

CURRICULUM VITAE – AVI SHPORER

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CONTACT INFORMATION

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POSITIONS

Research Scientist

Massachusetts Institute of Technology, *2017 – present*

Postdoctoral Scholar

California Institute of Technology, *2016 – 2017*

Sagan Postdoctoral Fellow

Jet Propulsion Laboratory, *2013 – 2016*

Postdoctoral Scholar

California Institute of Technology, *2012 – 2013*

Las Cumbres Observatory Postdoctoral Fellow

UC Santa Barbara and Las Cumbres Observatory, *2009 – 2012*

EDUCATION

Ph.D., Tel Aviv University, Tel Aviv, Israel

Thesis title: “Transiting Extrasolar Planets: Detection and Follow-up”
Advisor: Prof. Tsevi Mazeh, *2005 – 2009*

M.Sc., Magna Cum Laude, Tel Aviv University, Tel Aviv, Israel

Thesis title: “Variability Search in M33”
Advisor: Prof. Tsevi Mazeh, *2002 – 2005*

B.Sc. in Physics and Computer Science, Hebrew University of Jerusalem, Jerusalem, Israel *1994 – 1997*

(Military Service, rank: Captain, *1997 – 2002*)

REFEREED PUBLICATIONS

Total: 322 (+22 submitted)

First-author publications: 18

Second- or third-author publications: 33 (+ 2 submitted)

Total refereed citations (ADS): 22,519 (h-index: 74)

SCHOLARSHIPS HONORS AND AWARDS

Infinite Mile Award, MIT, *2020*

Sagan Postdoctoral Fellowship, awarded by NASA, *2013*

Las Cumbres Observatory Postdoctoral Fellow, Las Cumbres Observatory, *2009*

Fraenkel Prize, Israel Physical Society, *2008*

Dean’s scholarship for academic excellence, Tel Aviv University, *2008*

Yuval Ne’eman Scholarship for academic achievements, Tel Aviv University, *2008*

Dean’s scholarship for academic excellence, Tel Aviv University, *2007*

M.Sc. Magna Cum Laude, Tel Aviv University, *2005*

Excellence in teaching award, School of Physics and Astronomy, Tel Aviv University, *2005*
Dean’s commendation for public outreach activity, Tel Aviv University, *2005*
The Ilan Ramon scholarship for academic excellence and community involvement, *2003*

CONFERENCE
PARTICIPATION

“TESS Science Conference III”, MIT, MA, *July 2024* (SOC and LOC chair)
“AAS 243rd Meeting”, New Orleans, LA, *January 2024* (Talk)
“AAS 241st Meeting”, Seattle, WA, *January 2023* (Splinter Session organizer)
“AAS 240th Meeting”, Pasadena, CA, *June 2022* (Splinter Session organizer)
“Exoplanets IV”, Las Vegas, NV, *May 2022* (Invited Talk)
“TESS Science Conference II”, MIT, MA, *August 2021* (SOC co-chair and LOC chair)
“AAS 237th Meeting”, Virtual meeting, *January 2021* (Talk)
“Exoplanets III”, Heidelberg, Germany, *July 2020* (Talk)
“AAS 235th Meeting”, Honolulu, HI, *January 2020* (Talk)
“TESS Science Conference I”, MIT, MA, *July 2019* (SOC co-chair and LOC chair)
“TESS Data Workshop”, STScI, MD, *February 2019* (Talk, SOC member)
“AAS 233th Meeting”, Seattle, WA, *January 2019* (Talk)
“Sagan Fellows Symposium”, Pasadena, CA, *November 2018* (Talk)
“Observing techniques, instrumentation and science with metre-class telescopes II”, Tatrahska Lomnica, Slovakia, *September 2018* (Invited Talk)
“Cool Stars 20”, Boston, MA, *July 2018* (Talk)
“Exoplanets Orbiting Hot Stars”, Vanderbilt University, Nashville, TN, *June 2018* (Talk)
“Dwarf Stars and Clusters in K2”, Boston, MA, *January 2018* (Talk)
“AAS 231th Meeting”, Washington, DC, *January 2018* (Talk)
“Sagan Fellows Symposium”, Pasadena, CA, *November 2017* (Talk)
“Kepler & K2 Science Conference IV”, NASA Ames, CA, *June 2017* (Talk + Poster)
“AAS 229th Meeting”, Grapevine, TX, *January 2017* (Talk)
“ExSoCal2016”, Pasadena, CA, *September 2016* (Talk)
“Keck Science Meeting 2016”, Pasadena, CA, *September 2016* (Talk)
“Exoplanets I”, Davos, Switzerland, *July 2016* (Talk)
“AAS 228th Meeting”, San Diego, CA, *June 2016* (Talk)
“Community Astrophysics with WFIRST”, Pasadena, CA, *March 2016* (Talk)
“AAS 227th Meeting”, Kissimmee, FL, *January 2016* (2 Talks; Special Session organizer & chair)
“K2 Science Conference”, Santa Barbara, CA, *November 2015* (Invited Talk & Poster)
“ExSoCal2015”, Pasadena, CA, *September 2015* (Talk; SOC member & LOC chair)
“Sagan Summer Workshop”, Pasadena, CA, *July 2015* (Invited Talk)
“Sagan Fellows Symposium”, Pasadena, CA, *May 2015* (Talk)
“AAS 225th Meeting”, Seattle, WA, *January 2015* (Talk)
“Wide-field InfraRed Surveys: Science and Techniques”, Pasadena, CA, *November 2014* (Invited Talk)

