

Research Meteorologist III, Senior Lecturer
Dept. of Atmospheric Sciences
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EDUCATION

Ph.D. Atmospheric Sciences	University of Washington, 1989
M.S. Atmospheric Sciences	University of Washington, 1983
B.S. Atmospheric Sciences minor, Environmental Studies	University of California, Davis June 1978, High Honors

EMPLOYMENT

1991 - present	Research Meteorologist III and Senior Lecturer, University of Washington
1989 - 1991	Postdoctoral Scientist, Cooperative Institute for Meteorological Satellite Studies, University of Wisconsin
1980 - 1988	Research Assistant, University of Washington
1978 - 1979	Forecaster, River Forecast Center, National Weather Service, Portland OR

AWARDS

1999, 2004, 2011 Awarded Department Teaching Award.

RESEARCH GRANTS

1993 - 1996	Co-Investigator on NSF grant titled: Structure and Evolution of Southern Ocean Mesocyclones using Multiple Satellite Systems. Work was performed with Drs. Kristina Katsaros and Andrew Carleton.
1996 - 1999	Co-Investigator on NSF grant titled: Electronic Laboratory for Synoptic and Mesoscale Instruction. The research focused on developing computer-based case studies of synoptic and mesoscale weather systems for classroom use in a full range of courses from the introductory to the advanced atmospheric sciences courses. The work involved identifying suitable cases, analyzing each one both by hand and using computer models and developing a series of laboratory assignments at various levels of difficulty.
2005 - 2009	Principal Investigator on NSF grant titled: Climatology of Forecast Skill and Major Forecast Failures over North America and Adjacent Waters with Co-Investigator, Dr. Cliff Mass.
2009 – present	Principal Investigator on NRL grant titled: Predictability and Weather Regimes along the West Coast.
2011 – present	Co-Investigator with R. Holzworth, G. Hakim and C. Mass on NOAA grant titled: Lightning Studies.
2012 – present	Project Manager for NASA grant, Olympex Feasibility Study with R. A. Houze, Jr., PI, D. Lettenmaier, J. Lundquist and C. Mass Co-PI's.

ADVISING

- Summer 2000 Advised an undergraduate student in the summer program, Our Earth, funded by NASA. Student was responsible for completing and presenting a research project under my direct supervision on a topic pertinent to my research.
- 2005 – 2008 Masters Thesis advisor, chair, for Garrett Wedam. Degree completed Fall 2008. Title: Measuring Skill of Numerical Weather Prediction.
- Thesis committees Recent service includes; Thesis committee member for: Bri Dotson, in Atmospheric Sciences, masters, Fall 2007; Veronica Berrocal in Statistics, PhD, June 2007 and Brian Ancell in Atmospheric Sciences, PhD, June 2006. Currently serving on the committee for Nicole Feldl.

TEACHING EXPERIENCE

At the University of Washington:

- Summer 1983 Taught the "Weather" course (ATMS 101).
Spring 1985 Taught a University of Washington Extension Program course titled "Weather and the Atmosphere".
- 1991 - present
(except 1996) Laboratory instructor for the "Atmospheric Structure and Analysis" course for juniors in atmospheric sciences (ATMS 370). Responsible for the instruction and grading of the laboratory portion of the course. Coordinated with the lecture instructor concerning the content of the laboratory. The laboratory consists of map analysis and computer-based laboratory assignments.
- 1992 - present Laboratory instructor for the "Atmospheric Motions II" course for seniors in atmospheric sciences (ATMS 442). Responsible for the content, instruction and grading of the laboratory portion of the course. The laboratory consists of computer-based assignments.
- 1991 - 1998 Laboratory instructor for the "Atmospheric Structure and Analysis I: Synoptic Scale Systems" course for graduate students in atmospheric sciences (ATMS 551). Responsible for the content, instruction and grading of the laboratory portion of the course. The laboratory included both map analysis and computer-based assignments. Currently, this course is not taught every year.
- Spring 1997, 2000
and 2002 Laboratory instructor for "Introduction to Synoptic Meteorology" (ATMS 502). Coordinated with the lecture instructor concerning the content of the laboratory assignments, responsible for the instruction and grading of the laboratory portion of course. The laboratory consisted of map analysis, computer-based assignments and a student project.
- 1998, 1999, 2001 Taught "Introduction to Synoptic Meteorology" (ATMS 502). Fully responsible for the course including course content, lectures, laboratory assignments, and grading.
- 2003 - present

SEMINARS AND CONFERENCE PRESENTATIONS

- December 1982, 1985 American Geophysical Union Meeting, San Francisco, CA
July 1987 Invited Presentation, NCAR, Boulder, CO

