Brandon O. Wolding

NOAA Physical Sciences Labratory, Boulder, CO 80305-3337
brandon.wolding@noaa.gov, 303-497-6953

Appointments

May 2022 - Present
CIRES/NOAA PSL, Boulder, CO
Research Scientist II
- Supervising 3 CIRES scientists
- Funded NSF proposal: Characterizing interactions between tropical deep convection and the environment using a buoyancy framework

July 2020 - April 2022
CIRES/NOAA PSL, Boulder, CO
Research Scientist I
- Moisture-precipitation coupling in organized tropical convection research associate

July 2018 - June 2020
NOAA PSL, Boulder, CO
NOAA Climate and Global Change Fellow
- Research proposal: Energetics of convectively coupled tropical phenomena in present and past climates

Education

January 2013 - May 2017
Colorado State University
- Ph.D. Atmospheric Science
- Dissertation: Vertically Resolved Weak Temperture Gradient Analysis of the Madden-Julian Oscillation

August 2011 - December 2013
Colorado State University
- MSc Atmospheric Science
- Thesis: Moist Static Energy and the Madden-Julian Oscillation: Understanding Initiation, Maintenance and Propagation Through the Application of Novel Diagnostics

February 2009 - June 2010
University of Cape Town, South Africa
- MSc Applied Marine Science
- Thesis: Statistical Seasonal Forecasting of Winter Rainfall in Western South Africa

August 2002 - January 2007
Hawaii Pacific University
- BSc Oceanography

Publications

2024

Wolding, B., A. Rydbeck, J. Dias, F. Ahmed, M. Gehne, G. Kiladis, E. Riley Dellaripa, X. Chen, and I. McCoy (2024), Atmosphere-ocean coupled energy budgets of shallow and deep tropical convective discharge-recharge cycles, *J. Atm. Sci.*, 81(1), 3-29

Wolding, B., J. Dias, M. Gehne, G. Kiladis, F. Ahmed, K. Schiro, and A. Adames (2024), Plume model assessment of the convective coupling of equatorial waves, *J. Atm. Sci.*, submitted 12/14/2024

Dias, J., M. Gehne, G. Kiladis, **B. Wolding**, and A. Hoell (2024), Robust multi-decadal variability of Madden-Julian Oscillation amplitude in 20th century, *Geophysical Research Letters*, accepted with revisions

Chen, X., J. Dias, **B. Wolding**, P. Blossey, C. DeMott, R. Pincus, and E. J. Thompson (2024), Impacts of weak sea surface temperature warm anomalies on trade wind cloudiness in large eddy simulations, *JAMES*, submitted 10/17/2024

Bengtsson, L., S. N. Tulich, J. Dias, **B. Wolding**, K.J.C. Hall, M. Gehne, G. N. Kiladis, and P. Pegion (2024), The crucial role of the initial state in MJO prediction, *Geophysical Research Letters*, submitted 11/22/2024

2023

Chen, X., J. Dias, **B. Wolding**, R. Pincus, C. DeMott, G. Wick, E. J. Thompson, and C. W. Fairall (2023), Ubiquitous sea surface temperature anomalies increase spatial heterogeneity of trade-wind cloudiness on daily timescale, *J. Atm. Sci.*, 80(12), 2969-2987

2022

Wolding, B., S. W. Powell, F. Ahmed, J. Dias, M. Gehne, G. Kiladis, and J. D. Neelin (2022), Tropical thermodynamic–convection coupling in observations and reanalyses, *J. Atm. Sci.*, 79 (7), 1781–1803

Gehne, M., **B. Wolding**, J. Dias, and G. Kiladis (2022), Diagnostics of tropical variability for numerical weather forecasts, *Weather and Forecasting*, 37(9), 1661-1680

2020

Wolding, B., J Dias, G. Kildadis, E. D. Maloney, and M. Branson (2020), Interactions between moisture and tropical convection. Part II: The convective coupling of equtorial waves, *J. Atm. Sci.*, 77(5), 1801-1819

Wolding, B., J Dias, G. Kildadis, F. Ahmed, S.W. Powell, E. D. Maloney, and M. Branson (2020), Interactions between moisture and tropical convection. Part I: The co-evolution of moisture and convection, *J. Atm. Sci.*, 77(5), 1783-1799

2018

DeMott, C., **B. Wolding**, E. D. Maloney, and D. Randall (2018), Atmospheric mechanisms for MJO decay over the Maritime Continent, *J. Geophys. Res.*, 123(10), 5188-5204

2017

Wolding, B., E. D. Maloney, S. Henderson, and M. Branson (2017), Climate change and the Madden-Julian Oscillation: A vertically resolved weak temperature gradient analysis, *J. Adv. Model. Earth Syst.*, 9(1), 307-331

	Singh, M. S., Z. Kuang, E. D. Maloney, W. M. Hannah, and **B. Wolding** (2017), Increasing potential for intense tropical and subtropical thunderstorms under global warming, *Proc. National Acad. Sci.*, 114(44), 11657-11662
2016	**Wolding, B.**, E. D. Maloney, and M. Branson (2016), Vertically resolved weak temperature gradient analysis of the Madden-Julian Oscillation in SP-CESM, *J. Adv. Model. Earth Syst.*, 8(4), 1586-1619
2015	**Wolding, B.** and E. D. Maloney (2015b), Objective diagnostics and the Madden-Julian Oscillation. Part II: Application to moist static energy and moisture budgets, *J. Clim.*, 28(19), 7786-7808
	Wolding, B. and E. D. Maloney (2015a), Objective diagnostics and the Madden-Julian Oscillation. Part I: Methodology, *J. Clim.*, 28(10), 4127-4140
	Maloney E. D. and **B. Wolding** (2015), Initiation of an intraseasonal oscillation in an aquaplanet general circulation model, *J. Adv. Model. Earth Syst.*, 7(4), 1956-1976

Honors and Awards

2018	**NOAA Climate and Global Change Fellow**, UCAR CPAESS
2016	**Outstanding Student Paper Award**, American Geophysical Union
2016	**SoGES Sustainability Leadership Fellow**, Colorado State University
2015	**Outstanding Student Presentation**, American Meterological Society
2015	**Teaching Fellow**, Colorado College
2010	**Distinction Awarded**, University of Cape Town
2006	**Outstanding Student in Oceanography**, Hawaii Pacific University

Service

2024	**Host** of NOAA Climate and Global Change Summer Institute
2021 - Present	**Associate Editor** of Monthly Weather Review
2021 - 2023	**Chair** of 9th, 10th, and 11th MJO Symposium at the AMS Annual Meeting
2022, 2024	**Co-chair** of Convection Symposium, Convectively Coupled Equtorial Wave Session, AMS Tropical Conference
2022	**Mentor** in Research Experience for Community College Students (RECCS) program, administered by CU Boulder
2020 - 2022	**Advisory Board Member** for Colorado Early Colleges Fort Collins (CECFS)
2013 - Present	**Reviewer** for Journal of Climate, Journal of Atmospheric Science, and Journal of Geophysical Research, others

Additional Work Experience

March 2007 - July 2008 — **Observer Biologist**
National Marine Fisheries Service
MRAG Americas
Honolulu, Hawaii
- Collection of species data and samples aboard longline tuna and swordfish boats in Hawaiian and American Samoan fisheries

February 2007 - January 2009 — **Proprietor of Video Production Company**
Puena Productions
Amherst Jct, WI
- Video capture, editing and production per government contract
- Managing and coordinating multiple projects simulateously