“46th DPS Meeting”, Tucson, AZ, *November 2014* (Talk)
 GAIA Coordination Unit #7 (CU7) meeting, Tel Aviv, Israel, *May 2014* (Invited Talk)
 “Exoplanetary Science”, Quy Nhon, Vietnam, *April 2014* (Talk)
 “Kepler Science Conference II”, NASA Ames Research Center, Moffett Field, CA, *November 2013*
 (Invited Overview Talk)
 “AAS 221st Meeting”, Long Beach, CA, *January 2013* (Talk)
 “Exoplanets and Binaries: Corot and Kepler Mission Results, and Future Challenges”, Tel Aviv,
 Israel, *December 2012* (Invited Talk)
 “Sagan Summer Workshop”, Pasadena, CA, *July 2012* (Invited Talk)
 “Planetary Origins and Frontiers of Explorations”, Rehovot, Israel, *May 2012* (Talk)
 “AAS 219th Meeting”, Austin, TX, *January 2012* (Talk)
 “The Impact of Asteroseismology across Stellar Astrophysics”, Santa Barbara, CA, *October 2011*
 (Talk)
 “AAS 218th Meeting”, Boston, MA, *May 2011* (Talk)
 “AAS 217th Meeting”, Seattle, WA, *January 2011* (Talk)
 “Big Science with Small Telescopes”, Dornburg Castle, Germany, *October 2010* (Talk)
 “IAU Symposium No. 276: The Astrophysics of Planetary Systems”, Torino, Italy, *October 2010*
 (Poster)
 “Exoplanets Rising”, Santa Barbara, CA, *March 2010* (Poster)
 “The 54th Annual Meeting of the Israel Physical Society”, Israel, *December 2008* (Invited Talk)
 “IAU Symposium No. 253: Transiting Planets”, Boston, MA, *May 2008* (Poster)
 “The 53rd Annual Meeting of the Israel Physical Society”, Rehovot, Israel, *December 2007* (Talk)

