Analysis of the Transit Times of Hot Jupiters," *AAS Journals*, *submitted.*

3. **Grunblatt, S.** "Giant branch systems: surveys and populations," *Encyclopedia of Astrophysics, 1st ed.*, *in review.*

4. † Saunders, N., **Grunblatt, S.**, Dai, F., Chontos, A., Huber, D., et al. "TESS Giants Transiting Giants VI. Newly Discovered Hot Jupiters Provide Evidence for Efficient Obliquity Damping After the Main Sequence," *AJ*, 168, 81, 2024. [1 citation]

5. **Grunblatt, S.**, Saunders, N., Huber D., Yoshida, S., Vissapragada, S., et al. "TESS Giants Transiting Giants IV. An unlikely survivor: a low-density hot Neptune orbiting a red giant star," *AJ*, 168, 1, 2024. [3 citations]

6. Eisner, N., **Grunblatt, S.**, Barragan, O., Blunt, S., Saunders, N., et al. "A bright, nearby, multiplanet binary star system with a transiting gas planet in the habitable zone," *AJ*, 167, 241, 2024.

7. † Nnadi, B., & **Grunblatt, S.**, "Galactic Archaeology with Luminous Red Giant Oscillations in Gaia DR3 Photometry," *RNAAS*, 8, 59, 2024.

8. † Pereira, F., **Grunblatt, S.**, Psaridi, A., Saunders, N., Campante, T., et al. "TESS Giants Transiting Giants V. Two hot Jupiter systems around evolved stars in the southern ecliptic hemisphere," *MNRAS*, 527, 6332, 2024. [4 citations]

9. **Grunblatt, S.**, Wilson, R., Winter, A., Gaudi, B., Huber, D., et al. "Adding Fields Hosting Globular Clusters To The Galactic Bulge Time Domain Survey," Roman Core Community Survey White Paper, arXiv:2306.10647. [3 citations]

10. **Grunblatt, S.**, Saunders, N., Chontos, A., Hattori, S., Veras, D., et al. "TESS Giants Transiting Giants III. An eccentric warm Jupiter supports a period-eccentricity relation for giant planets transiting evolved stars," *AJ*, 165, 44, 2023. [7 citations]

11. † Yoshida, S., **Grunblatt, S.**, & Price-Whelan, A. "Determining the Detectability of Planets Transiting Stars of Extragalactic Origin," *AJ*, 164, 119, 2022.

12. **Grunblatt, S.**, Saunders, N., Sun, M., Chontos, A., Soares-Furtado, M.., et al. "TESS Giants Transiting Giants II. The hottest Jupiters orbiting evolved stars," *AJ*, 163, 120, 2022. [25 citations]

13. † Saunders, N., **Grunblatt, S**., Huber, D., Collins, K., Brahm, R. et al. "TESS Giants Transiting Giants I. A Non-inflated Hot Jupiter Orbiting a Massive Subgiant," *AJ*, 163, 53, 2022. [17 citations]

14. **Grunblatt, S.**, Zinn, J., Price-Whelan, A., Angus, R., Saunders, N., et al. "Age-Dating Red Giant Stars Associated with Galactic Disk and Halo Substructures," *ApJ*, 916, 88, 2021. [29 citations]

15. † Yoshida, S., **Grunblatt, S.**, Hermes, J., Armstrong, J., Coughlin, J. et al. "Eclipsing Binary and White Dwarf Features Associated with K2 Target EPIC251248385," *RNAAS*, 3, 174, 2019.

16. **Grunblatt, S.**, Huber, D., Gaidos, E., Hon, M., Zinn, J., et al. "Giant planet occurrence within 0.2 AU of low-luminosity red giant branch stars with K2," *AJ*, 158, 227, 2019. [39 citations]

17. **Grunblatt, S.**, Huber, D., Gaidos, E., Lopez, E., Barclay, T., et al. "Do close-in giant planets orbiting evolved stars prefer eccentric orbits?," *ApJL*, 861, L5, 2018. [31 citations]

18. **Grunblatt, S.**, Huber, D., Gaidos, E., Lopez, E., Howard, A., et al. "Seeing double with K2: Testing re-inflation with two remarkably similar planets around red giant branch stars," *AJ*, 154, 254, 2017. [69 citations]

19. **Grunblatt, S.**, Huber, D., Gaidos, E., Lopez, E., Fulton, B., et al. "K2-97b: A (Re-?)Inflated Planet Orbiting a Red Giant Star," *AJ*, 152, 185, 2016. [71 citations]

20. **Grunblatt, S.**, Howard, A., & Haywood, R. "Determining the Mass of Kepler-78b With Nonparametric Gaussian Process Estimation," *ApJ*, 808, 127, 2015. [127 citations]

Co-Authored Journal Publications

1. Chontos, A., Huber, D., **Grunblatt, S.**, Saunders, N., Winn, J., et al. "The TESS-Keck Survey XXI: 13 New Planets and Homogeneous Properties for 21 Subgiant Systems," *AAS Journals*, *in review.* [4 citations]

2. Huber, D., Slumstrup, D., Hon, M., Li, Y., Børsen-Koch, V., et al. including **Grunblatt, S.** "Stellar Models are Reliable at Low Metallicity: An Asteroseismic Age for the Ancient Very Metal-Poor Star KIC 8144907," *AAS Journals*, *accepted.*

3. Schmidt, S., Schlaufman, K., Ding, K., **Grunblatt, S.**, Carmichael, T., et al. "Verification of Gaia's Single-lined Spectroscopic Binary Solutions With Three Low-mass Secondaries," *AJ*, 166, 225, 2023. [2 citations]

