CURRICULUM VITAE

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Updated: 12/28/2023

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Education

B.S., Cornell University, Major - Physics

Ph.D., University of Washington - Atmospheric Sciences

Doctoral Thesis: "A Numerical and Observational Study of African Wave

Disturbances." J. R. Holton, adviser.

Professional Experience

Mid 1981 to Assistant, Associate Professor, and Professor, Department of

present Atmospheric Sciences, University of Washington.

1978 to mid Assistant Professor, Department of Meteorology, University of

Maryland.

Books

The Weather of the Pacific Northwest, University of Washington Press
The Weather of the Pacific Northwest, University of Washington Press, Second Edition
The Science of Weather Prediction, in preparation.

- Mass, C. and D. Ovens, 2023: The Meteorology of the August 2023 Maui Wildfire. Submitted to Weather and Forecasting
- Murphy, P. and C. Mass, 2023: Weather Modulation of Rapid-Growth Events in California Wildfires. In review.
- Conrick, R., C. F. Mass, and L. McMurdie, 2023: Improving Simulations of Warm Rain in a Bulk Microphysics Scheme. Mon. Wea. Rev., 152, 169–185,
- Mass, C., D. Ovens, J. Christy, and R. Conrick, 2023: The Pacific Northwest Heat Wave of 25-30 June 2021: Synoptic/Mesoscale Conditions and Climate Perspective. Wea. Forecasting, in press.
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- Murphy, P., and C. Mass, 2023: The Influence of Regional Meteorology on Carbon Emissions from

- California Wildfires. Wea. Forecasting, 38, 337–355
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- Weber, N. J., C. F. Mass, and D. Kim, 2020: The impacts of horizontal grid spacing and cumulus parameterization on subseasonal prediction in a global convection-permitting model. *Mon. Wea.* Rev., 148, 4747–4765,
- McClung, B., and C. F. Mass, 2020: The strong, dry winds of Central and Northern California: climatology and synoptic evolution. *Wea. Forecasting*, **35**, 2163–2178
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Mass, C., 1979: A linear primitive equation model of African wave disturbances. *J. Atmos. Sci.*, **36**, 2075-2092.

Mass, C., and S. H. Schneider, 1977: Statistical evidence on the influence of sunspots and volcanic dust on long-term temperature records. *J. Atmos. Sci.*, **34**, 1995-2004.

Holton, J. R., and C. Mass, 1976: Stratospheric vacillation cycles. J. Atmos. Sci., 33, 2218-2225.

Mass, C., and C. Sagan, 1976: A numerical circulation model with topography for the Martian southern hemisphere. *J. Atmos. Sci.*, **33**, 1418-1430.

Schneider, S. H., and C. Mass, 1975: Volcanic dust, sunspots, and temperature trends. *Science*, 190.

Offices and Honors

Councilor, American Meteorological Society

Fellow, American Meteorological Society

Max Eaton Award, American Meteorological Society

President, Puget Sound Chapter, American Meteorological Society.

Program Chairman, Puget Sound Chapter, AMS.

Treasurer, Puget Sound Chapter, AMS.

Chairman, UCAR (University Corporation for Atmospheric Research), UNIDATA Data Access Committee.

Associate Editor, Monthly Weather Review.

Consulting Editor, Encyclopedia of Climate and Weather.

Chairman, UCAR Committee on Meteorological Data Sets

Chairman, 15th AMS Conference on Weather Analysis and Forecastings

Chairman, Special Workshop on Real-Time Mesoscale NWP in the University Community

Chairman, AMS Mesoscale Meteorology Committee

Chairman, DTC Science Advisory Board

Co-chair, AMS Committee on Communication

National Committees

Exec. Committee AMS Forecast Interest Group

AMS Membership Committee

AMS Board on Enterprise Communication

DTC Science Advisory Board

WRF Research Applications Board

NRC Committee on Atmospheric Predictability

AMS Ad-Hoc Committee on Community Fora

Chairman and member, USWRP CONDUIT committee

USWRP Science Advisory Board

WRF Science Board

Chairman and member, AMS Mesoscale Committee

USWRP PDT#4 on Mountain Meteorology

USWRP PDT#9 on Hydrology

AMS Committee on Weather Analysis and Forecasting

MM5 Community Oversight Committee

AMS Information Systems Committee

UCAR/NWS Local Digital Library Committee

UNIDATA Steering and Data Access Committees

National Academy of Sciences Geophysical Data Committee

UCAR COMET Advisory Committee

Search Committee for New NWS Director

Executive Committee, Board of Oceans and Atmosphere, National Association of State Universities and Land Grant Colleges

