

Curriculum Vitae

Eli Galanti

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Personal details:

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Weizmann Institute of Science
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Employment:

- Associate Staff Scientist. Department of Earth and planetary Sciences, Weizmann Institute of Science. May 2020 – present.
- Assistant Staff Scientist. Department of Earth and planetary Sciences, Weizmann Institute of Science. April 2016 – April 2020.
- Research Scientist. Department of Earth and planetary Sciences, Weizmann Institute of Science. September 2014 – March 2016.
- Research Scientist. Department of Earth and planetary Sciences, Weizmann Institute of Science. September 2012 – August 2014.
- Research Scientist. Department of Geophysics and Planetary Sciences, Tel Aviv University. April 2007 – August 2014.
- Fellow. The Porter School of Environmental Studies and Department of Geophysics, Tel Aviv University. April 2005 – March 2007.
- Research Coordinator. The Porter School of Environmental, Tel Aviv University. April 2007 – September 2012.

Education:

- Postdoctoral Research Scientist -International Research Institute for Climate Prediction, Columbia University. Field: Seasonal SST prediction. Advisor – Dr. Steve Zebiak. October 2002 - July 2004.
- Ph.D. Weizmann Institute of Science. Thesis: Dynamics and predictability of ENSO. Advisor – Prof. Eli Tziperman. March 2003.
- B.Sc. Geophysics and planetary sciences, Tel Aviv University. Field: geophysics and atmospheric dynamics. Magna Cum Laude. August 1996.

Other Appointments:

- Co-Investigator at the European Space Agency Jupiter Icy Moons Explorer ([JUICE](#)).
- Member of the NASA [Juno](#) mission science team.

Teaching

- 'Global Warming Debates' - Weizmann Institute of Science. 2022. (2hr, one semester)
- 'Introduction to Mathematical Methods for Modelling and Data Analysis' - Weizmann Institute of Science. 2021. (3hr, one semester)
- 'Introduction Earth Climate System' – Weizmann Institute of Science. 2020. (3hr, one semester)
- 'Global Warming Debates' - Weizmann Institute of Science. 2019. (2hr, one semester)
- 'Introduction to Mathematical Methods for Modelling and Data Analysis' - Weizmann Institute of Science. 2019. (3hr, one semester)
- 'Global Warming Debates' - Weizmann Institute of Science. 2018. (2hr, one semester)
- 'Introduction Earth Climate System' – Weizmann Institute of Science. 2017. (3hr, one semester)
- 'Mathematical modeling in Earth Sciences' - Weizmann Institute of Science. 2016. (3hr, one semester)
- 'Great Papers in Earth Sciences' - Weizmann Institute of Science. 2014. (2hr, one semester)
- 'Introduction Earth Climate System' – Weizmann Institute of Science. 2014. (2hr, one semester)
- 'Environmental Challenges in Israel – Field tours' – The Porter School of Environmental Studies, Tel Aviv University. 2009-2013. (3hr, one semester).
- 'The oceans and mankind – between struggle and cooperation' – The Porter School of Environmental Studies, Tel Aviv University. 2008-2012. (2hr, one semester).
- 'Climate and the Human environment' – Department of Geography and Human Environment, Tel Aviv University. 2008-2012 (4hr, one semester)
- 'Introduction to Climate' – Department of Geography, Hebrew University. 2010. (3hr, one semester)
- 'Master students forum' – The Porter School of Environmental Studies, Tel Aviv University. 2010 (1hr, two semesters)
- 'Introduction to Climate' – Israel Maritime College, Ruppin Academic Center. 2006. (2hr, one semester)

Peer review

- Nature, Astrophysical Journal, Icarus, J. of Climate, J. of Atmospheric sciences, Environmental Modelling and Software, Atmospheric Research, J. Atmos. Solar-Terrestrial Phys, Physica A., MNRAS.
- **Grant proposals review** – Israel Science Foundation (ISF)

Review boards

- Expert evaluator for the European Union 7th framework program (FP7). Leading a review panel (in Brussels) of large-scale collaborative projects in the field of oceanic response to climate change. March 2012.

Awards:

- Maxine Singer Prize to Outstanding Staff Scientists for 2020.
- Rieger-JNF fellowship for Environmental studies. 1999-2001.

Publications:

