

nimrod.gavriel@weizmann.ac.il

Education

2020–2024 PhD Atmospheric Dynamics, The Weizmann Institute of Science. Advisor: Yohai Kaspi
2017–2019 MSc Energy Eng., The Technion - Israel Institute of Technology. Advisor: Guy Ramon
2013–2017 BSc Civil and Environmental Eng., The Technion - Israel Institute of Technology

Fellowships and Awards

2025 Rothschild Fellow
2024 The Prof. Israel Dostrovsky Memorial Prize of Excellence
2023 GFD Fellow at the Woods Hole Oceanographic Institution
2021 The Pearlman Prize for Student-Initiated Research
2019 M.Sc graduation - *summa cum laude*
2017-2019 Scholarship for excellence by the Israel Ministry of Energy
2017 B.Sc graduation - *summa cum laude* (The Technion's President Prize for BSc Students)
2013-2017 Five semesters under the Technion's President list of excellency; one semester under the Dean's list

Employment

2024-present Postdoctoral fellow, The Weizmann Institute of Science
2014–2017 Personal tutoring, The Beatrice Weston Unit for the Advancement of Students at the Technion
2016 Research assistance for Oded Amir, The Technion - Israel Institute of Technology

Teaching Experience

TA. The Weizmann Institute of Science:

2022-2023 Planetary Atmospheres
2022-2023 Atmospheric and Oceanic Fluid Dynamics

TA. The Technion - Israel Institute of Technology:

2017-2019 Structural Analysis
2018-2019 Quantitative Thinking and Statistics
2017-2018 Introduction to Environmental Engineering
2016-2017 Introduction to Engineering Mechanics

Reviewing Activities

2022-present Nature Communications; PNAS; Icarus.

Publications

1. **Gavriel, N** & Kaspi, Y. (*In revision, PNAS*). [Dynamical constraints on the vertical structure of Jupiter polar cyclones.](#)
2. Duer-Milner, K., **Gavriel, N.**, Galanti, E., Tziperman, E., Kaspi, Y. (*in 2nd review, Sci. Adv.*). From gas to ice giants: a unified mechanism for equatorial jets.

3. Kaspi, Y., Galanti E., Park R., Duer K., **Gavriel N.**, et al. (2023). [Observational evidence for cylindrically oriented zonal flows on Jupiter](#). *Nature Astronomy*, 7(12):1463-1472.
4. **Gavriel, N.** & Kaspi, Y. (2023). [The westward drift of Jupiter's polar cyclones explained by a center-of-mass approach](#). *Geophysical Research letters*, 50(19):e2023GL103635.
5. **Gavriel, N.** & Kaspi, Y. (2022). [The oscillatory motion of Jupiter's polar cyclones results from vorticity dynamics](#). *Geophysical Research letters*, 49(15):e2022GL098708.
6. Duer[†], K., **Gavriel[†], N.**, Galanti, E., Kaspi, Y., et al. (2021). [Evidence for multiple Ferrel-like cells on Jupiter](#). *Geophysical Research letters*, 48(23):e2021GL095651.
7. **Gavriel, N.** & Kaspi, Y. (2021). [The number and location of Jupiter's circumpolar cyclones explained by vorticity dynamics](#). *Nature Geoscience*, 14(8):559-563. (Cover)
8. Blayer[†], Y & **Elkayam[†], N.**, and Ramon, G. Z. (2019). [Phase-dependence of sorption-induced mass streaming in an acoustic field](#). *Applied Physics Letters*, 115, 033703.
9. Offner, A., Yang, R., Felman, D., **Elkayam, N.**, Agnon, Y., & Ramon, G. Z. (2019). [Acoustic oscillations driven by boundary mass exchange](#). *Journal of Fluid Mechanics*, 866, 316-349.

[†] These authors contributed equally to this work

Oral Presentations and Seminars

Mar 2025	workshop on Parameterizations for global dynamical models in Climatology, Astrophysics and Planetology (Les Houches, France)
Jan 2025	The 20th International Space Science Conference (Tel Aviv, Israel)
Oct 2024	56th Annual Division for Planetary Sciences (DPS) meeting (virtual presentation)
Sep 2024	PhD Defense Seminar , The Weizmann Institute of Science (Rehovot, Israel)
Jun 2024	Atmospheric and Oceanic Fluid Dynamics (Burlington, Vermont)
Jun 2024	Scripps Institution of Oceanography departmental seminar (San Diego, California)
Jun 2024	California Institute of Technology departmental seminar (Pasadena, California)
Jun 2024	UC Santa Cruz departmental seminar (Santa Cruz, California)
Jun 2024	UC Berkeley departmental seminar (Berkeley, California)
Apr 2024	EGU General Assembly (Vienna, Austria)
Aug 2023	Woods Hole GFD program (Woods Hole, Massachusetts)
Sep 2022	Europlanet Science Congress (Granada, Spain)
Jun 2022	Juno's Prime Mission workshop (Pasadena, California)
Jun 2022	Atmospheric and Oceanic Fluid Dynamics (Breckenridge, Colorado)
May 2022	EGU General Assembly (Vienna, Austria)
Apr 2022	GFD days (Sde Boker, Israel)
Jan 2022	Juno Atmospheric Working Group monthly meeting
Oct 2021	Moscow Solar System Symposium 12M-S3
Oct 2021	DPS annual meeting
Sep 2021	NASA HQ Monthly Science Report - invited speaker
Sep 2021	Juno Atmospheric Working Group monthly meeting

Skills and Hobbies

Languages: Hebrew; English; Spanish
Coding: Python; Matlab; Shell; Mathematica; Maple; Latex
Software: Illustrator; Inkscape; Obsidian
Music playing: Drums; Guitar; keyboard
Sport: Sport climbing; Running; Swimming; Cycling; Yoga
Other hobbies: Hiking; Traveling; Painting; Graphic designing