

FRANK J. MARSIK
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Education

PhD	The University of Michigan	Atmospheric & Space Sciences	1995
MS	The University of Michigan	Atmospheric & Space Sciences	1991
BS	The University of Michigan	Atmospheric, Oceanic & Space Sciences	1984

Professional Experience

Associate Research Scientist/Adjunct Lecturer, Dept. of Atmospheric, Oceanic and Space Sciences and the University of Michigan Air Quality Laboratory, The University of Michigan, Ann Arbor, MI (September 2005-Present). Research focuses on the following areas: (1) measurement and modeling of the transport, transformation and fate of mercury, trace metals and trace gases in the environment, (2) meteorological modeling of Great Lakes, (3) investigation of Great Lakes marine boundary and its impact on wind energy resources over these waters.

Assistant Research Scientist/Lecturer, Dept. of Atmospheric, Oceanic and Space Sciences and the University of Michigan Air Quality Laboratory, The University of Michigan, Ann Arbor, MI (July 1999-September 2005)

Post-Doctoral Research Fellow, Department of Environmental and Industrial Health, The University of Michigan, Ann Arbor, MI (July 1995- July 1999)

Academic Teaching Activities

Department of Atmospheric, Oceanic and Space Sciences, The University of Michigan, Ann Arbor, Michigan

- AOSS 462: Instrumentation for Atmospheric and Space Sciences (Winter 2001-03)
- AOSS 440: Meteorological Analysis Laboratory (Winter 2005-06, Fall 2006-13)
- AOSS 414: Weather Systems (Winter 2007-2014)
- AOSS 463: Air Pollution Meteorology (Winter 2013, 2014)
- ENGR 290: Professional Skills for Engineers (Fall 2012-2013)
- ENGR 110: The Engineering Profession (Fall 2013)

Academic Advising Activities

PhD Committees: Masako Morishita, Emily White, Lynn Gratz, Evan Oswald, Douglass Halleaux, Naima Hall

MS Students: I serve as the program advisor for the Atmospheric and Space Sciences MS/Sequential Graduate Undergraduate Studies (MS/SGUS) Program within AOSS. I have personally advised the work of four of these students.

Undergraduate Mentoring: I have served as a mentor to a number of undergraduate students over the past 15-20 years. During Calendar Year 2013, I was a research mentor for five undergraduate students.

Awards

2008 University of Michigan College of Engineering Thomas M. Sawyer, Jr. Teaching Award

Proposal Peer Reviewer for the Following Organizations: National Aeronautics and Space Administration, Electric Power Research Institute, Hudson River Foundation

Manuscript Peer Reviewer for the Following Professional Journals

Atmospheric Environment; Journal of Applied Meteorology; Journal of Geophysical Research – Atmospheres; Water, Air and Soil Pollution; Environmental Toxicology and Chemistry; The Science of the Total Environment; Journal of Environmental Quality; Journal of Atmospheric and Oceanic Technology; Atmospheric Chemistry and Physics Discussions

Selected Peer-Reviewed Publications

Barbehenn, R. V., J. Knister, F. Marsik, C. Miller and W. Nham (2014): Nutritional benefits for caterpillars feeding on mature leaves in the Salicaceae. *In preparation for submission.*

Desai, N., A. Cotel, F. Marsik, and G. Meadows (2014): LIDAR-based measurements of wind characteristics within the marine boundary layer over Lake Michigan, USA. *In preparation for submission to the Journal of Atmospheric and Oceanic Technology.*

Gratz, L.E., G.J. Keeler, F.J. Marsik, J.A. Barres and J.T. Dvonch (2012): Atmospheric transport of speciated mercury across southern Lake Michigan: Influence from emission sources in the Chicago/Gary urban area. *Science of the Total Environment*, Volume 448, Pages 84-95.

Liu, B., G.J. Keeler, J.T. Dvonch, J.A. Barres, M.M. Lynam, F.J. Marsik and J. Taylor-Morgan (2007): Temporal variability of mercury speciation in urban air. *Atmospheric Environment*, 41:1911-1923.

Sillman S., F.J. Marsik, K.I. Al-Wali, G.J. Keeler, M.S. Landis (2007): Reactive mercury in the troposphere: Model formation and results for Florida, the northeastern United States, and the Atlantic Ocean, *Journal of Geophysical Research*, 112, D23305, doi:10.1029/2006JD008227.

Lyman, S.N., M.S. Gustin, E.M. Prestbo, F.J. Marsik (2007): Estimation of Dry Deposition of Atmospheric Mercury in Nevada by Direct and Indirect Methods *Environmental Science & Technology*, 41(6): 1970-1976.

Marsik, F.J., G.J. Keeler, and M.S. Landis. (2007): The dry deposition of speciated mercury to the Florida Everglades: measurements and modeling. *Atmospheric Environment*, 41, 136-149.

Marsik, F.J., G.J. Keeler, S.E. Lindberg and H. Zhang (2005): The air-surface exchange of gaseous mercury over a mixed sawgrass-cattail stand within the Florida Everglades. *Environmental Science and Technology*, 39(13); 4739-4746.

Dvonch, J.T., G.J. Keeler and F.J. Marsik (2005): The influence of meteorological conditions on the wet deposition of mercury in Southern Florida. *Journal of Applied Meteorology*, 44(9); 1421-1435.

Zhang, H., S.E. Lindberg, F.J. Marsik, G.J. Keeler (2001): Mercury air/surface exchange kinetics of background soils of the Tahquamenon River watershed in the Michigan Upper Peninsula. *Water, Air and Soil Pollution*, 126, 151-169.

Dvonch, J.T, F.J. Marsik, G.J. Keeler, T.G. Robins, F. Yip, and M. Morishita (2000): Field Comparison of PM2.5 TEOM and PM2.5 Manual Filter-Based Measurement Methods in Urban Atmospheres. *Journal of Aerosol Science*, 31 (suppl 1): S190-S191.

Gustin, M.S., S. Lindberg, F. Marsik, A. Casmir, F. Ebinghaus, G. Edwards, C. Hubble-Fitzgerald, J. Kemp, H.H. Kock, T. Leonard, J. London, M. Majewski, C. Montecinos, J. Owens, M. Pilote, L. Poissant, P. Rasmussen, F. Shaedlich, D. Schneeberger, W. Schroeder, J. Sommar, R. Turner, A. Vette, D. Wallschlaeger and Z. Xiao, H. Zhang (1999): The Nevada STORMS project: Measurement of mercury emissions from naturally enriched surfaces. *Journal of Geophysical Research, D: Atmospheres*, **104**, No. 17, 21831-21844.

Dvonch, J.T., J.R. Graney, F.J. Marsik, G.J. Keeler and R.K. Stevens (1998): An investigation of source-receptor relationships for mercury in South Florida using event precipitation data. *Science of the Total Environment*, 213 (1998) 95-108.