OBSERVING
 EXPERIENCE AND
 SUCCESSFUL
 OBSERVING
 PROPOSALS

Magellan II (Clay) with PFS (0.5 night, 2024A; 0.5 night, 2023B; 0.5 night, 2023A; 1 night, 2022B;
 1 night, 2022A; 1 night, 2021B; 1.5 nights, 2020B; 2 nights, 2019B; 1 night, 2019A)
 WIYN with NEID (0.5 night, 2020B; 0.5 night, 2019B)
 Anglo-Australian Telescope 3.9 m with Veloce (2.5 nights, 2020A; 2 nights, 2019B)
 Keck I with HIRES (2 nights, 2018B; 1 night, 2017A; 1 night, 2016B; 1 night, 2015B; 1 night, 2014A)
 SMARTS 1.5 m with CHIRON (10 hours, 2023B; 10 hours, 2023A; 15 hours, 2022B; 30 hours,
 2021B; 30 hours, 2021A; 25 hours, 2020B; 30 hours, 2020A; 30 hours, 2019B; 30 hours, 2019A; 15
 hours, 2018B)
 WIYN with HYDRA (3.5 nights, 2016B; 9.5 nights, 2015A; 4 nights, 2014B; 3 nights, 2014A)
 LCO Network (67.5 hours, 2014B)
 Palomar 200 inch with CHIMERA (3 nights, 2014B; 1 night, 2014A)
 Palomar 200 inch with TSpec (3 nights, 2014B)
 Palomar 200 inch with PHARO (2 nights, 2013A)
 LCO FTN 2.0 m and FTS 2.0 m (50 – 100 hours per semester, 2009 – 2012)
 Lick Observatory Shane 3 m with Hamilton (5 nights, 2011A)
 ESO 3.6 m with HARPS, Chile (6 nights, 2008B)

SELECT
SUCCESSFUL
PROPOSALS

OHP 1.93 m with SOPHIE, France (25 nights, 2007 – 2009)
The Wise Observatory 1.0 m telescope, Israel (\approx 50 nights, 2005 – 2009)
The Wise Observatory 0.46 m telescope, Israel (\approx 50 nights, 2005 – 2009)
TESS GI Cycle 6 (70K USD)
LCO Key Project, 2023 – 2026 (6 semesters), \approx 10,000 hours
TESS GI Cycle 4 (50K USD)
TESS GI Cycle 3 (50K USD)
LCO Key Project, 2020 – 2023 (6 semesters), \approx 10,000 hours
LCO Key Project, 2017 – 2019 (4 semesters), \approx 3,600 hours
NASA-Keck time: 2018B - 2 nights ,18.3K USD; 2017A - 1 night, 10.85K USD; 2016B - 1 night, 15K USD; 2015B - 1 night, 13K USD
JPL FY 2014 R&TD (25K USD)
Kepler Guest Observer Cycle 3 (GO30029; Science PI):
“Measurement of the Spin-Orbit Alignment in Stellar Binaries”

SERVICE

Referee for *Nature Communications*, *The Astrophysical Journal*, *Astronomy & Astrophysics*, *Monthly Notices of the Royal Astronomical Society*, and *The Astronomical Journal*
SOC co-chair and LOC chair, TESS Science Conference II, MIT, MA, *August 2021*
SOC co-chair and LOC chair, TESS Science Conference I, MIT, MA, *July 2019*
SOC member, TESS Data Workshop, STScI, MD, *February 2019*
Special Session organizer and chair, Chambliss Award referee, 227th AAS Meeting, *January 2016*
SOC member and LOC chair, ExSoCal2015, Caltech, CA *September 2015*
NASA Earth and Space Science Fellowship (NESSF) Program proposals reviewer, *March 2015*
Session chair and Chambliss Award referee, 225th AAS Meeting, *January 2015*
NASA ROSES-2014 Exoplanets Research Program review panel, *July 2014*
Chilean National Fund for Scientific & Technological Development proposal reviewer, *2014*
Co-organizer of Caltech Morning arXiv Discussions, *2013-2017*
Co-organizer of the Caltech Planetary Discussion Group weekly meetings, *2012 – 2013*
LCO TAC, *2012*

PARTICIPATION IN
LARGE
COLLABORATIONS

TESS - Activity: Member of the TESS Science Council, TOI group steering committee, and the TESS Follow-up Observing Program (TFOP) steering committee.
LCO Transiting Exoplanet Key Project - Activity: Confirmation and follow-up of transiting planet candidates - Role: PI.
Kepler - Activity: Member of the Kepler follow-up observing program (KFOP) and eclipsing binary working groups (Kepler Collaborator status during primary mission).
CoRoT - Activity: Ground-based photometric follow-up of transiting planet candidates.
HATNet - Activity: Photometric and radial velocity follow-up of transiting planet candidates.
LSST, Transients and Variable Stars collaboration - Activity: Looking for white dwarf binaries.
Chandra ACIS Survey of M33 (ChASem33; Chandra VLP) - Activity: studying variable X-ray sources.

