

## BIOGRAPHICAL SKETCH

<b>NAME</b> Petros Koutrakis	<b>TITLE</b> Professor of Environmental Science
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<b>EDUCATION</b>			
<b>INSTITUTION AND LOCATION</b>	<b>DEGREE</b>	<b>YEAR</b>	<b>FIELD OF STUDY</b>
University of Patras, Greece	B.S.	1980	Chemistry
University of Paris, France	M.S.	1982	Atmospheric Chemistry
University of Paris, France	Ph.D.	1984	Environmental Chemistry

### **Experience:**

2003-present	Director, Exposure, Epidemiology, & Risk Program, Harvard School of Public Health
1995-present	Professor of Environmental Sciences, Dept. Environmental Health, Harvard School of Public Health
1999-present	Director, EPA/Harvard Center on Ambient Particle Health Effects
1991-1995	Associate Professor of Environmental Science, Harvard School of Public Health
1988-1991	Assistant Professor of Environmental Science, Harvard School of Public Health
1985-1988	Research Associate, Harvard School of Public Health

### **Editorial Board:**

1994-2003	Technical Editor-In-Chief, Journal of the Air & Waste Management Association
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### **Professional Activities:**

1994-present	Consultant, U.S. EPA Science Advisory Board
1998-2002	Member, National Research Council Committee on Research Priorities for Airborne Particulate Matter
1999-present	Member, American Chemistry Council Strategic Science Team

### **Patents:**

Ozone Measurements Using a Passive Monitor, Serial No. 07/662,164
Honeycomb Denuder/Filter Pack System to Collect Gaseous and Particulate Pollutants, