

Julian D. Marshall

John R. Kiely Professor of Civil & Environmental Engineering jdmarsh@uw.edu
University of Washington, Dept. of Civil & Environmental Engineering www.ce.washington.edu

Professional Preparation

Princeton University	Chemical Engineering	B.S.E with high honors, 1996
University of California, Berkeley	Energy and Resources	M.S., 2002
University of California, Berkeley	Energy and Resources	Ph.D., 2005
University of British Columbia	Environmental Health	Postdoctoral training, 2005-2006

Appointments

2016-present: Professor, University of Washington (UW)
2013-2016: Associate Professor, University of Minnesota (UMN)
2007-2013: Assistant Professor, UMN
2001-2005: Student Researcher, Lawrence Berkeley National Lab, Berkeley, CA
1998-1999: Lecturer and International Fellow, Temasek Polytechnic, Singapore
1996-1997: Environmental Consultant, Environ Corporation, Emeryville, CA

Relevant Experience

Marshall studies air pollution exposure assessment: understanding how much pollution is breathed by people, and how to reduce those exposures. He has extensive experience in documenting environmental justice aspects of population exposure to air pollution. Collaborating with PI Millet, co-PI Marshall has experience applying GEOS-Chem to interpret satellite and other data in terms of human exposure to air pollution. Recent projects in this context include “Air Pollution, Environmental Justice and Urban Form” (NSF; 2012-16; Marshall PI), which applies satellite and in-situ measurements to characterize fine-scale spatial patterns in US air pollution, and uses those patterns to understand air pollutant exposure across demographic groups, and how the spatial layout of cities affects air pollution exposure and environmental justice. “Center for Air, Climate, and Energy Solutions” (EPA; 2016-21; Marshall Dual-PI) uses a range of tools (including satellite data) to investigate spatial and temporal patterns in air pollution, exposure, and human health across the US, evaluate technology & policy scenarios for improving those outcomes, and explore environmental justice aspects of air pollution exposures.

Honors and Fellowships

Charles E. Bowers Teaching Award, UMN, 2014; C. Eugene Allen Award for Innovative International Initiatives, UMN, 2014; Joan M. Daisey Outstanding Young Scientist Award, International Society of Exposure Science, 2013; McKnight Land-Grant Professorship, 2009-2011; Young Engineer of the Year, American Society of Civil Engineers, Minnesota Section, 2009; Multiple doctoral and post-doctoral research fellowships, including from NSF.

Selected Publications (*out of more than 70 total*)

- MJ Bechle, DB Millet, JD Marshall. A national spatiotemporal exposure surface for NO₂: monthly scaling of a satellite-derived land-use regression, 2000-2010. *Environmental Science & Technology*, 49(20). 2015.
- LP Clark, DB Millet, JD Marshall. National patterns in environmental injustice and inequality: outdoor NO₂ air pollution in the United States. *PLOS One*, 9(4). 2014.
- JD Marshall, KR Swor, NP Nguyen. Prioritizing environmental justice and equality: diesel particles in California's South Coast. *Environmental Science & Technology*, 48(7). 2014.
- MJ Bechle, DB Millet, JD Marshall. Remote sensing of exposure to NO₂: satellite versus in situ measurement in a large urban area. *Atmospheric Environment*, 69. 2013.