Daniel F. D'Amico

Atmospheric Science Program
Department of Geography
The Ohio State University

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Education

2013 – 2017 The Ohio State University, Doctor of Philosophy in Atmospheric Science.
Ph.D. Dissertation: *Dissolved oxygen in the oceans: An examination of the Late Ordovician and near future using an Earth system climate model.*
Advisor: Alvaro Montenegro

2010 – 2012 South Dakota School of Mines and Technology, Master of Science in Atmospheric Sciences.
M.S. Thesis: *Simulating impacts of alternative land management and vegetation phenologies on Great Plains hydrometeorology and hydroclimate using WRF-ARW.*
Advisor: William J. Capehart

2006 – 2010 Valparaiso University, Bachelor of Science in Meteorology, Mathematics Minor, *Cum Laude*.

Research Interests

Climate modeling, extreme weather, numerical data assimilation, deep convection, paleoclimatology and oceanography, boundary layer meteorology, land-atmosphere-ocean interactions, tropical meteorology, hydrometeorology, wildfire meteorology, climate change, biogeochemistry, remote sensing

Awards and Honors

2014 Rayner Scholarship for Graduate Field Work: One-time award for outstanding Geography or Atmospheric Science students at Ohio State to gather data in support of a dissertation or share research away from campus.

2011 – 2012 Nelson Fellow: Awarded to a graduate student in recognition of research achievement in chemistry, chemical engineering, physics, geology, geological engineering, mathematics, or atmospheric sciences.

2011 – 2012 Ivanhoe Fellow: Awarded to a graduate student for excelling research in a scientific or environmental field.

2010 NASA South Dakota Space Grant Consortium Research Stipend: Awarded to a deserving graduate student that is researching topics related to NASA goals and strategic vision.

2010 – Chi Epsilon Pi National Meteorological Honor Society: Inducted into the Valparaiso University chapter in the Spring of 2010 based on GPA merit in meteorology, physical science, and mathematics courses.

2006 – 2010 Valparaiso University Presidential Scholarship: Awarded to incoming freshman at Valparaiso University based on highest combined subscore of the ACT or SAT and grade point average.

Publications and Manuscripts

Currently Revising

2018 **D'Amico, D. F.**, A. Montenegro, M. J. Melchin, and M. Eby, In preparation: Ordovician climate simulations with an earth system model: Impact of atmospheric O_2 and CO_2, winds, and nutrient inputs on ocean bottom oxygen concentrations. Submitting to *Palaeogeography, Palaeoclimatology, Palaeoecology*.

Under Review

2018 **D'Amico, D. F.**, S. M. Quiring, C. M. Maderia, and D. B. McRoberts, In preparation: Improving the Hurricane Outage Prediction Model by including tree species. Submitting to: *Journal of Applied Meteorology and Climatology*.

2018 **D'Amico, D. F.**, A. Montenegro, and M. J. Melchin, In preparation: Simulating deep ocean oxygen in the Late Ordovician with an earth system climate model: Impacts of organic matter remineralization, settling velocities, and ocean surface albedo. Submitting to *Palaeogeography, Palaeoclimatology, Palaeoecology*.

Conference Proceedings

2012 **D'Amico, D. F.**, W. J. Capehart, C. K. Wright, and G. M. Henebry, 2011: Downscaling in WRF from regional climate to storm scale for different vegetation and boundary condition sources. *12th Annual WRF Users Workshop*, Boulder, CO, USA, National Center for Atmospheric Research, 15 pp.

Conference Presentations

2016 **D. F. D'Amico** and A. Montenegro: Simulating Late Ordovician deep ocean O_2 with an earth system climate model: First Results. *2016 Annual Meeting of the Geological Society of America*, Denver, CO, USA, Geological Society of America, poster presentation.

2016 **D. F. D'Amico** and A. Montenegro: Simulating Late Ordovician deep ocean O_2 with an earth system climate model. Preliminary results. *European Geosciences Union General Assembly 2016*, Vienna, AUT, European Geosciences Union, poster presentation.

2015 **D. F. D'Amico**, A. Montenegro, and M. Eby: Ordovician climate simulations with an earth system model: Focus on the impact of atmospheric O_2 and CO_2 on deep ocean oxygen concentrations. *2015 Joint Assembly of the American Geophysical Union, Canadian Geophysical Union, Geological Association of Canada, and Mineralogical Association of Canada*, Montreal, QC, CAN, American Geophysical Union, oral presentation.

2012 **D. F. D'Amico**, P. Norton, W. J. Capehart, J. Stamm, V. Kovalskyy, and G. Henebry: Impacts of alternative land management and vegetation regimes on Northern Great Plains hydroclimate. *2012 Western South Dakota Hydrology Conference*, Rapid City, SD, USA, United States Geological Survey, oral presentation.

2012 Capehart, W. J., **D. F. D'Amico**, P. Norton, J. Stamm, V. Kovalskyy, and G. Henebry: Impacts of alternative land management on Northern Great Plains hydroclimate. *92nd Annual Meeting of the American Meteorological Society*, New Orleans, LA, USA, American Meteorological Society, oral presentation.

2011 **D'Amico, D. F.**, W. J. Capehart, C. K. Wright, and G. M. Henebry: Downscaling in WRF from regional climate to storm scale for different vegetation and boundary condition sources. *12th Annual WRF Users Workshop*, Boulder, CO, USA, National Center for Atmospheric Research, poster presentation.

