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I. Education

1979	B.A.,	Lawrence University. Geology.
1984	M.S.,	Florida Institute of Technology. Environmental Science.
1991	Ph.D.,	University of Virginia, Charlottesville. Environmental Science.

II. Professional Background

1990-1992	Post-Doctoral Fellow, The Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA
1992-1994	Research Scientist, The Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA
1993-1994	Adjunct Faculty, Biology Department, Cape Cod Community College
11/94-2001	Assistant Professor, Appalachian Laboratory, University of Maryland Center for Environmental Science, Frostburg, MD
2001-present	Associate Professor, Appalachian Laboratory, University of Maryland Center for Environmental Science, Frostburg, MD

III. Research

A. Areas of professional expertise

Environmental Science: Atmosphere-Biosphere Interactions.

B. Peer-Reviewed Publications

Zhang, L., P. Blanchard, D. Johnson, A. Dastoor, A. Ryzhkov, C.J. Lin, K. Vijayaraghavan, D. Gay, T. Holsen, J. Huang, J.A. Graydon, V.L. St. Louis, M.S. Castro, E.K. Miller, F. Marsik, J. Lu, L. Poissant, M. Pilote and K.M Zhang. **2012**. Assessment of modeled mercury dry deposition over the Great Lakes region. *Environmental Pollution* 161 (2012) 272-283.

Zhang, L., P. Blanchard, D.A. Jay, E.M. Prestbo, M.R. Risch, D. Johnson, J. Narayan, R. Zsolway, T. Holsen, E.K. Miller, M.S. Castro, J.A. Graydon, V.L. St. Louis, and J. Dalziel. **2012**. Estimation of speciated and total mercury dry deposition at monitoring locations in eastern and central North America. **2012**. *Atmospheric Chemistry and Physics*, 12, 4327-4340.

Castro, M.S., C. Moore, J. Sherwell, and S.B. Brooks. **2012**. Dry deposition of gaseous oxidized mercury in Western Maryland. *Science of the Total Environment* 417-418 (2012) 232-240.

Moore, C.W. and M.S. Castro. **2012**. Investigation of factors affecting gaseous mercury concentration in soils. *Science of the Total Environment* 419 (2012) 136-143.

Lan, X., R. Talbot, M. Castro, K. Perry, and W. Luke. **2012**. Seasonal and diurnal variations of atmospheric mercury across the US determined from AMNet monitoring data. *Atmospheric Chemistry and Physics*, 12, 10569-10582.

Huang, J. , F. Chang, S. Wang, Y.J. Han, M. Castro, E. Miller, and T. M. Holsen. **2013**. Mercury wet deposition in the eastern United States: characteristics and scavenging ratios. *Environ. Sci. Processes Impacts*, 15, 2321-2328.

Castro, M.S., S. Brooks and C.W. Moore. *In Preparation*. Temporal variations in the atmospheric concentration of speciated mercury in western Maryland.

Castro, M.S. and John Sherwell. *In Preparation*. Reductions in power plant mercury emissions and the concentration of atmospheric mercury in western Maryland

C. Contracts and Grants (2011 to 2015)

Air Quality Monitoring at the Piney Creek Reservoir (2011-2014) Maryland Department of the Environment.

Air Quality Monitoring in Garrett County, Maryland (2011-2012) Maryland Department of Natural Resources.

Air Quality of the Mid-Atlantic Highlands in the Chesapeake Bay Watershed (2012-2013) Maryland Department of Natural Resources.

Mercury in Fish Tissue (2012-2013) Maryland Department of the Environment.

Marcellus Shale Air Quality Project (2013-2015) Maryland Department of the Environment.

Mercury Measurements at the Piney Creek Reservoir in Garrett County, Maryland (2014-2015). Maryland Department of Natural Resources.

Air Quality Measurements at the Piney Creek Reservoir in western Maryland (2014-2017). Maryland Department of the Environment.

IV. Teaching and Training

Nov. 1994 Graduate Faculty, Frostburg State University

Dec. 1994 Affiliate Member, UMCES Graduate Faculty

Dec. 1997 Member, UMS Inter-Institutional Graduate Faculty

A. University of Maryland Courses Taught

<u>Course No.</u>	<u>Institution</u>	<u>Semester</u>	<u>Title</u>	<u>Enrollment</u>	<u>Credit Hrs.</u>
Biology 490-002 & Biology 650-002	FSU	Spring '96	Effects of Human Activities on the Biosphere	5	3
Biology 499-003	FSU	Fall '97	Atmosphere-Soil Interactions	1	1
MEES 608p	FSU/UMCP	Fall '97	Nutrient Dynamics at Landscape Scales	6	1
MEES M689M & Biology 650-1	UMCP&FSU&CBL&HPL	Fall '98	Biogeochemistry	9	3
MEES 608Y & Biology 650-002	FSU & UMCP	Fall '98	Important Issues in Environmental Science	3	1
MEES 609Y	AL	Fall '99	Restoration Ecology	3	1
MEES 698Q	UMCP, UMES& AL	Spring '00	Biogeochemistry	7	3
FSU 499-003		Fall '00	Mercury Biogeochemistry	1	1
MEES 608Y		Fall '01	Important Issues in Environmental Science	1	1
MEES 608Y		Spring '02	Important Issues in Environmental Science		

MEES 698Q & Biology 650-2	Spring '02	2 Terrestrial Biogeochemistry 9	1 3
MEES 698I	Fall '03	Land-Margin Interactions 10	4
MEES 698I	Fall '04	Land-Margin Interactions 8	4
MEES 610	Fall '05	Land-Margin Interactions 15	4
MEES 610	Fall '06	Land-Margin Interactions 11	4
MEES 610	Fall '07	Land-Margin Interactions 15	4
MEES 610	Fall '08	Land-Margin Interactions 9	4
MEES 610	Fall '09	Land-Margin Interactions 15	4
MEES 610	Fall '10	Land-Margin Interactions 10 Graduate Students	4
MEES 610	Fall '11	Land-Margin Interactions 15 Graduate Students	4
MEES 610	Fall '12	Land-Margin Interactions 9 Graduate Students	4
MEES 610	Fall '13	Land-Margin Interactions 11 Graduate Students	4
MEES 610	Fall '14	Land-Margin Interactions 6 Graduate Students	4

Graduate Students Supervised as Major Advisor

1. Students Currently Supervised, Program and Thesis Titles

Chris Moore, (graduated in 2011) Ph.D. Environmental Science MEES

2. Graduate Student Committees

Kim Vest	(current, defended in 2014)	Ph.D.	Ecology	MEES
Robert Chastain	(graduated)	Ph.D.	Ecology	MEES
Madhura Kulkarni	(graduated)	M.S.	Ecology	MEES
Melanie S. Hawkins	(graduated)	M.S.	AECB	FSU
Brian Margolis	(graduated)	M.S.	AECB	FSU

3. Supervised Research Internships and Independent Studies

Jacob Humm (2012-2013) FSU undergraduate

Jeff Curry (Fall 2011) FSU undergraduate
Keith Felts (2009- current)
Carol Richardson Heft (2010-2011)
Ben Brown (2013)