MENTORING

Canis Li, Valley Christian High School, San Jose, CA, *2023–2024*
Resulting paper: Li & Shporer, 2024, AJ, 167, 245.

Zahra Essack, MIT, *2021 – 2023*
Resulting paper: Essack, Shporer, et al., 2023, AJ, 165, 47.

Prajwal Niraula, MIT (Graduate student project), *2020 – 2022*
Resulting paper: Niraula, Shporer, et al., 2022, AJ, 163, 172.

Ismael Mireles, MIT, *2019 – 2020*
Resulting paper: Mireles, Shporer, et al. 2020, AJ, 160, 133.

Ian Wong, MIT, *2018 – 2021*
Resulting papers: Shporer, Wong, et al. 2019, AJ, 157, 178.
Wong, Shporer, et al. 2020, AJ, 159, 29.
Wong, Shporer, et al. 2020, AJ, 160, 88.
Wong, Shporer, et al. 2020, AJ, 160, 155.
Wong, Kitzmann, Shporer, et al. 2021, AJ, 162, 127.
Wong, Shporer, et al. 2021, AJ, 162, 256.
Wong, Shporer, et al. 2022, AJ, 163, 175.

Tianjun Gan, Tsinghua University, China, *2017 – 2020*
LCO Photometric follow-up of transiting planet candidates identified in space-based surveys.
Resulting paper: Gan, Shporer, et al. 2020, AJ, 159, 160.

Benjamin Fulton, Las Cumbres Observatory, *2010 – 2012*
Resulting paper: Fulton, Shporer, et al. 2011, AJ, 142, 84.

TEACHING

Teaching assistant, Tel Aviv University, School of Physics and Astronomy. Teaching experience includes physics lab instruction and lectures in computer programming, mathematics, and astrophysics for undergraduate students, *2002 – 2009*.

OUTREACH

Initiating an LCO program where Hawaiian high school students carry out photometric follow-up observations of CoRoT transiting planet candidates, using the 2 m Faulkes Telescope North, *2010 – 2012*.

Tel Aviv University Astronomy Club (Astroclub). Activities include organizing public lectures in astronomy, sky observing events, and open days at the Wise Observatory, Israel, *2002 – 2009*.

Math tutoring high school students, as part of a volunteer program during army service, *2000 – 2001*.

18. **Shporer, A.**, et al., 2020
“*GJ 1252 b: A 1.2 R_{\oplus} planet transiting an M3 dwarf at 20.4 pc*”.
ApJL, 890, 7
17. **Shporer, A.**, et al., 2019
“*TESS full orbital phase curve of the WASP-18b system*”.
AJ, 157, 178
16. **Shporer, A.**, et al. 2017
“*K2-114b and K2-115b: Two transiting warm Jupiters*”,
AJ, 154, 188
15. **Shporer, A.**, et al. 2017
“*Three statistically validated K2 transiting warm Jupiter exoplanets confirmed as low-mass stars*”,
ApJL, 847, L18
14. **Shporer, A.** 2017
“*The astrophysics of visible-light orbital phase curves in the space age*”,
PASP, 129, 072001, Invited Review
13. **Shporer, A.** et al. 2016,
“*Radial velocity monitoring of Kepler heartbeat stars*”,
ApJ, 829, 34
12. **Shporer, A.** & Hu, R. 2015,
“*Studying atmosphere-dominated hot Jupiter Kepler phase curves: Evidence that inhomogeneous atmospheric reflection is common*”,
AJ, 150, 112
11. **Shporer, A.** et al. 2014,
“*Atmospheric characterization of the hot jupiter Kepler-13Ab*”,
ApJ, 788, 92
10. **Shporer, A.** et al. 2012,
“*On using the beaming effect to measure spin-orbit alignment in stellar binaries with Sun-like components*”,
New Astronomy, 17, 309
9. **Shporer, A.** et al. 2011,
“*Detection of KOI-13.01 using the photometric orbit*”,
AJ, 142, 195
8. **Shporer, A.** & Brown, T. 2011,
“*The impact of the convective blueshift effect on spectroscopic planetary transits*”,
ApJ, 733, 30
7. **Shporer, A.** et al. 2010,
“*A ground-based measurement of the relativistic beaming effect in a detached double WD binary*”,
ApJL, 725, L200
6. **Shporer, A.** et al. 2010,
“*Ground-based multisite observations of two transits of HD 80606b*”,
ApJ, 722, 880
5. **Shporer, A.** et al. 2009,
“*Photometric follow-up of the Neptune-mass transiting planet GJ 436b*”,
ApJ, 694, 1559
4. **Shporer, A.** et al. 2009,
“*HAT-P-9b: A low density planet transiting a moderately faint F star*”,
ApJ, 690, 1393