2010 Guseman, J., V. Vincente, and **D. F. D'Amico**: Severe weather case study exercise. *8th Annual Great Lakes Meteorology Conference*, Valparaiso, IN, USA, Northwest Indiana Chapter of AMS/NWA, interactive presentation.

Teaching – Primary Instructor

Ohio Wesleyan University, Department of Geology and Geography

GEOG 111 Introduction to Physical Geography (Autumn 2018)

The Ohio State University, Department of Geography

GEOG 1900 Introduction to Weather and Climate (Summer 2016, 2017)

Hubei Outstanding Student US Study Tour

Experiencing American University Education, Environmental Science (Winter 2013)

Teaching – Laboratory Instructor

The Ohio State University, Department of Geography

GEOG 1900 Introduction to Weather and Climate (Autumn 2013, 2016, 2017, Spring 2014, 2017, Summer 2015, 2016, 2017)

GEOG 2960 Introduction to Physical Geography (Spring 2015)

GEOG 5900 Climatology (Spring 2018)

Teaching – Guest Lecturer

The Ohio State University, Department of Geography

GEOG 1900	Introduction to Weather and Climate (Autumn 2014, 2016, Spring 2017)
GEOG 2400	Economic and Social Geography (Autumn 2014)
ATMOSSC 2940	Basic Meteorology (Spring 2014)
GEOG 5900	Climatology (Spring 2018)

Courses Assisted

Valparaiso University, Department of Geography and Meteorology

MET 279	Severe Storm Prediction and Nowcasting (Autumn 2008)

Professional Experience

2018 – Part-time Faculty, Instructor, Department of Geology and Geography, Ohio Wesleyan University, Delaware, Ohio, USA.

2017 – Postdoctoral Instructor and Researcher, Department of Geography, The Ohio State University, Columbus, Ohio, USA.

2016 – 2017 Meteorologist, Columbus Crew SC, Columbus, Ohio, USA.

2013 – 2017 Graduate Research/Teaching Associate, Department of Geography, The Ohio State University, Columbus, Ohio, USA. Foci: Paleoclimate modeling, Ordovician paleoclimatology and paleoceanography, oceanic anoxia

2012 – 2013 Temporary Visiting Research Assistant, Department of Atmospheric Sciences, South Dakota School of Mines and Technology, Rapid City, South Dakota, USA. Foci: Regional climate modeling, land-atmosphere interactions, vegetation phenology, remote sensing of the land surface

2010 – 2012 Graduate Research Assistant, Institute of Atmospheric Sciences/Department of Atmospheric Sciences, South Dakota School of Mines and Technology, Rapid City, South Dakota, USA. Foci: Regional climate modeling, land-atmosphere interactions, vegetation phenology, remote sensing of the land surface

2009 – 2010 Undergraduate Research Assistant, National Center for Atmospheric Research Earth Observing Laboratory Profiling of Winter Storms Project, Champaign, Illinois, USA. Focus: Mesoscale structure and dynamics of winter storms

Professional Service

2017 Committee Member, Ohio Union Activities Board Graduate/Professional Student Committee, The Ohio State University, Columbus, Ohio, USA

2016 – 2017 Atmospheric Sciences Delegate, Council of Graduate Students, The Ohio State University, Columbus, Ohio, USA

2015 – 2016 Chair, Geography Graduate Organization, The Ohio State University, Columbus, Ohio, USA

2015 Faculty Meeting Representative, Geography Graduate Organization, The Ohio State University, Columbus, Ohio, USA

2014 – 2015 Secretary, Geography Graduate Organization, The Ohio State University, Columbus, Ohio, USA

2011 – 2012 Committee Member, Search and Screen Committee for the Head of the Department of Atmospheric and Environmental Sciences, South Dakota School of Mines and Technology, Rapid City, South Dakota, USA

2011 – 2012 Local Manager, WxChallenge Forecast Competition, South Dakota School of Mines and Technology, Rapid City, South Dakota, USA

2011 – 2012 President, SDSMT Weather Association, South Dakota School of Mines and Technology, Rapid City, South Dakota, USA

2011 – 2012 Secretary, Black Hills Local Chapter of the American Meteorological Society, Rapid City, South Dakota, USA

2010 – 2012 Vice President, SDSMT Weather Association, South Dakota School of Mines and Technology, Rapid City, South Dakota, USA

Professional Memberships

2007 – American Meteorological Society
2010 – WRF User Community
2012 – 2013 National Weather Association
2014 – Geological Society of America
2015 – American Geophysical Union

Technical Skills

Strong:
Unix/Linux
Fortran 77/90/95
National Center for Atmospheric Research Command Language (NCL)
Network Common Data Form (NetCDF)
Advanced Research Dynamical Core of the Weather Research and Forecasting Model (WRF-ARW)
University of Victoria Earth System Climate Model (UVic ESCM)
Gibson Ridge Software

Microsoft Office
Some Experience:
Interactive Data Language (IDL)
R
HyperText Markup Language (HTML)
General Meteorology Package (GEMPAK)

Languages

Mother Tongue:
English Fluent
Others:
Italian Read: Fair Write: Limited Speak: Limited