- 1) **Galanti, E.** and E. Tziperman, 2000: On ENSO's phase locking to the seasonal cycle in the fast SST, fast wave, and mixed mode regimes. *Journal of the Atmospheric Sciences*. 57, 2936-2950. [Link](#)
- 2) Harrison, M. J., A. Rosati, B. J. Soden, **E. Galanti**, and E. Tziperman, 2002: An evaluation of air-sea coupling for ENSO simulation and prediction. *Monthly Weather Review*, 130 (3), 723-732. [Link](#)
- 3) **Galanti, E.**, E. Tziperman, M. Harrison, A. Rosati, R. Giering, Z. Sirkes, 2002: The equatorial thermocline outcropping - A seasonal control on the tropical Pacific ocean-atmosphere instability. *Journal of Climate*, 15 (19), 2721-2739. [Link](#)
- 4) **Galanti, E.**, and E. Tziperman, 2003: A Mid-Latitude-ENSO teleconnection mechanism via baroclinically unstable long Rossby waves. *Journal of Physical Oceanography*. 33 (9), 1877-1888. [Link](#)
- 5) **Galanti, E.**, E. Tziperman, M. Harrison, A. Rosati, and Z. Sirkes, 2003: A study of ENSO prediction using a hybrid-coupled model and the adjoint method for data assimilation. *Monthly Weather Review*, 131 (11), 2748-2764. [Link](#)
- 6) Kohn, M., **E. Galanti**, C. Price, K. Lagouvardos and V. Kotroni, 2011: Now-Casting Thunderstorms in the Mediterranean Region using Lightning Data. *Atmos. Res.*, 100, 489-502. [Link](#)
- 7) Price, C., Y. Yair, A. Mugnai, K. Lagouvardos, M. C. Llasat, S. Michaelides, U. Dayan, S. Dietrich, **E. Galanti**, L. Garrote, N. Harats, D. Katsanos, M. Kohn, V. Kotroni, M. Llasat-Botija, B. Lynn, L. Mediero, E. Morin, K. Nicolaidis, S. Rozalis, K. Savvidou, B. Ziv, 2011: The FLASH Project: Using lightning data to better understand and predict flash floods. *Environ. Sci. & Policy*, 14, 898-911. [Link](#)
- 8) Price, C., Y. Yair, A. Mugnai, K. Lagouvardos, M. C. Llasat, S. Michaelides, U. Dayan, S. Dietrich, F. Di Paola, **E. Galanti**, L. Garrote, N. Harats, D. Katsanos, M. Kohn, V. Kotroni, M. Llasat-Botija, B. Lynn, L. Mediero, E. Morin, K. Nicolaidis, S. Rozalis, K. Savvidou, B. Ziv, 2011: Using lightning data to better understand and predict flash floods in the Mediterranean. *Surveys in Geophysics*, 32(6), 733-751. [Link](#)
- 9) Harnik, N., **E. Galanti**, O. Martius, and O. Adam, 2014: The anomalous merging of the African and North Atlantic jet streams during Northern Hemisphere winter of 2010. *Journal of Climate*, 27(19), 7319-7334. [Link](#)
- 10) Mezuman, K, C. Price, and **E. Galanti**, 2014: On the spatial and temporal distribution of global thunderstorm cells. *Environ. Res. Lett.* 9(12), 124023. [Link](#)
- 11) Haikin, N., T. Reisin, **E. Galanti**, I. Mahrer, P. Alpert, 2015: Inner-structure of Atmospheric Inversion Layers in the Eastern Mediterranean. *Boundary-Layer Meteorology*. 156(3), 471-487. [Link](#)
- 12) Silver, I., C. Price, **E. Galanti**, and A. Shuval, 2015: Anomalous strong vertical magnetic fields from distant ELF/VLF sources. *JGR – Space Physics*. 120(7), 6036-6044. [Link](#)
- 13) Helled, R., **E. Galanti**, and Y. Kaspi, 2015: A fast spinning Saturn as determined from its gravitational field and oblateness. *Nature*, 520, 202-204. [Link](#)
- 14) Parisi M., **E. Galanti**, S. Finocchiaro, L. Iess, and Y. Kaspi, 2016: Probing the depth of Jupiter's Great Red Spot with the Juno gravity experiment. *Icarus*, 267, 232-242. [Link](#)

