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Education

- 2014 M.S., Atmospheric and Oceanic Sciences University of Wisconsin - Madison
- 2008 B.S., Atmospheric and Oceanic Sciences University of Wisconsin - Madison

Publications

- Rowe, S. M., and M. H. Hitchman, 2015: On the role of inertial instability in stratosphere -troposphere exchange in midlatitude cyclones. *J. Atmos. Sci*., **72**, 2131– 2151.

- Rowe, S. M., and M. H. Hitchman, 2016: On the relationship between inertial instability, poleward momentum surges and jet intensifications near midlatitude cyclones. *J. Atmos. Sci*., **73**, 2299-2315.

- Hitchman, M. H., and S. M. Rowe, 2017: On the similarity of lower stratospheric potential vorticity dipoles above tropical and midlatitude deep convection. *J. Atmos. Sci*., **74**, 2593-2613.

- Hitchman, M. H., and S. M. Rowe, 2019: On the structure and formation of UTLS PV dipole/jetlets in tropical cyclones by convective momentum surges. *Mon. Wea. Rev*., **147**, 4107-4125.

- Rowe, S. M. and M. H. Hitchman, 2020: Rapid destruction of a stratospheric potential vorticity anomaly by convectively induced inertial instability during the 20 August 2018 southern Wisconsin extreme flooding event. *Mon. Wea. Rev*., **148**, 4397- 4414.

- Hitchman, M. H., and S. M. Rowe, 2020: Reply to comment on "On the structure and formation of UTLS PV dipole/jetlets in tropical cyclones by convective momentum surges." *Mon. Wea. Rev*., **148**, 4697.

- Hitchman, M. H. and S. M. Rowe, 2021: On the formation of tropopause folds and constituent gradient enhancement near westerly jets. *J. Atmos. Sci*., **78,** 2057-2074.

- Hitchman, M. H. and S. M. Rowe, 2024: On the Role of the Meridional Jet and Horizontal Potential Vorticity Dipole in the Iowa Derecho of 10 August 2020. *Mon. Wea. Rev*., in press.

- Hitchman, M. H. and S. M. Rowe, 2024: Diagnosing the evolution and diurnal cycle of tropical cyclone Yasa using potential vorticity from ECMWF High-Resolution Operational Forecasts. In prep.

Professional Experience:

- Researcher II, Department of Atmospheric and Oceanic Sciences, UW-Madison, September 2021 - Present
- Associate Researcher, Department of Atmospheric and Oceanic Sciences, UW-Madison, January 2019 – September 2021
- Course Developer AOS 102 SoHE, Department of Atmospheric and Oceanic Sciences, UW-Madison, October 2019 – March 2020
- Assistant Researcher, Department of Atmospheric and Oceanic Sciences, UW-Madison, December 2014 - January 2019
- Research Assistant, Department of Atmospheric and Oceanic Sciences, UW-Madison, 2010-2014
- Teaching Assistant, AOS 171, Department of Atmospheric and Oceanic Sciences, UW- Madison, Spring 2010-2014
- Systems Programmer Assistant, Atmospheric Sciences Department, UW-Madison September 2007 – June 2011
- Web Master Assistant, Space Science and Engineering Center, UW-Madison, June 2008-September 2009

Awards, Scholarships and Certificates

- 2020 TeachOnline@UW – Plan and Design
- 2020 TeachOnline@UW - Facilitation and Management
- 2014 Wahl Award for outstanding performance as a Teaching Assistant - Awarded by the Department of Atmospheric and Oceanic Sciences at the University of Wisconsin-Madison
- 2012 L&S Teaching Fellow Award - Awarded by the L&S Teaching Assistant Instructional Development Program Committee at the University of Wisconsin - Madison