

PROMOTION RECOMMENDATION
The University of Michigan
School of Public Health
Department of Environmental Health Sciences

Joseph T. Dvornch, assistant professor of environmental health sciences, Department of Environmental Health Sciences, School of Public Health, is recommended for promotion to associate professor of environmental health sciences, with tenure, Department of Environmental Health Sciences, School of Public Health.

Academic Degrees:

Ph.D.	1998	University of Michigan, Environmental Health Sciences
M.S.	1994	University of Michigan, Environmental Health Sciences
B.S.	1992	University of Michigan, Chemistry

Professional Record:

2011-present	Assistant Professor, Department of Environmental Health Sciences, University of Michigan School of Public Health
2005-2011	Research Assistant Professor, Department of Environmental Health Sciences, University of Michigan School of Public Health
2009-2011	Adjunct Lecturer, Department of Environmental Health Sciences, University of Michigan School of Public Health
1995-2011	Assistant Research Scientist, Department of Environmental Health Sciences, University of Michigan School of Public Health
1999-2005	Center Exposure Assessment Scientist, Michigan Center for Environmental and Children's Health, School of Public Health, University of Michigan
1998-1999	Post-Doctoral Research Fellow, Institute for Environmental Science, Engineering, and Technology, College of Engineering, University of Michigan

Summary of Evaluation:

Teaching: Since moving to the position of assistant professor in 2011, Professor Dvornch has excelled as an educator. He has continued to offer courses developed during his time as a research assistant professor, as well as developing new courses. These have received consistently high student evaluations. Currently, he is on an agreed teaching load ramp-up, and is teaching at a level that is consistent with this. Over the next two years, Professor Dvornch will develop and offer strategically important courses that will strengthen the department's environmental quality and health program. He is currently the faculty lead on this program, and is actively developing it in consultation with students and faculty.

Professor Dvornch has supervised and continues to supervise the work of a number of graduate students. He is currently primary advisor to two Ph.D. students, and is a committee member for ten Ph.D. students. In addition, he has been the Master of Science thesis or field experience mentor for four students.

Research: Professor Dvornch has had a long and productive research association with the Department of Environmental Health Sciences. For some years, he has been an extremely productive and creative independent researcher. His grant and publication records provide evidence of a researcher who is academically independent, and is well on the way to consolidating an international reputation in his research areas.

Professor Dvonch's research focuses specifically on environmental contaminant release, transportation and exposure (with an emphasis on mercury and Particulate Matter). He is nationally recognized as a leader in his field. His research on mercury has been particularly important in establishing routes of environmental exposure, from source to receptor. This research has included both the development of new analysis methods and characterization of mercury release and environmental distribution. An important aspect of Professor Dvonch's academic research is his commitment to engaging with communities, policy makers, and other stakeholders that are impacted by his findings.

Professor Dvonch's ongoing research into particulate matter (PM) exposure is connecting exposure profiles with adverse health impacts and indicators. His research addresses differing risks of exposure and health impacts related to disparities in socio-economic status, disease (or pre-disease) status, geographic location of residence, chemical composition and specific emission sources of particles. Several of his studies have identified adverse health outcomes in vulnerable sub-populations as well as "healthy" people due to exposure to specific chemical components of air pollution, as well as specific emission sources of pollution.

Given the nature of his research, Professor Dvonch's funding portfolio is dominated by EPA grants, funding from state agencies and environmental organizations, and funding through subcontracts on larger research programs. This is common for atmospheric exposure research. His research funding represents a healthy diversity of sources that indicate a resilient and productive research program. He has been the PI on grants totaling over \$8M in direct costs, and a co-investigator on projects totaling over \$21M in direct costs. The diversity and number of funded projects that Professor Dvonch is or has been the PI on are strongly indicative of his ability to lead and grow an independent research program.

Professor Dvonch has to date had 52 peer review papers published. On 14 of these he is either lead author or the lead author is a student or researcher working under his direct supervision. He has published in the leading journals in his field. According to the Scopus database, Professor Dvonch has an H index of 19, indicating that 19 of his peer review papers have been cited at least 19 times. His publications have been cited over 1000 times. In addition, he currently has five manuscripts in review.

Professor Dvonch has given invited presentations at regional, national, and international conferences and workshops, organized and hosted by state and federal agencies and international research communities. He has also served as an invited session chair and as an invited participant on international conference scientific program committees. Most recently, he was the invited guest editor for a journal special issue of *Science of the Total Environment*.

Recent and Significant Publications:

Gratz LE, Keeler GJ, Morishita M, Barres JA, Dvonch JT. (2013) Assessing the emission sources of atmospheric mercury wet deposited across Illinois. *Sci. Total Environ.*, 448:120-131.