- 15) **Galanti, E.** and Y. Kaspi, 2016: An adjoint based method for the inversion of the Juno and Cassini gravity measurements into wind fields. *The Astrophysical Journal*, 820(2), 91. [Link](#)
- 16) Kaspi Y., J.E. Davighi, **E. Galanti** and W.B. Hubbard, 2016: The gravitational signature of internal flows in giant planets: Comparing the thermal wind approach with barotropic potential-surface methods. *Icarus*, 276, 170-181. [Link](#)
- 17) **Galanti, E.**, Y. Kaspi, and E. Tziperman, 2017: A full, self-consistent treatment of thermal wind balance on oblate fluid planets. *Journal of Fluid Mechanics*. 810, 175–195. [Link](#)
- 18) **Galanti, E.** and Y. Kaspi, 2017: Decoupling Jupiter's deep and atmospheric flows using the upcoming Juno gravity measurements and a dynamical inverse model. *Icarus*, 286, 46-55. [Link](#)
- 19) Wahl, S. M., W. B. Hubbard, B. Militzer, T. Guillot, Y. Miguel, N. Movshovitz, Y. Kaspi, R. Helled, D. Reese, **E. Galanti**, S. Levin, J.E. Connerney, S.J. Bolton, 2017: Comparing Jupiter interior structure models to Juno gravity measurements and the role of a dilute core. *Geophysical Research Letters*, 44. [Link](#)
- 20) **Galanti, E.**, D. Durante, S. Finocchiaro, L. Iess, and Y. Kaspi, 2017: Estimating Jupiter gravity field using Juno measurements, trajectory estimation analysis, and a flow model optimization. *The Astronomical Journal*, 154(2). [Link](#)
- 21) Kaspi, Y., T. Guillot, **E. Galanti**, Y. Miguel, R. Helled, W.B. Hubbard, B. Militzer, and S.M. Wahl, 2017: The effect of differential rotation on Jupiter's low-order even gravity moments. *Geophysical Research Letters*, 44, 5960-5968. [Link](#)
- 22) **Galanti, E.** and Y. Kaspi, 2017: Prediction for the flow-induced gravity field of Saturn: implications for Cassini's Grande Finale. *The Astrophysical Journal Letters*, 843, L25. [Link](#)
- 23) **Galanti, E.**, H. Cao, and Y. Kaspi, 2017: Constraining Jupiter's internal flows using Juno magnetic and gravity measurements. *Geophysical Research Letters*, *Geophysical Research Letters*. 44:(16), 8173-8181. [Link](#)
- 24) Iess, I., W. M. Folkner, D. Durante, M. Parisi, Y. Kaspi, **E. Galanti**, T. Guillot, W. B. Hubbard, D. J. Stevenson, J. D. Anderson, D. R. Buccino, L. Gomez Casajus, A. Milani, R. Park, P. Racioppa, D. Serra, P. Tortora, M. Zannoni, H. Cao, R. Helled, J. I. Lunine, Y. Miguel, B. Militzer, S. Wahl, J. E. P. Connerney, S. M. Levin and S. J. Bolton, 2018: Measurement of Jupiter's asymmetric gravity field. *Nature*. 555, 220-222. [Link](#)
- 25) Kaspi, Y., **E. Galanti**, W. Hubbard, D. Stevenson, S. Bolton, L. Iess, T. Guillot, J. Bloxham, H. Cao, J. Connerney, D. Durante, W. Folkner, R. Helled, A. Ingersoll, J. Lunine, S. Levin, Y. Miguel, B. Militzer, M. Parisi, and S. Wahl, 2018: Jupiter's atmospheric jetstreams extend thousands of kilometers deep. *Nature*, 555, 223-226. [Link](#)
- 26) Guillot, T., Y. Miguel, B. Militzer, W. Hubbard, Y. Kaspi, **E. Galanti**, H. Cao, R. Helled, S. Wahl, L. Iess, W. Folkner, D. Stevenson, J. Lunine, D. Reese, A. Biekman, M. Parisi, D. Durante, J. Connerney, S. Levin, and S. Bolton, 2018: A suppression of differential rotation in Jupiter's deep interior. *Nature*, 555, 227- 230. [Link](#)
- 27) **Galanti, E.**, Y. Kaspi, Y. Miguel, T. Guillot, D. Durante, P. Racioppa and L. Iess, 2019: Saturn's Deep Atmospheric Flows Revealed by the Cassini Grand Finale Gravity Measurements. *Geophysical Research Letters*. 46:(2)616-624. [Link](#)

