

# Dr. Ori Adam

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## Current position

Senior Lecturer

The Fredy & Nadine Herrmann Institute of Earth Sciences

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## Research Interests

Climate dynamics. Tropical meteorology.

## Education

- |           |                 |   |
|-----------|-----------------|---|
| 2013–2016 | <b>Postdoc.</b> | Climate dynamics, ETH Zürich, Switzerland           |
| 2011–2013 | <b>Postdoc.</b> | Atmospheric dynamics, Tel-Aviv University, Israel   |
| 2005–2011 | <b>Ph.D.</b>    | Atmospheric dynamics, the Hebrew University, Israel |
| 2002–2004 | <b>M.Sc.</b>    | Astrophysics, the Hebrew University, Israel         |
| 1998–2001 | <b>B.Sc.</b>    | Physics, the City College of New York, NY, USA      |

## Appointments and Activities

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| 2015–2016 | Member of the Tropical Width Diagnostics Intercomparison Project  |
| 2012–2016 | Author and developer of <b>GOAT</b> (Geophysical Observation Analysis Tool): a MATLAB based tool for the management and analysis of geophysical data ( <a href="http://www.goat-geo.org">www.goat-geo.org</a> ) |
| 2015–2016 | Israeli Atmospheric and Climatic Data Center ( <b>IACDC</b> ) board member  |
| 2009–2011 | Pulmone Medical Devices Ltd., Israel ( <a href="http://www.pulm-one.com">www.pulm-one.com</a> ) Chief inventor and technology officer (CTO)   |

# Publications

## Journal articles

1. **Adam, O.**, T. Schneider, F. Brient, & T. Bischoff, 2016: Relation of the double-ITCZ bias to the atmospheric energy budget in climate models. *Geophys. Res. Lett.*, **43**, 7670–7677
2. **Adam, O.**, T. Bischoff & T. Schneider, 2016: Seasonal and interannual variations of the energy flux equator and ITCZ. Part II: Zonally varying shifts of the ITCZ. *J. Climate*, **0**, doi:10.1175/JCLI-D-15-0710.1
3. **Adam, O.**, T. Bischoff & T. Schneider, 2016: Seasonal and interannual variations of the energy flux equator and ITCZ. Part I: Zonally averaged ITCZ position. *J. Climate*, **29**, 3219–3230
4. **Adam, O.**, T. Schneider, & N. Harnik, 2014: Role of changes in mean temperatures versus temperature gradients in the recent widening of the Hadley circulation. *J. Climate*, **27**, 7450–7461
5. Harnik N., E. Galanti, O. Martius & **O. Adam**, 2014: The anomalous merging of the African and North Atlantic jet streams during Northern Hemisphere winter of 2010. *J. Climate*, **27**, 7319–7334
6. **Adam, O.** & N. Harnik, 2012: Idealized annually averaged Hadley Circulation in a Shallow Water Model. *J. Atmos. Sci.*, **70**, 284–302
7. **Adam, O.** & N. Paldor, 2010: On the role of viscosity in ideal Hadley circulation models. *Geophys. Res. Lett.*, **37**, L16801
8. **Adam, O.** & Paldor, N., 2010: Global circulation in an axially symmetric shallow water model forced by off-equatorial differential heating. *J. Atmos. Sci.*, **67**, 1275–1286
9. **Adam, O.** & N. Paldor, 2009: Global circulation in an axially symmetric shallow water model forced by equinoctial differential heating. *J. Atmos. Sci.*, **66**, 1414–1433

## Selected Invited Seminars

1. Bern University, Switzerland, May.2016. “Relating the atmospheric energy flux equator and intertropical convergence zone.”
2. Weizmann Institute, Israel, Oct.2015. “Seasonal and interannual variations of the energy flux equator and ITCZ in the present climate.”

3. Hebrew University, Israel, Oct.2015. “Seasonal and interannual variations of the energy flux equator and ITCZ in the present climate.”
4. Tel-Aviv University, Israel, Dec.2013. “GOAT Seminar: Introduction to GOAT (Geophysical Observation Analysis Tool) written by Ori Adam.”
5. Tel-Aviv University, Israel, Dec.2013. “What is the role of global-warming in the recent widening of the tropical-circulation?”
6. Weizmann Institute, Israel, Dec.2013. “What is the role of global-warming in the recent widening of the tropical-circulation?”
7. Hebrew University, Israel, Dec.2013. “What is the role of global-warming in the recent widening of the tropical-circulation?”
8. Ben-Gurion University, Sede Boker campus, Israel, Dec.2013. “What is the role of global-warming in the recent widening of the tropical-circulation?”
9. Weizmann Institute, Israel, Jan.2013. “Macroturbulent Hadley Circulation.”
10. Hebrew University, Israel, Jan.2012. “Simplified Macroturbulent Hadley Circulation.”