Gratz LE, Keeler GJ, Marsik FJ, Barres JA, Dvonch JT. (2013) Atmospheric mercury transport across southern Lake Michigan: Influence from the Chicago/Gary urban area. *Sci. Total Environ.*, 448:84-95.

Pancras JP, Landis MS, Norris GA, Vedantham R, Dvonch JT. (2013) Source apportionment of ambient fine particulate matter in Dearborn, Michigan, using hourly resolved PM chemical composition data. *Sci. Total Environ.*, 448:2-13.

- Risch MR, Gay DA, Fowler KK, Keeler GJ, Backus SM, Blanchard P, Barres JA, Dvonch JT. (2012) Spatial patterns and temporal trends in mercury concentrations, precipitation depths, and mercury wet deposition in the North American Great Lakes Region, 2002-2008. *Environ. Pollut.*, 161:261-71.
- Sherman LS, Blum JD, Keeler GJ, Demers JD, Dvonch JT. (2012) Identification of mercury pollution from a coal-fired power plant using mercury isotopes. *Environ. Sci. Technol.*, 46(1):382-90.
- Dvonch JT, Kannan S, Schulz AJ, Keeler GJ, Mentz G, House J, Benjamin A, Max P, Bard RL, Brook RD. (2009) Acute effects of ambient particulate matter on blood pressure: Differential effects across urban communities. *Hypertension*, 53(5):853-9.
- Dvonch JT, Keeler GJ, Marsik FJ. (2005) The influence of meteorological conditions on the wet deposition of mercury in southern Florida. *J. Appl. Meteor.*, 44:1421-35.

**Underscore indicates student/trainee as first author, under Professor Dvonch's direct supervision*

Service: Professor Dvonch has been a highly active member of his academic community within the department and university, as well as more widely. Specifically, he has had a significant impact within the department in his time on the academic degree program committee, the professional degree programs committee, and the laboratory space committee. He has been a highly responsive and responsible committee member, taking a lead on key activities as needed to ensure the success of the department.

In September 2013, Professor Dvonch took over as chair of the professional degree program committee. In this role he has been highly productive in addressing improvements to the department Master of Public Health program. This proactive leadership is also seen in his development of the department's environmental quality and health program, which before he took over as program leader was languishing. Overall, Professor Dvonch demonstrates a high level of dedication, creativity and competence in his service to the department and the school.

Professor Dvonch is also highly engaged in working with policy makers and stakeholders outside the University of Michigan. He has a passion for connecting research with people who are impacted by it, and are in a position to make use of it. This is amply demonstrated in his integration of community engagement in his research projects, and in his work with policy makers to ensure evidence-informed policies on environmental exposures.

External Reviewers:

Reviewer (A): "I strongly support Dr. Dvonch's promotion to associate professor, and feel that he would be promoted to associate professor at [my institution]. I think Michigan is lucky to have a young scientist like Dr. Dvonch."

Reviewer (B): "I recognize Professor Dvonch to be an accomplished researcher and scholar with every indication of continued success even within a world of constrained resources."

Reviewer (C): "As impressive as his publication record is, his success in funding that work may be even more impressive."

Reviewer (D): "I am extremely impressed with what he has accomplished. In all areas I believe his case significantly exceeds expectations."

Reviewer (E): "I fully believe that Dr. Dvonch has laid the foundation for a long and successful academic career. He is well on his way to developing a fully mature research program as evidenced by extensive publications and funding."

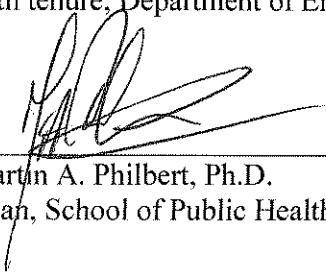
Reviewer (F): "Prof. Dvonch's record in research, service and teaching is outstanding. Quite frankly this is one of the strongest academic files for tenure that I have seen."

Reviewer (G): "In fact, it seems to me that he is already performing at the level of a Full Professor."

Reviewer (H): "I have known Dr. Dvonch to be a talented investigator who I believe has and will continue to make contributions to the field of environmental health, especially within the field of exposure and health."

Summary of Recommendation

Professor Dvonch is an exceptional academic who is already a strong leader in his field. He is an outstanding researcher and a dedicated teacher. His productivity has provided research and training opportunities to numerous students. With the support of the executive committee, I am pleased to recommend Joseph T. Dvonch for promotion to associate professor of environmental health sciences with tenure, Department of Environmental Health and Sciences, School of Public Health.



Martin A. Philbert, Ph.D.
Dean, School of Public Health

May 2014