- 28) Iess, L, B. Militze,; Y. Kaspi, P. Nicholson, D. Durante, P. Racioppa, A. Anabtawi, **E. Galanti**, W. Hubbard, M. J. Mariani, P. Tortora, S. Wahl, M. Zannoni, 2019: Measurement and implications of Saturn's gravity field and ring mass. *Science*. 364, 6445. [Link](#)
- 29) **Galanti, E.**, Y. Kaspi, F. J. Simons, D. Durante, M. Parisi, S.J. Bolton, 2019: Determining the depth of Jupiter's Great Red Spot with Juno: a Slepian approach. *Astrophysical Journal Letters*, 874, L24. [Link](#)
- 30) Duer, K., **E. Galanti**, and Y. Kaspi, 2019: Analysis of Jupiter's deep jets combining Juno gravity and time varying magnetic field measurements. *Astrophysical Journal Letters*, 879:L22. [Link](#)
- 31) Parisi, M., W. Folkner, **E. Galanti**, Y. Kaspi, D. Buccino, K. Oudrhiri, and S.J. Bolton, 2020: A mascon approach to estimating the depth of Jupiter's Great Red Spot with the Juno mission. *Planetary and Space Science*. 181, 104781. [Link](#)
- 32) Raiter, D., **E. Galanti** and Y. Kaspi, 2020: The tropical conveyor belt: a Lagrangian analysis of the large-scale tropical atmospheric circulation. *Geophysical Research Letters*, in press. [Link](#)
- 33) Kaspi, Y., **E. Galanti**, A. Showman, D. Stevenson, T. Guillot, L. Iess, W. Hubbard and S.J. Bolton, 2020: Comparing the deep atmospheric dynamics of Jupiter and Saturn in light of the Juno and Cassini gravity measurements. *Space Science Reviews*, 216, 5, 84.. [Link](#)
- 34) Duer D., **E. Galanti**, and Y. Kaspi, 2020: The range of Jupiter's flow structures fitting the Juno asymmetric gravity measurements. *JGR-Planets*, 125, 8. [Link](#)
- 35) Parisi M., **E. Galanti**, W.M. Folkner, Y. Kaspi, and D.R. Buccino, 2020: Resolving the latitudinal short-scale gravity field of Jupiter using Slepian functions. *JGR-Planets*, 125, 11. [Link](#)
- 36) **Galanti, E.** and Y. Kaspi, 2021: Combined magnetic and gravity measurements probe the deep zonal flows of the gas giants. *Monthly notices of the Royal Astronomical Society*, in press. [Link](#)
- 37) **Galanti E.**, Kaspi Y., Duer K., Fletcher L., Ingersoll A., Li C., Orton G., Guillot T., Levin S. M., Bolton S. 2021: Constraints on the latitudinal profile of Jupiter's deep jets. *Geophysical Research Letters*. [Link](#)
- 38) Fletcher L. N., Oyafuso F. A., Allison M., Ingersoll A., Li L., Kaspi Y., **Galanti E.**, Wong M. H., Orton G. S., Duer K., Zhang Z., Li C., Guillot T., Levin S. M., Bolton S. 2021: Jupiter's Temperate Belt/Zone Contrasts Revealed at Depth by Juno Microwave Observations. *JGR: Planets*. 126, 10 [Link](#)
- 39) Duer K., Gavriel N., **Galanti E.**, Kaspi Y., Fletcher L. N., Guillot T., Bolton S. J., Levin S. M., Atreya S. K., Grassi D., Ingersoll A. P., Li C., Li L., Lunine J. I., Orton G. S., Oyafuso F. A., Waite J. H. 2021 : Evidence for multiple Ferrel-like cells on Jupiter. *Geophysical Research Letters*. 48. [Link](#)
- 40) Bolton S. J., Levin S. M., Guillot T., Li C., Kaspi Y., Orton G., Wong M. H., Oyafuso F., Allison M., Arballo J., Atreya S., Becker H. N., Bloxham J., Brown S., Fletcher L. N., **Galanti E.**, Gulkis S., Janssen M., Ingersoll A., Lunine J. L., Misra S., Steffes P., Stevenson D., Waite J. H., Yadav R. K., Zhang Z. 2021: Microwave observations reveal the deep extent and structure of Jupiter's atmospheric vortices. *Science*. eabf1015. [Link](#)
- 41) Parisi M., Kaspi Y., **Galanti E.**, Durante D., Bolton S. J., Levin S. M., Buccino D. R., Fletcher L. N., Folkner W. M., Guillot T., Helled R., Iess L., Li C., Oudrhiri K., Wong M. H. 2021: The depth of Jupiter's Great Red Spot constrained by Juno gravity overflights. *Science*. 374, 6570, p. 964-968. [Link](#)
- 42) Nettelmann N., Movshovitz N., Ni D., Fortney J., **Galanti E.**, Kaspi Y., Helled R., Mankovich C. R. & Bolton S. J. 2021: Theory of Figures to the Seventh Order and the Interiors of Jupiter and Saturn. *The Planetary Science Journal*. 2, 6, 241. [Link](#)

- 43) **Galanti E.**, Raiter D., Kaspi Y. & Tziperman E., 2022: Spatial patterns of the tropical meridional circulation: drivers and teleconnections. *JGR-Atmospheres*. 127, 2, e2021JD035. [Link](#)

Book chapters:

- 44) Haikin, N., I. Mahrer, T. Reisin, **E. Galanti**, and P. Alpert, 2010: A high resolution study of Atmospheric dispersion over a coastal urban area with complex terrain. *Air Pollution Modeling and Its Application XX*, 75-80. Springer. [Link](#)

Other publications:

- 45) **Galanti, E.**, 2003: Dynamics and predictability of ENSO - a study using a hybrid-coupled model and the adjoint method. *Ph.D. Thesis*. [Link](#)

Invited talks:

- 8th Joint Workshop on High Pressure, Planetary and Plasma Physics. Dresden, Germany. The deep winds of Jupiter and Saturn: similarities and differences. 10/2019.
- EPSC-DPS joint meeting, Geneva, Switzerland. Saturn's deep atmospheric flows in light of the Cassini gravity and magnetic measurements. 09/2019.
- JUICE SWT workshop, ESTEC, Noordwijk, Netherlands. The deep dynamics of Jupiter and Saturn. 03/2019.
- EGU meeting, Vienna, Austria. The depth of Jupiter's zonal jet-streams as inferred from the Juno gravity measurements. 04/2018.
- AOGS meeting, Singapore. Determining the Depth of Atmospheric and Interior Flows on Jupiter from the Juno Gravity Measurements. 08/2017.

Other international presentations:

- AGU meeting, New Orleans, USA. Jupiter's envelope is not homogeneous. 12/21. (Oral)*
- AGU meeting, New Orleans, USA. The internal structure of vortices on Jupiter as observed by the Juno Microwave Radiometer. 12/21. (Oral)*
- AGU meeting, New Orleans, USA. Jupiter's Deep Meridional Circulation as Inferred From Juno's MWR. 12/21. (Oral)*
- AGU meeting, New Orleans, USA. How deep is Jupiter's Great Red Spot? Results from the Juno gravity experiment. 12/21. (Oral)*
- AGU meeting, New Orleans, USA. Constraints on the Latitudinal Profile of Jupiter's Deep Jets. 12/21. (Oral)
- EGU meeting, virtual. The relation between the zonal jets and ammonia anomalies in Jupiter. 04/2021. (Oral)*
- EGU meeting, virtual. The Range of Jupiter's Flow Structures that Fit the Juno Asymmetric Gravity Measurements. 04/2021. (Oral)*
- EGU meeting, virtual. Constraints on the latitudinal structure of the deep zonal flows of Jupiter and Saturn. 04/2021. (Oral)*
- EGU meeting, virtual. Jupiter's envelope is not homogeneous. 04/2021. (Oral)*

