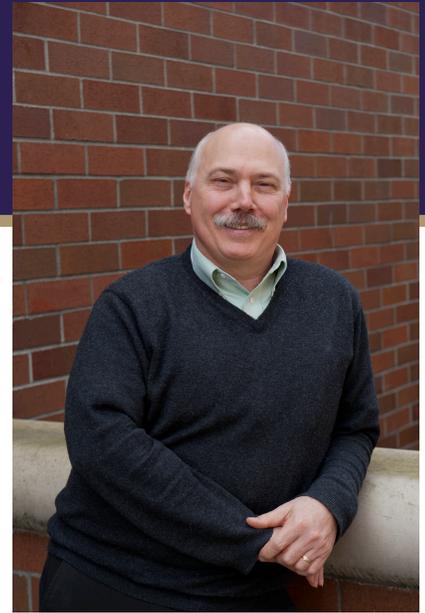




Michael Yost, PhD

[SUMMARY OF RESEARCH IN LAY LANGUAGE]:

Michael Yost's research focuses on developing tools and techniques to measure environmental and occupational exposures using electromagnetic radiation such as ultraviolet, visible, and infrared light, or lasers. He holds eight patents on products and processes. The technology has been applied to monitor pollution from car, train, and marine traffic, to measure pesticide drift, and also to detect hazardous and concealed materials. His research also extends to investigating the impacts of climate change and nanotechnology on human health.



WHY IMPORTANT TO HEALTH?

[In reference to the research summary]

- Pesticides sprayed on crops may drift from farms to nearby homes and agricultural communities. We are looking at how and who is vulnerable.
- Air pollution is made up of a myriad of sources. What are these sources? We're finding out by detecting unique "fingerprints" that identify air pollution sources in urban air sheds.

IMPACT ON WORKPLACES

[related to workers and employers in Washington State]

- Partnering with Washington State University, we are demonstrating that a robust and practical integrated pest management program is cost-effective and can reduce pesticide usage and risk of exposure.
- A number of US dairy farm workers are foreign born, are unable to read or speak English, and have limited formal education. Communicating with this large, diverse, and often transient population of workers is challenging. Our work has investigated the best strategy for conveying the potential health risks to farm workers.

STUDENT EXAMPLES

- Undergraduate **Sara Mar** spent the summer working on a study investigating how integrated pest management practices might reduce the use of pesticides on dairy farms, lessening risk to workers.

<https://www.youtube.com/watch?v=bibReMn5aYo>

- While Lecturer **Tania Busch Isaksen** was a PhD student, she studied the effect that increasing heat from climate change would have on health outcomes. The findings supported materials created by local public health practitioners, detailing heat-risk estimates, vulnerable populations, and heat-risk distribution.

<http://deohs.washington.edu/environmental-health-news/study-finds-hot-humid-days-king-county-increase-risk-hospitalization-and-death>

- Vanessa Galaviz** (PhD, 2013) researched traffic-related air pollutant exposures for pedestrians who cross the US-Mexican border. Her findings were used to support the recommendations of a local group advocating for residents to ensure reconstruction of the US-Mexican border port-of-entry took into account community concerns.

<http://issuu.com/uwdeohs/docs/deohs-2011-2013-biennial-report/30>

RECENT PUBLICATIONS

Blood RP1, Yost MG, Camp JE, Ching RP. Whole-body Vibration Exposure Intervention among Professional Bus and Truck Drivers: A Laboratory Evaluation of Seat-suspension Designs. *J Occup Environ Hyg.* 2015;12(6):351-62.

Galaviz VE, Quintana PJ, Yost MG, Sheppard L, Paulsen MH, Camp JE, Simpson CD. Urinary metabolites of 1-nitropyrene in US-Mexico border residents who frequently cross the San Ysidro Port of Entry. *J Expo Sci Environ Epidemiol.* 2015 Dec 16.

Isaksen TB, Fenske RA, Hom EK, Ren Y4, Lyons H, Yost MG. Increased mortality associated with extreme-heat exposure in King County, Washington, 1980-2010. *Int J Biometeorol.* 2015 May 10.

STUDENT FACTS

After graduating, students have gone on to work for the National Institute for Environmental Health Sciences, Environmental Protection Agency, and at the Centers for Disease Control and Prevention. They work for industries like the Puget Sound Energy or as consultants. They are on faculty at universities.

LEARN MORE

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Photos, front: left: Stacey Holland; PNASH Archives; Cathy Schwartz.
Photos, back: left: Kit Galvin; Cheryl Root; Stacey Holland.