July 1987	IUGG, Vancouver, Canada
February 1988	Invited Presentation, University of Wisconsin, Madison, WI
1988	AMS 3rd Satellite Meteorology and Oceanography conference Anaheim, CA
1991	Air/Sea Interaction Conference, Galveston, TX
April 1991	Invited Talk, National Severe Storms Laboratory, Norman, OK
January 1992	AMS 6th Satellite Meteorology and Oceanography conference, Atlanta, GA
June 1994	Extratropical Cyclone Symposium, Bergen, Norway
July 1995	IUGG, Boulder, CO
July 1996	Proposal review panel, NSF Course and Curriculum Development Program of the Department of Undergraduate Education
March 2000	Northwest Weather Workshop, Seattle, WA
June 2000	Instructor for short-course in Users of Unidata Products, Boulder, CO
August 2000	Invited presentation, Cyclone Workshop, Monterey CA
March 2002	Northwest Weather Workshop, Seattle, WA
March 2003	Northwest Weather Workshop, Seattle, WA
September 2003	Ensemble Workshop and Cyclone Workshop, Val Morin, Canada
January 2004	AMS Annual Meeting
March 2004	Northwest Weather Workshop, Seattle, WA
May 2005	Department Colloquium, University of Washington, Seattle, WA
June 2005	THORPEX workshop, Seattle, WA
August 2005	Weather and Forecasting/Numerical Weather Prediction, Washington, D.C.
March 2006	Northwest Weather Workshop, Seattle, WA
October 2006	Cyclone Workshop, Monterey, CA
March 2007	Northwest Weather Workshop, Seattle, WA
June 2007	Weather and Forecasting/Numerical Weather Prediction, Park City, UT
November 2007	Dynamics Seminar, University of Washington, Seattle, WA
March 2008	Northwest Weather Workshop, Seattle, WA
March 2008	Invited talk, University of Wisconsin, Madison, WI
March 2008	Invited talk, M3, NCAR, Boulder, CO
September 2008	Cyclone Workshop, Montreal, Canada
March 2009	Pacific Northwest Weather Workshop, Seattle, WA
September 2009	Third Thorpex International Science Symposium, Monterey CA
March 2010	Pacific Northwest Weather Workshop, Seattle, WA
January 2011	Fifth Conference on the Meteorological Applications of Lightning Data, Seattle WA
January 2011	24 th Conference on Weather and Forecasting/20 th Conference on Numerical Weather Prediction, Seattle, WA
March 2011	Cyclone Workshop, Monterey, CA
May 2011, March 2012	Pacific Northwest Weather Workshop, Seattle, WA
Jan 2013	AMS 6 th Conference on Meteorological Applications of Lightning Data and AMS 17 th Conference on Integrated and Observing Assimilation Systems for the Atmosphere, Ocean and Land Surfaces, Austin, TX
March 2013	Pacific Northwest Weather Workshop, Seattle, WA
March 2013	Precipitation Measurement Missions workshop, Annapolis, MD
August 2013	AMS Mesoscale Conference, Portland, OR
September 2013	McGill University, Montreal Canada
October 2013	Colorado State University, Fort Collins, CO
December 2013	AGU, San Francisco, CA
March 2014	PNW Weather Workshop, Seattle WA
April 2014	PNNL, Richland WA

BIBLIOGRAPHY

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- Ancell, B. C., and L. A. McMurdie, 2013: Ensemble adaptive data assimilation techniques applied to land-falling North American cyclones. Chapter in "Data Assimilation for Atmospheric, Oceanic and Hydrologic Applications (Vol. II)," Xu, L., and S. Park, Eds., Springer, 555-575.
- McMurdie, L.A., and J. Casola, 2009: Weather regimes and forecast errors in the Pacific Northwest. *Wea. Forecasting*, **24**, 829-842.
- Wedam, G. B., L. A. McMurdie, C. F. Mass, 2009: Comparison of model forecast skill of sea level pressure over the east and west coasts of the United States. *Wea. Forecasting*, **24**, 843-854.
- McMurdie, L. A., and C. Mass, 2004: Major Numerical Forecast Failures over the Northeast Pacific. *Wea. Forecasting*, **19**, 338-356.
- Claud, C., G. Heinemann, E. Raustein, L. McMurdie, 2003: Polar Low "Le Cygne": Satellite Observations and Numerical Simulations. *Quart. J. of Roy. Met. Soc.*, **104**, 1075-1102.
- McMurdie, L. A., C. Claud, and S. Atakturk, 1997: Satellite-derived atmospheric characteristics of spiral and comma-shaped southern hemisphere mesocyclones. *J. Geophys. Res.*, **102**, 13889-13905.
- McMurdie, L. A., K. B. Katsaros, 1996: Satellite-derived integrated water vapor and rain intensity patterns: Indicators for rapid cyclogenesis. *Wea. and Forecasting*, **11**, 230-245.
- Carleton, A. M., L. A. McMurdie, K. B. Katsaros, H.-W. Zhao, N. Mognard, and C. Claud, 1995: Satellite-derived features and associated atmospheric environments of Southern Ocean mesocyclone events. *The Global Atmosphere and Ocean System*, **3**, 209-248.
- Rabin, R. M., L. A. McMurdie, C. M. Hayden and G. S. Wade, 1993: Evaluation of the atmospheric water budget following an intense cold-air outbreak over the Gulf of Mexico -- application of a regional forecast model and SSM/I observations. *J. Applied Met.*, **32**, 3-16.
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- McMurdie, L. A., 1989: Interpretation of integrated water vapor patterns in oceanic midlatitude cyclones derived from the Scanning Multichannel Microwave Radiometer. Ph. D. Thesis, University of Washington, 223pp.
- Katsaros, K. B., I. Bhatti, L. A. McMurdie, and G. W. Petty, 1989: Identification of atmospheric fronts over the ocean with microwave measurements of water vapor and rain. *Wea. Forecasting*, **4**, 449-460.

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