3. **Shporer, A.** et al. 2007,
“Photometric follow-up of the transiting planet around WASP-1”,
MNRAS, 376, 1296
2. **Shporer, A.** et al. 2007,
“Photometric analysis of the optical counterpart of the black hole HMXB M33 X-7”,
A&A, 462, 1091
1. **Shporer, A.** & Mazeh, T. 2006,
“Long-term V-band monitoring of the bright stars of M33 at the Wise Observatory”,
MNRAS, 370, 1429

35. Tey, E., **Shporer, A.**, et al., 2024
“GJ 238 b: A 0.57 Earth radius planet orbiting an M2.5 dwarf star at 15.2 pc”.
AJ, 167, 283.
34. Li, C., **Shporer, A.**, et al., 2024
“A Search for Temporal Atmospheric Variability of Kepler Hot Jupiters”.
AJ, 167, 245.
33. Essack, Z., **Shporer, A.**, et al., 2023
“TOI-1075 b: A Dense, Massive, Ultra-Short Period Hot Super-Earth Straddling the Radius Gap”.
AJ, 165, 47.
32. Wong, I., **Shporer, A.**, et al., 2022
“TESS revisits WASP-12: Updated orbital decay rate and constraints on atmospheric variability”.
AJ, 163, 175.
31. Niraula, P., **Shporer, A.**, et al., 2022
“Revisiting Kepler transiting systems: Unvetting planets and constraining relationships among harmonics in phase curves”.
AJ, 163, 172.
30. Wong, I., **Shporer, A.**, et al., 2021
“TOI-2109 b: An ultra-hot gas giant on a 16-hour orbit”.
AJ, 162, 256.
29. Wong, I., Kitzmann, D., **Shporer, A.**, et al., 2021
“Visible-light Phase Curves from the Second Year of the TESS Primary Mission”.
AJ, 162, 127.
28. Sha, L., Huang, C., **Shporer, A.**, et al., 2021
“TOI-964 b and K2-329 b: short-period Saturn-mass planets that test whether irradiation leads to inflation”.
AJ, 161, 82.
27. Wong, I., **Shporer, A.**, et al., 2020
“Systematic phase curve study of known transiting systems from Year 1 of the TESS Mission”.
AJ, 160, 155.
26. Mireles, I., **Shporer, A.**, et al., 2020
“TOI 694 b and TIC 220568520 b: Two low-mass companions near the Hydrogen burning mass limit orbiting Sun-like stars”.
AJ, 160, 133.
25. Wong, I., **Shporer, A.**, et al., 2020
“Exploring the atmospheric dynamics of the extreme ultra-hot Jupiter KELT-9b using TESS photometry”.
AJ, 160, 88.