- EGU meeting, virtual. Combined magnetic and gravity measurements probe the deep zonal flows of the gas giants. 04/2021. (Oral)
- AGU, virtual. The range of flow structures fitting Jupiter's asymmetric gravity field. 12/2020. (Oral)*
- AGU, virtual. A Coupled Eulerian-Lagrangian Analysis of the Large Scale Tropical Circulation: Implications for Climate Change. 12/2020. (Oral)*
- AGU, virtual. On the use of different function bases for the determination of Jupiter's gravity field. 12/2020. (Oral)*
- EPSC meeting, virtual. Synergized magnetic and gravity measurements probe the detailed structure of the gas giants' deep atmospheres. 09/2020. (Oral)
- EPSC meeting, virtual. TRIDENT Radio Science Objectives and Expected Performance. 09/2020. (Oral)*
- EPSC meeting, virtual. EnVision Radio Science Experiment. 09/2020. (Oral)*
- EPSC meeting, virtual. Jupiter's Temperate Belt/Zone Contrasts at Depth Revealed By Juno. 09/2020. (Oral)*
- EPSC meeting, virtual. Comparison of the deep atmospheric dynamics of Jupiter and Saturn in light of the Juno and Cassini gravity measurements. 09/2020. (Oral)*
- EPSC meeting, virtual. The statistical probability of deep flow structures that fit Jupiter's asymmetric gravity. 09/2020. (Oral)*
- EGU meeting, virtual. The range of flow structures fitting Jupiter's asymmetric gravity field. 04/2020. (Oral)*
- EGU meeting, virtual. The tropical atmospheric conveyor belt: a Lagrangian perspective of the large-scale tropical circulation. 04/2020. (Oral)*
- AGU meeting, San Francisco, USA. Cassini magnetic and gravity measurements reveal detailed structure of Saturn's deep atmosphere. 12/2019. (Poster)
- AGU meeting, San Francisco, USA. A comparative analysis of the deep atmospheric dynamics of Jupiter and Saturn in light of the Juno and Cassini gravity measurements. 12/2019. (Oral)*
- AGU meeting, San Francisco, USA. The gravity signature of Jupiter's small-scale atmospheric features from the Juno mission. 12/2019. (Poster)*
- EPSC-DPS, Geneva, Switzerland. How deep is Jupiter's Great Red Spot? a multimethod analysis using the recent Juno gravity measurements. 09/2019. (Oral)
- EPSC-DPS, Geneva, Switzerland. New insight on Jupiter's deep flows using a combination of Juno gravity and magnetic field measurements. 09/2019. (Oral)*
- EPSC-DPS, Geneva, Switzerland. Mechanisms controlling the deep jets on Jupiter: interpretation in light of the Juno mission measurements. 09/2019. (Poster)*
- AOGS, Singapore. Saturn's Deep Atmospheric Flows in Light of the Cassini Gravity and Magnetic Measurements. 08/2019. (Oral)
- AOGS, Singapore. The Juno Gravity Experiment: Revealing Juno's Interior and Deep Flows. 08/2019. (Oral)*
- AOGS, Singapore. Determining the Depth of the Great Red Spot with Juno Gravity Measurements. 08/2019. (Oral)*
- AOFD meeting, Portland, ME, USA. The deep winds of Jupiter and Saturn as inferred from recent gravity measurements: similarities and differences. 06/2019. (Oral)
- AOFD meeting, Portland, ME, USA. The Longitudinally Dependent Hadley Circulation - Clustering its Seasonal and Interannual Variability. 06/2019. (Poster)
- AOFD meeting, Portland, ME, USA. The tropical large scale circulation: A Lagrangian point of view. 06/2019. (Oral)*

