

NICHOLAS JAMES LUTSKO

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77 Massachusetts Avenue MIT
Cambridge, MA 02139.

Education

2012-2017 **Ph.D.** Atmospheric and Oceanic Sciences, Princeton University.
Thesis title: Aspects of Eddy Momentum Fluxes in the General Circulation of the Troposphere.
Adviser: Professor Isaac Held

2008-2012 **Msci.** Geophysics, Imperial College London.

Publications

Submitted/In Revision	Lutsko, N. J. and Cronin, T. W. (2018). Precipitation efficiency across different climates in radiative-convective equilibrium. <i>Journal of Advances in Modeling Earth Systems</i> , Submitted
2018	<p>Lutsko, N. J. (2018a). The relationship between cloud radiative effect and surface temperature variability at enso frequencies in cmip5 models. <i>Geophysical Research Letters</i>, In Press</p> <p>Lutsko, N. J. and Popp, M. (2018). The influence of meridional gradients in insolation and long-wave optical depth on the climate of a gray radiation gcm. <i>Journal of Climate</i>, In Press</p> <p>Lutsko, N. J. and Takahashi, K. (2018). What can the internal variability of cmip5 models tell us about their climate sensitivity? <i>Journal of Climate</i>, 31:5051 – 5069</p> <p>Lutsko, N. J. (2018b). The response of an idealized atmosphere to enso-like heating: Superrotation and the breakdown of linear theory. <i>Journal of the Atmospheric Sciences</i>, 75:3–20</p>
2017	<p>Popp, M. and Lutsko, N. J. (2017). Quantifying the zonal-mean structure of tropical precipitation. <i>Geophysical Research Letters</i>, 44(18):9470–9478. 2017GL075235</p> <p>Lutsko, N. J., Held, I. M., Zurita-Gotor, P., and O’Rourke, A. K. (2017). Lower tropospheric eddy momentum fluxes in idealized models and reanalysis data. <i>Journal of the Atmospheric Sciences</i>, 74:3787 – 3797</p>

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| 2016 | Lutsko, N. J. and Held, I. M. (2016). The response of an idealized atmosphere to orographic forcing: Zonal vs meridional propagation. <i>Journal of the Atmospheric Sciences</i> , 73(8):3701 – 3718 |
| 2015 | Lutsko, N. J., Held, I. M., and Zurita-Gotor, P. (2015). Applying the fluctuation–dissipation theorem to a two-layer model of quasi-geostrophic turbulence. <i>Journal of the Atmospheric Sciences</i> , 72(8):3161 – 3177 |

Departmental Seminars

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| 2018 | Laboratoire de Meteorologie Dynamique (Paris), NYU, MIT, Cambridge (UK), Oxford, Exeter University, Harvard University |
| 2017 | University of Chicago, Geophysical Fluid Dynamics Laboratory (dissertation defense), Columbia University |

Conference Presentations

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| 2018 | <p>AGU (<i>Invited Talk</i>) Investigating the Relationship Between TOA Energy Fluxes and Surface Temperature as a Function of Frequency</p> <p>Held Symposium (<i>Poster</i>) Investigating the Relationship Between TOA Energy Fluxes and Surface Temperature as a Function of Frequency</p> <p>MIT Water and Climate Change Workshop (<i>Poster</i>) Quantifying the Zonal-Mean Structure of Tropical Precipitation</p> |
| 2017 | <p>AGU (<i>Poster</i>) The Influence of Meridional Gradients in Insolation and Long-Wave Optical Depth on the Climate of a Gray Radiation GCM</p> <p>AOFD (<i>Talk</i>) Lower Tropospheric Eddy Momentum Fluxes in Idealized Models and Reanalysis Data</p> |
| 2016 | <p>AGU (<i>Talk</i>) What Can the Internal Variability of Climate Models Tell Us About Their Climate Sensitivity?</p> <p>Model Hierarchies Workshop (<i>Poster</i>) The Responses of Idealized Atmospheric Models to Orographic Forcing</p> |
| 2015 | <p>AOFD (<i>Talk</i>) The Response of the Mid-Latitudes to Idealized Orography in the Presence of a Jet</p> <p>AOFD (<i>Poster</i>) Applying the Fluctuation–Dissipation Theorem to a Two-Layer Model of Quasi-Geostrophic Turbulence</p> |

Professional Activities

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| Reviewer | Journal of the Atmospheric Sciences, Journal of Climate, Geophysical Review Letters, GFDL Internal Reviews. |
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- December 2018 **Session Convener at AGU** *Theme:* Relating the Internal Variability of Climate Systems and their Forced Responses.
- June 2017 **AOFD Session Chair** *Theme:* Theoretical Advances in AOFD.
- August 2015 **Organizer** Princeton AOS Workshop. *Theme:* Using Climate Models to Study Extreme Climates.
- Fall 2013 – Spring 2014 **Organizer** Princeton AOS student seminar series.

Teaching and Instruction

- Spring 2016 **Assistant Instructor** Princeton GEO202: Ocean, Atmosphere, and Climate with Professor Allison Gray.
- Fall 2015 **Assistant Instructor** Princeton AOS576: Current Topics in Dynamic Meteorology Large-Scale Structure/Atmosphere with Professor Isaac Held.
- Fall 2011 **Tutor** Imperial College ESE101: Mathematics for Geoscientists.

Awards, Fellowships and Summer Schools

- 2016 Rossbypalooza
- 2014 Cambridge FDSE Summer School
- 2013–16 NSF Graduate Research Fellowship
- 2012 Princeton University Centennial Fellowship
- 2012 Imperial College Governor's Prize
- 2009 EPSRC Summer Research Grant
- 2008 R. Stoddard Longcroft Prize at Imperial College

Professional Outreach

- 2018 **Lab Visit Host** with MIT Executive MBA Program.
- First Place** Climate Changed: After Models? Competition. MIT Environmental Solutions Initiatives & Department of Architecture, Urbanism and Planning.