

Melissa D. Payer

18 Barre Paxton Road • Rutland, MA 01543 • (978) 302-9347
payer.melissa@gmail.com • <http://www.atmos.albany.edu/student/mpayer/>

Education

The University at Albany, State Univ. of NY (SUNY) *Albany, NY* *December 2010*
Master of Science in Atmospheric Science
Thesis: Precipitation Distributions Associated with Cool-season Cutoff Cyclones in the Northeast US
GPA: 3.84 / 4.00

Plymouth State University *Plymouth, NH* *May 2008*
Bachelor of Science in Meteorology
Minor in Technical Mathematics
GPA: 3.96 / 4.00 with *summa cum laude* honors

Relevant Experience

Science Tutor *Anna Maria College, Paxton, MA* *Jan. 2011–present*

- Provide academic support to students enrolled in Chemistry I & II through individual and group review sessions
- Assist students with lab reports, problem sets, practice problems, and exam review

Graduate Research Assistant *The Research Foundation of SUNY, Albany, NY* *May 2009–Aug. 2010*

- Examined several cases of persistent winter storms using data visualization tools, such as GEMPAK, in order to determine the causes of heavy precipitation in the Northeast US
- Wrote six-monthly reports documenting research progress to be submitted to a grant committee
- Communicated research results to National Weather Service forecasters every 2–3 months with the goal of increasing their situational awareness and improving precipitation forecasts

Graduate Teaching Assistant *The University at Albany, SUNY, Albany, NY* *Aug. 2009–May 2010*

- Graded homework assignments, proctored exams, and met with students to answer questions pertaining to course material
- Prepared and taught one lecture for a senior-level meteorology course (Dynamic Meteorology II)

Summer Research Intern *Hobart & William Smith Colleges, Geneva, NY* *June 2008–July 2008*

- Manually examined six-years of surface maps to identify all frontal passages in the Great Lakes region
- Developed a database in Excel documenting the evolution of 2,173 fronts including the type, start and end time, and the lakes/states each front passed over and analyzed the data using SPSS
- Co-wrote a journal article that was published in *Weather and Forecasting*

Student Assistant *Plymouth State University, Plymouth, NH* *Sept. 2005–May 2008*

- Completed various projects within the meteorology department, such as maintaining computers, organizing professional meteorological journals, and assisting professors in course preparations
- Responsible for maintaining meteorological instruments and archiving the data from these instruments

Student Research Intern *Space Weather Prediction Center, Boulder, CO* *May 2007–July 2007*

- Consulted with forecasters to determine their operational need for automated space weather detection
- Evaluated several programs for their ability to identify space weather events and made recommendations for best software package for the forecasters' needs
- Presented research results to NOAA scientists in Boulder, CO, and Washington, DC, in August 2007

Skills

<i>Operating Systems</i>	Windows XP and Vista, Linux, UNIX, Macintosh
<i>Programming</i>	C shell, Fortran, HTML
<i>Computational/Scientific Tools</i>	MATLAB, GEMPAK, HYSPLIT, GR2Analyst, IDV, SPSS, Minitab
<i>Microsoft Office</i>	Excel, PowerPoint, Word, Outlook

Refereed Publications

Payer, M., N. F. Laird, R. Maliawco, and E. Hoffman, 2011: Climatology of Great Lakes fronts and associated surface baroclinic zones. *Weather and Forecasting*, in press.

Laird, N. F., J. Desrochers, and M. Payer, 2009: Climatology of lake-effect precipitation events over Lake Champlain. *Journal of Applied Meteorology and Climatology*, **48**, 232–250.

Payer, M., J. Desrochers, and N. F. Laird, 2007: A lake-effect snow band event over Lake Champlain. *Monthly Weather Review*, **135**, 3895–3900.

Honors and Awards

2008	AMS Graduate Fellowship	National Weather Service (sponsor)
2008	Senior Meteorology Achievement Award	Plymouth State University
2007	David S. Johnson Endowed Undergraduate Scholarship	American Meteorological Society
2006	Ernest F. Hollings Undergraduate Scholarship	NOAA
2005–2007	NASA Space Grant Scholarship	NASA
2005, 2006	Geneva Smith Meteorology Scholarship	Plymouth State University
2004–2008	Presidential Scholarship (all semesters)	Plymouth State University

Professional Affiliations

2008–present	Phi Kappa Phi
2006–present	American Meteorological Society

References Available Upon Request