- AOFD meeting, Portland, ME, USA. New insight on Jupiter's deep jets using the Juno gravity and magnetic field measurements. 06/2019. (Poster)*
- EGU meeting, Vienna, Austria. New insight on Jupiter's deep jets using the Juno gravity and magnetic field measurements. 04/2019. (Oral)*
- EGU meeting, Vienna, Austria. Comparison between the deep atmospheric dynamics of Jupiter and Saturn in light of the Juno and Cassini gravity measurements. 04/2019. (Oral)*
- EGU meeting, Vienna, Austria. Titan and Saturn Atmospheric Occultation Experiments using Analytical Ray-Tracing. 04/2019. (Oral)*
- AGU meeting, Washington, USA. The Longitudinally Dependent Hadley Circulation - Clustering its Seasonal and Interannual Variability. 12/2018. (Oral)
- AGU meeting, Washington, USA. How Deep is the Great Red Spot? Determining the Depth of the GRS with the Juno Gravity Measurements. 12/2018. (Poster)
- AGU meeting, Washington, USA. The possible mechanisms controlling the deep jets on Jupiter and Saturn in light of the Juno and Cassini gravity measurements. 12/2018. (Oral)*
- AGU meeting, Washington, USA. Saturn's Gravity Field Determination from Cassini Grand Finale and Implications on its Internal Structure. 12/2018. (Oral)*
- DPS meeting, Knoxville, USA. Comparing the deep dynamics on Jupiter and Saturn in light of the Juno and Cassini gravity experiments. 10/2018. (Oral)*
- EPSC, Berlin, Germany. How deep is the Great Red Spot? Determining the depth of the GRS with the Juno gravity measurements. 09/2018 (Oral)
- EPSC, Berlin, Germany. The deep winds of Jupiter and Saturn as inferred from recent gravity measurements - similarities and differences. 09/2018 (Oral)
- EPSC, Berlin, Germany. Saturn's deep atmosphere revealed by the Cassini Grand Finale gravity measurements. 09/2018 (Oral)
- EPSC, Berlin, Germany. Juno's sensitivity to the gravitational signature of Jupiter's meridional flows. 09/2018 (Oral)*
- Cassini symposium, Boulder, USA. Saturn's deep atmosphere revealed by the Cassini Grand Finale gravity measurements. 08/2018. (Oral)
- COSPAR meeting, Pasadena, USA. Can Juno detect the gravitational signature of Jupiter's meridional flows and frequency-dependent tidal response?. 07/2018 (Oral)*
- COSPAR meeting, Pasadena, USA. The surprising gravity field of Saturn. 07/2018 (Oral)*
- COSPAR meeting, Pasadena, USA. The new Jupiter. 07/2018 (Oral)*
- COSPAR meeting, Pasadena, USA. Juno's characterization of Jupiter's deep rotation and structure. 07/2018 (Oral)*
- COSPAR meeting, Pasadena, USA. Detection of deep jovian dynamics by the Juno gravity experiment. 07/2018 (Oral)*
- AOGS meeting, Honolulu, USA. Gravity Detection of Jupiter's Great Red Spot with the Juno Mission. 06/2018. (Poster)*
- EGU meeting, Vienna, Austria. Saturn's deep flow structure revealed by the Cassini Grand Finale gravity measurements. 04/2018. (Oral).
- EGU meeting, Vienna, Austria. Determination of Jupiter's gravity field by Juno. 04/2018. (Poster)*
- AGU meeting, New Orleans, USA. Initial estimation of Saturn's deep flow structure using the Cassini Grand Finale gravity measurements. 12/17. (Oral)
- AGU meeting, New Orleans, USA. The depth and structure of the atmospheric flows on Jupiter: results from the Juno gravity measurements. 12/17. (Oral)*
- AGU meeting, New Orleans, USA. Models of Jupiter's Interior that match Juno's Gravity Measurements. 12/17. (Oral)*

- AGU meeting, New Orleans, USA. Jupiter's gravity field from Ka-band Doppler tracking of Juno. 12/17. (Oral)*
- AGU meeting, New Orleans, USA. Investigating Jupiter's Deep Flow Structure using the Juno Magnetic and Gravity Measurements. 12/17. (Poster)*
- AGU meeting, New Orleans, USA. Great Red Spot's detection with the Juno gravity experiment. 12/17. (Poster)*
- DPS meeting, Utah, USA. Unveiling the Interior of Jupiter with Juno. 10/2017.(Oral)*
- DPS meeting, Utah, USA. Inferring the depth of the atmospheric flows on Jupiter from the Juno gravity measurements. 10/2017.(Oral)*
- EPSC, Riga, Latvia. Initial results for the depth of the winds on Jupiter as inferred from the Juno gravity measurements. 09/2017. (Oral)
- AOFD meeting, Portland, USA. Determining the Depth of Jupiter's Zonal Flows Using Gravity Measurements: Results from Juno's First Year Orbiting Jupiter. 06/2017. (Oral)*
- AOFD meeting, Portland, USA. Thermal Wind Balance of Fluid Planets: The Effects of Oblateness, Centrifugal Forces, and Self-Gravitation. 06/2017. (Poster)
- EGU meeting, Vienna, Austria. A new approach for estimating the Jupiter and Saturn gravity fields using Juno and Cassini measurements, trajectory estimation analysis, and a dynamical wind model optimization. 04/2017. (Oral)
- EGU meeting, Vienna, Austria. Juno's first peek at Jupiter's interior. 04/2017. (Oral)*
- EGU meeting, Vienna, Austria. Initial results for the depth of atmospheric and interior flows on Jupiter as inferred from the Juno gravity measurements. 04/2017. (Poster)*
- AGU meeting, San Francisco, USA. Slantwise convection on fluid planets: Interpreting convective adjustment from Juno observations. 12/2016. (Poster)*
- DPS meeting, Pasadena, USA. Unfolding the atmospheric and deep internal flows on Jupiter and Saturn using the Juno and Cassini gravity measurements. 10/2016. (Oral)
- DPS meeting, Pasadena, USA. Slantwise convection on fluid planets: Interpreting convective adjustment from Juno observations. 10/2016. (Oral)*
- Symposium on Climate Dynamics, Sde Boker, Israel. Thermal wind balance on fluid planets: corrections due to oblateness and wind induced gravity perturbations. 01/2016. (oral)
- AGU meeting, San Francisco, USA. Deep Plume Interaction with Gas Giant Weather Layers: Applications to Jupiter and Saturn. 12/2015. (Poster)*
- AGU meeting, San Francisco, USA. The possibility of inferring the depth of Jupiter's Great Red Spot with the Juno gravity experiment. 12/2015. (Poster)*
- DPS meeting, National Harbor, USA. Deciphering Jupiter's complex flow dynamics using the upcoming Juno gravity measurements and an adjoint based dynamical model. 11/2015. (Oral)
- DPS meeting, National Harbor, USA. Saturn's fast spin determined from its gravitational field and oblateness. 11/2015. (Poster)*
- DPS meeting, National Harbor, The gravity signature of atmospheric dynamics on giant planets: comparing the potential-theory and thermal-wind approaches. 11/2015. (Oral)*
- DPS meeting, National Harbor, USA. Coupled Gas Giant Atmospheres: Solar Heating vs. Interior Heating. 11/2015. (Oral)*
- DPS meeting, National Harbor, USA. Determining the vertical extent of Jupiter's Great Red Spot with the Juno gravity measurements. 11/2015. (Oral)*
- IUGG meeting, Prague, Czech Republic. Inferring the depth of the atmospheric circulation on Jupiter and Saturn through gravity measurements by Juno and Cassini. 06/2015. (Oral)

