# CURRICULUM VITAE – AVI SHPORER

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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: 360 (+22 submitted)

First-author publications: 18

Second- or third-author publications: 34 (+2 submitted)

Total refereed citations (ADS): 26,067 (h-index: 76)

**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

"The First Annual Science Meeting of the Earth 2.0 (ET) Space Mission", Shanghai, China, *August 2025* (Invited Talk)

"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)

OHP 1.93 m with SOPHIE, France (25 nights, 2007 – 2009)

The Wise Observatory 1.0 m telescope, Israel (≈50 nights, 2005 – 2009)

The Wise Observatory 0.46 m telescope, Israel (≈50 nights, 2005 – 2009)

## Select Successful Proposals

TESS GI Cycle 7 (70K USD)

TESS GI Cycle 6 (70K USD)

LCO Key Project, 2023 – 2026 (6 semesters), ≈10,000 hours

TESS GI Cycle 4 (50K USD)

TESS GI Cycle 3 (50K USD)

LCO Key Project, 2020 – 2023 (6 semesters), ≈10,000 hours

LCO Key Project, 2017 – 2019 (4 semesters), ≈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 chair and LOC chair, TESS Science Conference III, MIT, MA, *July 2024*

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, *2023–2025*
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*.

## First-Author Publications

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

## Second- and third-author Publications

36. Hon, M., Rappaport, S., **Shporer, A.**, et al., 2025
*"A disintegrating rocky planet with prominent comet-like tails around a bright star"*.
ApJ, 984L, 3.

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
*"Trasnsiting 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. Brosch, 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