24. Gan, T., **Shporer, A.**, et al., 2020
“LHS 1815 b: The first thick-disk planet detected by TESS”.
 AJ, 159, 160.
23. Shreyas, V., Jontof-Hutter, D., **Shporer, A.**, et al., 2020
“Diffuser-assisted Infrared transit photometry for four dynamically interacting Kepler systems”.
 AJ, 159, 108.
22. Wong, I., Benneke, B., **Shporer, A.**, et al., 2020
“TESS phase curve of the hot Jupiter WASP-19b”.
 AJ, 159, 104.
21. Guo, Z., **Shporer, A.**, et al., 2020
“Tidally Excited Oscillations in Heartbeat Binary Stars: Pulsation Phases and Mode Identification”.
 ApJ, 888, 95.
20. Wong, I., **Shporer, A.**, et al., 2020
“The full Kepler phase curve of the eclipsing hot white dwarf binary system KOI-964”.
 AJ, 159, 29.
19. Guo, Z., Fuller, J., **Shporer, A.**, et al., 2019
“KIC 4142768: An evolved Gamma Doradus/Delta Scuti hybrid pulsating eclipsing binary with tidally excited oscillations”.
 ApJ, 885, 46.
18. Wang, S., Jones, M., **Shporer, A.**, et al. 2019
“HD 202772A b: A Transiting Hot Jupiter Around A Bright, Mildly Evolved Star In A Visual Binary Discovered By TESS”.
 ApJ, 157, 51.
17. Lund, M., Pepper, J., **Shporer, A.**, Stassun, K. 2018
“Transiting planets with LSST IV: Detecting planets around white dwarfs”.
 arXiv:1809.10900.
16. Colon, K., Zhou, G., **Shporer, A.**, et al. 2018
“A large ground-based observing campaign of the disintegrating planet K2-22”.
 AJ, 156, 227.
15. Sanghavi, S. & **Shporer, A.** 2018
“Photopolarimetric characterization of brown dwarfs bearing uniform cloud decks”.
 ApJ, 866, 28.
14. Huang, C., **Shporer, A.**, et al. 2018
“Expected Yields of Planet discoveries from the TESS primary and extended missions”.
 arXiv:1807.11129.
13. Fuller, J., Hambleton, K., **Shporer, A.** et al. 2017,
“Accelerated tidal circularization via resonance locking in KIC 8164262.”
 MNRAS, 472, L25
12. Holczer, T., **Shporer, A.** et al. 2015,
“Time variation of Kepler transits induced by stellar spots — a statistical way to distinguish between prograde and retrograde motion II. Application to KOIs”,
 ApJ, 807, 170
11. Mazeh, T., Holczer, T., **Shporer, A.** 2015,
“Time variation of Kepler transits induced by stellar rotating spots — a statistical way to distinguish between prograde and retrograde motion I. Theory”,
 ApJ, 800, 142

10. Muirhead, P., Vanderburg, A., **Shporer, A.** et al. 2013,
 “*Characterizing the cool KOIs V. KOI-256: A mutually eclipsing post-common envelope binary*”,
 ApJ, 767, 111
9. Barnes, J. W., Linscott, E., **Shporer, A.** 2011
 “*Measurement of the spin-orbit misalignment of KOI-13.01 from its gravity-darkened Kepler transit lightcurve*”,
 ApJS, 197, 10
8. Fulton, B. J., **Shporer, A.** et al. 2011,
 “*Long-term transit monitoring and refined light curve parameters of HAT-P-13b*”,
 AJ, 142, 84
7. Steinfadt, J., Kaplan D., **Shporer, A.** et al. 2010,
 “*Discovery of the eclipsing detached double white dwarf binary NLTT 11748*”,
 ApJL, 716, 146
6. Hirano, T., Narita, N., **Shporer, A.** et al. 2010,
 “*A possible tilted orbit of the super-Neptune HAT-P-11b*”,
 PASJ, 63, 531
5. Deeg, H. J., Gillon, M., **Shporer, A.** et al. 2009,
 “*Ground-based photometry of space-based transit detections: Photometric follow-up of the CoRoT mission*”,
 A&A, 506, 343
4. Winn, J. N., Holman, M. J., **Shporer, A.** et al. 2008,
 “*The transit light curve project. VIII. Six occultations of the exoplanet TrES-3*”,
 AJ, 136, 267
3. Brosh, N., Polishook, D., **Shporer A.** et al. 2008,
 “*The Centurion 18-inch telescope of the Wise Observatory*”,
 Ap&SS, 314, 163
2. Loeillet, B., **Shporer, A.** et al. 2008,
 “*Refined parameters and spectroscopic transit of the super-massive planet HD 147506b*”,
 A&A, 481, 529
1. Bakos, G. A., **Shporer, A.** et al. 2007,
 “*HAT-P-5b: A Jupiter-like hot Jupiter transiting a bright star*”,
 ApJ, 671, 173