- EGU meeting, Vienna, Austria. “Revealing Saturn's Rotation Period from its Gravitational Field”. 04/2015. (Poster)*
- AGU meeting, San Francisco, USA. . Inverting Juno Gravity Field Measurements into the Atmospheric Dynamics of Jupiter. 12/2014. (Poster)*
- AGU meeting, San Francisco, USA. Utilizing the Upcoming Gravity Measurements from Cassini's Proximal Orbits for Studying the Atmospheric Dynamics of Saturn - How Deep Do the Winds Penetrate? 12/2014. (Poster)*
- DPS meeting, Tucson, USA. Inversion of Jupiter and Saturn gravity field into the atmospheric circulation on these planets - using the gravity measurements by Juno and Cassini and an adjoint based dynamical model. 11/2014. (oral).
- Latsis Symposium, Zurich, Switzerland. A study of the depth of the atmospheric circulation on Jupiter and Saturn using gravity measurements by Juno and Cassini and an adjoint based dynamical model. 06/2014. (poster)
- Latsis Symposium, Zurich, Switzerland. Inferring the depth of Jupiter’s vortices by the Juno gravity measurements. 06/2014. (poster)*
- ICEA meeting, Oklahoma, USA. Vertical Magnetic Field Measurements of ELF and VLF radio signals. 06/2014. (oral)*
- EGU meeting, Vienna, Austria. “Inferring the depth of the atmospheric circulation on Jupiter and Saturn through gravity measurements by Juno and Cassini and an adjoint based dynamical model”. 05/2014. (oral)*
- Symposium on Climate Dynamics, Sde Boker, Israel. Estimating Jupiter's winds using the Juno expected measurements, a trajectory estimation model, and an adjoint based thermal wind model. 01/2014. (oral)
- AGU meeting, San Francisco, USA. . Estimating Jupiter's winds using the Juno expected measurements, a trajectory estimation model, and an adjoint based thermal wind model. 12/2013. (poster)*
- AGU meeting, San Francisco, USA. Estimating the depth of the jet streams on Jupiter and Saturn through gravity measurements by Juno and Cassini: comparing the thermal wind and potential theory approaches. 12/2013. (poster)*
- DACA-13, Davos, Switzerland. The number of active global thunderstorms. 07/2013. (oral)*
- EGU meeting, Vienna, Austria. The anomalously zonal structure of the Atlantic jet during winter of 2009-10 - possible causes and implications. 04/2011. (oral)
- IUGG meeting, Melbourne, Australia. “The anomalously zonal structure of the Atlantic jet during winter of 2009-10 - possible causes and implications”. 07/2011 (oral)*
- EGU meeting, Vienna, Austria. How many thunderstorms are active at any moment? 04/2011. (oral)*
- EGU meeting, Vienna, Austria. “Now-Casting Thunderstorms in the Mediterranean Region using Lightning Data”. 04/2010. (oral)
- EGU meeting, Vienna, Austria. Now-casting of Flashfloods in the Mediterranean Area using Lightning Data and the Warning Decision Support System (WDSS-II)”. 04/2009. (oral)
- Plinius 11th meeting, Barcelona, Spain. “Tracking and Now-casting Intense Lightning Activity in the Global Tropics”. 09/2009. (oral)
- Plinius 10th meeting, Nicosia, Cyprus. “Now-casting of Flashfloods in the Mediterranean Area using Lightning Data and the Warning Decision Support System (WDSS-II)”. 09/2008. (poster)
- EGU meeting, Vienna, Austria. ”Measuring the impact of a new observing system lifetime on ENSO prediction -between ideas and reality”. 04/2005. (oral)
- EGU meeting, Nice, France. ”A study of ENSO prediction using a hybrid-coupled model and the adjoint method for data assimilation”. 04/2004. (oral)