## Selected Conferences

1. WIS-Miverva symposium, the Weizmann Institute, Israel, Sep.2016. Talk: **Adam, O.**, T. Bischoff, F. Brient & T. Schneider, “Relation of the double-ITCZ bias and the atmospheric energy budget in climate models.”
2. Workshop on Monsoons and ITCZs, Columbia University, NY, Sep.2015. Poster: **Adam, O.**, T. Bischoff & T. Schneider, “Seasonal and interannual variations of the energy flux equator and ITCZ in the present climate.”
3. Chapman Conference on ‘The width of the tropics’, Santa Fe NM, July.2015. Talk: **Adam, O.**, T. Schneider & N. Harnik, “Role of changes in mean temperatures vs. temperature gradients in the recent widening of the Hadley circulation.”
4. American Meteorological Society Atmospheric and Ocean Fluid Dynamics (AOFD) conference, Minneapolis MN, June.2015. Talk: **Adam, O.**, T. Bischoff & T. Schneider, “Seasonal and interannual variations of the energy flux equator and ITCZ in the present climate.”
5. Latsis symposium on ‘Atmosphere and Climate Dynamics’, June 2014, Zürich, Switzerland. Poster: **Adam, O.**, T. Schneider & N Harnik, “Role of changes in

mean temperatures vs. temperature gradients in the recent widening of the Hadley circulation.” Poster: **Adam, O.**, T. Schneider & N Harnik, “GOAT: A new MATLAB based tool for retrieval, archiving, visualization and analysis of geophysical data.”

6. Davos Atmospheric and Cryosphere Assembly (DACA), July 2013, Davos, Switzerland. Invited Talk: **Adam, O.**, N. Harnik & T. Schneider, “The Balanced Stream Function: decomposing of the mean meridional circulation into eddy and diabatic-heating driven components in reanalysis data.” Poster: **Adam, O.** & N. Harnik, “Increased persistence of the solsticial Hadley circulation pattern in reanalysis data.”
7. American Meteorological Society’s 19th conference on Atmospheric and Oceanic Fluid Dynamics, June 2013, RI, USA. Talk: **Adam, O.** & N. Harnik, “Idealized annually averaged Macroturbulent Hadley Circulation in a Shallow Water Model.” (Presented by N. Harnik)
8. Symposium on Physical Aspects of Global and Regional Climate Dynamics (PADC), Ben-Gurion University, Israel, Nov.2012. Talk: **Adam, O.** & N. Harnik, “Idealized annually averaged Macroturbulent Hadley Circulation in a Shallow Water Model.”
9. Workshop on ‘Hierarchical modeling of climate’, ICTP, July 2012, Trieste, Italy. Poster: **Adam, O.** & N. Harnik, “Idealized Macroturbulent Hadley circulation in a shallow water model.”
10. European Respiratory Society Meeting, Amsterdam, 2011. Talk: **Adam, O.**, R. Shiner, P. Calverly, J. Solway, R. Brown & J. Fredberg (PI), “The measurement of absolute lung volume without plethysmography.” (presented by P. Calverly)
11. European Geophysical Union Meeting, Vienna, Apr.2008. Poster: **Adam, O.** & N. Paldor, “Jetstreams in an axially symmetric, differentially heated, Shallow Water Model on the rotating Earth.”
12. American Geophysical Union Meeting, San Francisco, 2006. Poster: **Adam, O.** & N. Paldor, “Jetstreams in an axially symmetric, differentially heated, Shallow Water Model on the rotating Earth.”

## Patents

1. **Adam, O.**, A. LaPrad, I. Cohen, Z. Peles, J. Solway, & J. Fredberg: “Determining Respiratory Parameters.” US Patent 20,160,106,341 (2016)

2. Shiner, R., **O. Adam.**, & A. Lazar: “Methods and devices for determining pulmonary measurements.” US Patent App. 14/954,417 (2015)
3. **Adam, O.** & A. Lazar: “System and methods for the measurement of lung volumes.” US Patent 8657757 (2014)
4. **Adam, O.**, A. Lazar, R. Shiner, Z. Peles & Y. Sheinman: “Methods and apparatus for the measurement of pulmonary parameters.” US Patent App. 13/808,868 (2011)
5. Lazar, A., M. Gaides, B. Rechav, **O. Adam**, Y. Sheinman, & R. Shiner: “System and methods for the measurement of lung volumes.” US Patent App. 12/670,661 (2008)