

## **Ron Williams, Research Chemist, in EPA's National Exposure Research Laboratory**

Exposure Methods and Measurements Division

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**Area of Expertise:** Ron is an Air Climate and Energy (ACE) Project Leader with the US EPA's National Exposure Research Laboratory. He has held senior research positions in private, academic and governmental research organizations for more than 35 years. His US EPA responsibilities have included an extended tenure (2009-2010) as an Acting Branch Chief for the Exposure Measurements and Analysis Branch where he led a multidisciplinary team of exposure scientists. His personal research focus has been upon human exposures to complex environmental mixtures. These efforts have resulted in approximately 130 peer review journal articles and hundreds of presentations at national and international conferences.

He is a recognized expert in the area of human exposure monitoring and has been responsible for designing, executing and summarizing some of the US EPA's largest human observational panel studies. His current research focuses on evaluating air quality sensors and development of novel monitoring systems for community-based research. He is continuing to develop and lead multidisciplinary, multi-institutional research efforts involving emerging technologies and their application to meet a wide range of stakeholder needs. He has extensive international experience and collaborates extensively within the US EPA and with external researchers to fully understand the impact of pollutant exposures on human health effect outcomes.

### **Select Publications:**

- Logue, J., Sherman, J., Lunden, M., Klepis, N., Williams, R., Croghan, C., Singer, B.  
Development and assessment of a physics-based simulation model to investigate residential PM<sub>2.5</sub> infiltration across the US housing stock. *Building and Environment* (2015), doi:10.106/j.buildenv.2015.06.032.
- Breen, M., Long, T., Schultz, B., Williams, R., Richmond-Bryant, J., Breen, M., Langstaff, J., Devlin, R., Schneider, A. Air pollution exposure model for individuals (EMI) in health studies: evaluation of ambient PM<sub>2.5</sub> in central North Carolina. *Environmental Science and Technology*. In press. DOI:10.1021/acs.est.5b02765.
- Wan, J., Hagler, G., Williams, R., Sharpe, B., Weinstock, L., Rice, J. Field assessment of the Village Green Project: An autonomous community air quality monitoring system. *Environmental Science and Technology*. DOI: 10.1021/acs.est.5b01245. April 23, 2015.
- Conner, T., Cernikovsky, L., Novak, J., Placha, H., Krejci, B., Nikolva, I., Chalupnickova, E., Williams, R. An investigation of local and regional sources of fine particulate matter in Ostrava, the Czech Republic. *Air Pollution Research*. DOI:10.5094/APR.2015.050; 6: 454-463 (2015).
- Hwashin, S., Jones, P., Brook, R., Bard, R., Oliver, K., Williams, R. Associations between personal exposures to VOCs and alterations in cardiovascular physiology: Detroit

Exposure and Aerosol Research Study (DEARS). Atmospheric Environment, In Press (January 2015). DOI:10.1016/j.atmosenv.2015.01.016, 104: 246-255 (2015).

Hammond, D., Croghan, C., Shin, H., Burnett, R., Bard, R., Brook, R., Williams, R. Cardiovascular impacts and micro-environmental exposure factors associated with continuous personal PM2.5 monitoring. JESEE DOI:10.1038/jes.2013.46; 24: 337-345 (2014).

View more research publications by [Ron Williams](#).

### **Education:**

- B.S., Chemistry, East Carolina University, 1979

### **Professional Experience:**

- Research Chemist, ACE Project Leader, USEPA, RTP, NC 2011-present
- Research Chemist, Measurements Team Leader, USEPA, RTP, NC 2010-2011
- Acting Branch Chief, USEPA, RTP, NC 2009-2010
- Research Chemist, Measurements Team Leader, USEPA, RTP, NC 1998-2009
- Chemist, US EPA, 1995-1999
- Research Assistant Professor-University of North Carolina-Chapel Hill, 1994-1995
- Senior Research Scientist, EHRT, RTP, NC 1994-1983
- Safety Officer, EHRT, RTP, NC 1993-1982
- Associate Scientist, Northrop Services, RTP, NC 1982-1983
- Chemist, RTI International, 1980-1982