4. Mallorquin Diaz, M., Goffo, E., Palle, E., Lodieu, N., Bejar, V., et al. including **Grunblatt, S.**. "TOI-1801 b: a temperate mini-Neptune around a young M0.5 dwarf," *A&A*, 680, 76, 2023. [6 citations]

5. Huber, D., Pinsonneault, M., Beck, P., Bedding, T., Bland-Hawthorn, J., et al. including **Grunblatt, S**. "Asteroseismology with the Roman Galactic Bulge Time-Domain Survey," Roman Core Community Survey White Paper, arXiv:2307.03237. [2 citations]

6. Blunt, S., Carvalho, A., David, T., Beichman, C., Zink, J., et al. including **Grunblatt, S**. "Overfitting Affects the Reliability of Radial Velocity Mass Estimates of the V1298 Tau Planets," *AJ*, 166, 62, 2023. [25 citations]

7. Lin, Z., Gan, T., Wang, S., Shporer, A., Rabus, M., et al. including **Grunblatt, S**. "Three low-mass companions around aged stars discovered by TESS," *MNRAS*, 523, 6162, 2023. [5 citations]

8. Knudstrup, E., Gandolfi, D., Nowak, G., Persson, C., Furlan, E., et al. including **Grunblatt, S**. "Radial velocity confirmation of a hot super-Neptune with a warm Saturn-mass companion discovered by TESS," *MNRAS*, 519, 5637, 2023. [2 citations]

9. Vissapragada, S., Chontos, A., Greklek-Mckeon, M., Knutson, H., Dai, F., et al. including **Grunblatt, S**. "The Possible Tidal Demise of Kepler's First Planetary System," *ApJL*, 941, 31, 2022. [24 citations]

10. Tayar, J., Moyano, F., Soares-Furtado, M., Escorza, A., Joyce, M., et al. including **Grunblatt, S**. "Spinning up the Surface: Evidence for Planetary Engulfment or Unexpected Angular Momentum Transport?" *ApJ*, 940, 23, 2022. [11 citations]

11. Stello, D., Saunders, N., **Grunblatt, S**., Hon, M., Reyes, C., et al. "TESS asteroseismology of the Kepler red giants," *MNRAS*, 476, 536, 2022. [38 citations]

12. Gaidos, E., Hirano, T., Kraus, A.L., Kuzuhara, M., Zhang, Z., et al. including **Grunblatt, S**. "Zodiacal Exoplanets in Time (ZEIT) XII: A Directly-Imaged Planetary-Mass Companion to a Young Taurus M Dwarf Star," *MNRAS*, 3069, 2819, 2021. [7 citations]

13. Murphy, J., Kosiarek, M., Batalha, N., Gonzales, E., Isaacson, H., including **Grunblatt, S**. "Another super-dense sub-Neptune in K2-182 b and refined mass measurements for K2-199 b and c," *AJ*, 162, 294, 2021. [9 citations]

14. Polanski, A., Crossfield, I., Burt, J., Nowak, G., Lopez-Morales, M., including **Grunblatt, S**. "Wolf 503 b: Characterization of a Sub-Neptune Orbiting a Metal-Poor K Dwarf," *AJ*, 162, 238, 2021. [7 citations]

15. Zhang, J., Weiss, L., Huber, D., Blunt, S., Chontos, A., et al. including **Grunblatt, S**. "A Long-Period Giant Planet Causes Inner Planets to be Misaligned with the Host Star in Kepler-129 System," *AJ*, 162, 89, 2021. [18 citations]

16. David, T., Contardo, G., Sandoval, A., Angus, R., Lu, Y., et al. including **Grunblatt, S**. "Evolution of the Exoplanet Size Distribution: Forming Super-Earths Over Billions of Years," *AJ*, 161, 265, 2021. [41 citations]

17. Kosiarek, M., Berardo, D., Crossfield, I., Laguna, C., Akana Murphy, J., et al. including **Grunblatt, S**. "Physical Parameters of the Multi-Planet Systems HD 106315 and GJ 9827," *AJ*, 161,47, 2021. [12 citations]

18. Lu, Y., Angus, R., Agueros, M., Blancato, K., Ness, M., et al. including **Grunblatt, S**. "Astraea: Predicting Long Rotation Periods with 27 Day Light Curves," *AJ*, 160, 168, 2020. [14 citations]

19. Huber, D., Chaplin, W. J.; Chontos, A., Kjeldsen, H., Christensen-Dalsgaard, J., et al. including **Grunblatt, S**. "A hot Saturn orbiting an oscillating late subgiant discovered by TESS," *AJ*, 157, 245, 2019. [86 citations]

20. White, T. R., Huber, D., Mann, A. W., Casagrande, L., **Grunblatt, S. K.**, et al. "Interferometric diameters of five evolved intermediate-mass planet-hosting stars measured with PAVO at the CHARA Array," *MNRAS*, 447, 4, 2018. [44 citations]

21. North, T., Campante, T., Miglio, A., Davies, G., **Grunblatt, S.**, et al. "Weighing in on the masses of retired A stars with asteroseismology. Kepler and K2 observations of exoplanet hosts," *MNRAS*, 472, 1866, 2017. [29 citations]

22. Fulton, J., Howard, A., Weiss, L., Sinukoff, E., Petigura, E., et al. including **Grunblatt, S.**. "Three Temperate Neptunes Orbiting Nearby Stars," *ApJ*, 830, 46, 2016. [26 citations]

23. Younes, G., Kouveliotou, C., van der Horst, A.J., Baring, M. G., Granot, J. et al. including **Grunblatt, S**. "Time resolved spectroscopy of SGR J1550-5418 bursts detected with Fermi/GBM," *ApJ*, 785, 52, 2014. [28 citations]