- Climate Diagnostics and Prediction Workshop, Reno, NV. "A study of ENSO prediction using a hybrid-coupled model and the adjoint method for data assimilation". 10/2003. (oral)
- Tropical Biases Workshop, GFDL, Princeton University, NJ. "Sensitivity of the equatorial Pacific to mid-Lat processes using an ocean GCM and its adjoint". 05/2003. (oral)
- Coupled Data Assimilation Workshop, Portland, Oregon. "Coupled model initialization in a hybrid-coupled model". 04/2003. (oral)
- EGS-AGU-EUG, Nice, France. "A Mid-Latitude -ENSO tele-connection mechanism via baroclinically unstable long Rossby waves", and "A study of ENSO prediction using a hybrid-coupled model and the adjoint method for data assimilation". 04/2003. (oral)
- AGU Ocean Science meeting, Honolulu, Hawaii. "The equatorial thermocline outcropping: a seasonal control of the tropical Pacific ocean-atmosphere instability strength". 02/2002. (oral)
- Z-model Ocean Meeting, GFDL, Princeton University, NJ. "The generation of an adjoint code to MOM4 -current state and future plans". 11/1999. (oral)
- 12th AMS Conference on Atmospheric and Oceanic Fluid Dynamics, New York, NY. "On ENSO's phase locking to the seasonal cycle in the fast SST, fast wave, and mixed mode regimes". 06/99. (poster)
- Initiation and organization of the first CARESS (Conference of Active Research of Environmental Sciences Students) conference, Weizmann Institute of Science. 05/98.

* Presented by collaborators

G: Scientific Productivity

Participation in grants

- 2020. Unraveling the flow structure on Jupiter and Saturn using synergized analysis of magnetic and gravity measurements. IMOS. 185,000\$ (CO-PI with Yohai Kaspi).
- 2017. Data analysis of the 2016-2018 Juno and Cassini spacecraft observations. IMOS. 165,000\$ (CO-PI with Yohai Kaspi).
- 2017. JUICE Occultations of Jupiter. Israel Space Agency. 600,000\$ (with Dr. Yohai Kaspi, Weizmann)
- 2014. JUICE Occultations of Jupiter. Israel Space Agency. 480,000\$ (with Dr. Yohai Kaspi, Weizmann)
- 2014. Inferring the sub-cloud-layer atmospheric dynamics on Jupiter from Juno's gravity measurements. Ministry of Science. 120,000\$ (with Dr. Yohai Kaspi, Weizmann).
- 2012. ULF Precursors of Seismic Activity. Israel Insurance Association. 240,000\$ (CO-PI with Prof. Colin Price, TAU)
- 2012. ULF Precursors of Seismic Activity. Ministry of Science. 120,000\$ (CO-PI with Prof. Colin Price, TAU)

Involvement in student supervising

- Maria Smirnova, Ph.D student, Weizmann Institute (with Dr. Yohai Kaspi)
- Keren Duer, Ph.D student, Weizmann Institute (with Dr. Yohai Kaspi)
- Dana Raiter, M.Sc. student, Weizmann Institute (with Dr. Yohai Kaspi)
- Marzia Parisi, Postdoctoral fellow, Weizmann Institute (with Dr. Yohai Kaspi)
- Morgan O'Neill, Postdoctoral fellow, Weizmann Institute (with Dr. Yohai Kaspi)
- Talia Tamarin, Ph.D student, Weizmann Institute (with Dr. Yohai Kaspi)
- Hilla Afargan, Ph.D student, Weizmann Institute (with Dr. Yohai Kaspi)
- Adrian van-Kan, visiting student, , Weizmann Institute (with Dr. Yohai Kaspi)

- Joe Davighi, visiting student, Weizmann Institute (with Dr. Yohai Kaspi)
- Hofit Shahaf, M.Sc., Tel Aviv Univeristy (with Prof. Colin Price)
- Keren Mezuman, M.Sc., Tel Aviv Univeristy (with Prof. Colin Price)
- Nitsa Haikin, Ph.D., Tel Aviv Univeristy (with Prof. Pinhas Alpert)
- Moriah Kohn, M.Sc., Tel Aviv Univeristy (with Prof. Colin Price)

Collaborators

- Prof. Frederik Simons, Princeton University, USA.
- Prof. Timothy Dowling, University of Louisville, USA.
- Prof. Yamila Miguel, Leiden Univeristy, Holland.
- Prof. Tristan Gullit, Observatoire de la Cote d'Azu, France.
- Dr. Hao Cao, Harvard University, USA.
- Prof. William B. Hubbard, University of Arizona, USA.
- Prof. Luciano Iess, Sapienza University of Rome, Italy.
- Prof. Ravit Helled, Zurich University, Switzerland.
- Prof. Colin Price, Tel Aviv University.
- Prof. Nili Harnik, Tel Aviv University.
- Prof. Pinhas Alpert, Tel Aviv University.

I. Languages

- Hebrew: Reading (3), Writing (3), Speaking (3)
- English: Reading (3), Writing (3), Speaking (3)