

Sergey L. Napelenok, Physical Scientist, in EPA's National Exposure Research Laboratory

Computational Exposure Division

[Mailing Address](#)

napelenok.sergey@epa.gov

Area of Expertise: I work on development and evaluation of photochemical air quality models and their applications to better understand the formation and fate of air pollutants. I have been involved in a wide range of projects including model sensitivity and uncertainty analysis, integrating ground-based and satellite observation with modeling results, development of emission inventories, regional source apportionment, VOC reactivity, SOA modeling, etc. I develop and publically release Community Multiscale Air Quality model enhancements such as the Decoupled Direct Method in 3D (CMAQ-DDM-3D) and the Integrated Source Apportionment Method (CMAQ-ISAM).

Select Publications:

Napelenok, S.L., R. Vedantham, P.V. Bhawe, G.A. Pouliot, R.H.F. Kwok. Source-receptor reconciliation of fine-particulate emissions from residential wood combustion in the southeastern United States. *Atmospheric Environment*, 98, 454-460, 2014.

Napelenok, S.L., K.M. Foley, D. Kang, R. Mathur, T. Pierce, S.T. Rao. Dynamic Evaluation of Regional Air Quality Model's Response to Emission Reductions in the Presence of Uncertain Emission Inventories, *Atmospheric Environment*, 45(24), 2011.

Napelenok, S.L., R.W. Pinder, A.B. Gilliland, R.V. Martin. A method for evaluating spatially-resolved NO_x emissions using Kalman filter inversion, direct sensitivities, and space-based NO₂ observations, *Atmospheric Chemistry & Physics*, 8, 5603-5614, 2008.

Napelenok, S.L., D.S. Cohan, Y. Hu, A.G. Russell. Decoupled direct 3D sensitivity analysis for particulate matter (DDM-3D/PM). *Atmospheric Environment*, 40, 6112-6121, 2006.

View more research publications by [Sergey Napelenok](#).

Education:

- B.S. *summa cum laude* Civil Engineering, Washington State University, 2000
- M.S. Civil Engineering, Georgia Institute of Technology, 2001
- Ph.D. Environmental Engineering, Georgia Institute of Technology, 2006

Professional Experience:

- Research Physical Scientist, U.S. Environmental Protection Agency, Research Triangle Park, NC, 2006 – Present
- Graduate Research Assistant, Department of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA, 2000 – 2006
- Technical Assistant II, Laboratory for Atmospheric Research, Washington State University, Pullman, WA, 1996 - 2000

Select Awards and Honors:

- 2015 U.S. EPA Scientific and Technical Achievement Award (Level III)
- 2014 U.S. EPA Bronze Medal for Commendable Service
- 2014 U.S.EPA/AMAD Blue Ribbon Manuscript Award
- 2013 U.S. EPA Scientific and Technical Achievement Award (Level III)
- 2012 U.S. EPA Scientific and Technical Achievement Award (Level III)
- 2011 U.S.EPA/AMAD Blue Ribbon Manuscript Award
- 2011 Exceptional ORD Technical Assistance to the Program Offices Award
- 2010 U.S. EPA Bronze Medal for Commendable Service
- 2009 Exceptional ORD Technical Assistance to the Program Offices Award
- 2009 U.S.EPA/AMAD Blue Ribbon Manuscript Award
- 2007 Young Researcher EURASAP Award
- 2000 Georgia Institute of Technology Presidential Fellowship
- 2000 American Meteorological Society Fellowship