UCAR UCAM Committee

Regional Committees

Northwest Regional Modeling Consortium

University Committees and Organizations

Member and Chair: College Council, College of the Environment

Member, University Senate 1988-1990, 2004-2006

Department Computer Committee

Arts and Sciences Graduation Committee

Department Rules and Computer Committees

Electronic Publications

National Meteorological Center Grid Point Data Set CD-ROM (Versions I and II).

GALE Experiment CD-ROM.

North American Observational Data for August-December 1987 CD-ROM.

World Weather Disc CD-ROM.

Climate Analysis Center Global Gridded Data

Past Graduate Students

Kucera, T., 1981: M.S. on mesoscale modeling in complex terrain.

Delman, A., 1981: M.S. on diurnal wind and temperature variations and air quality in Washington, D.C. area.

Dubofsky, D., 1981: M.S. on a diagnostic study of Hurricane David.

Dempsey, D., 1985: Ph.D. on mesoscale modeling in complex terrain.

Pam Speers, 1985: M.S. on precipitation diagnoses and modeling in complex terrain.

David Portman, 1988: M.S. Effects of major eruptions on surface temperature and pressure.

Daniel Brees, 1988: M.S. Onshore push of the Pacific Northwest.

Brian Ulrickson, 1989: Ph.D. 3D primitive equation modeling of flow in the LA basin.

Garth Ferber,1991 M.S. Mesoscale pressure perturbations forced by the Olympic Mountains.

David Schultz, 1992, M.S. Structural analysis of a midlatitude cyclone over land.

Brian Colle, 1994, M.S. Northerly surges to the east of the Rocky Mountains.

Jim Steenburgh, 1995, Ph.D: Mesoscale modeling of synoptic/orographic interactions.

Brian Colle, 1997, Ph.D: Dynamics of windstorms in three dimensional terrain

Fang-Ching Chien, 1997, Ph.D: Interaction of fronts with coastal topography.

Ken Westrick, 1998, M.S.: Coupling of atmospheric and distributed hydrological models.

Richard Steed, 1999, M.S.: Initialization of mesoscale forecasting models.

Eric Grimit, 2001, M.S.; A Short-Range Ensemble Prediction System

Justin Sharp, 2002: M.S.: A Study of the Meteorology of the Columbia River Gorge

Tony Eckel, 2004: Ph.D. Effective Short-Range Mesoscale Ensemble Prediction.

Eric Grimit, 2004: Ph.D. Predicting Forecast Skill Using a Mesoscale Ensemble System

Justin Sharp, 2005, Ph.D. Modeling study of the flow in the Columbia River Gorge.

Brian Ancell, 2006, Ph.D. Adjoint and ensemble-based forecast sensitivity

Bri Dotson, 2007, M.S.. Structure and dynamics of major Pacific windstorms.

Garrett Wedam, 2008, M.S. Errors in numerical prediction models

Robert Hahn, 2008, M.S. Understanding of microphysical errors in numerical models.

Ken Dixon, 2013: M.S. Lightning Data Assimilation

Michael Warner, 2014. M.S., Ph.D. Heavy precipitation events of the U.S. West Coast

Lee Picard, 2015. MS. An idealized model of orographic precipitation

Matt Brewer, 2017: Ph.D. Structure and dynamics of the thermal trough

Luke Madaus, 2016. Ph.D. Initiation of convection and smartphone data assimilation

Brandon McClung, 2019, M.S. Diablo Winds.

Robert Conrick, 2021, Ph.D. Warm rain microphysics

Callie McNicolas, 2021, Ph.D. Smartphone pressure observations.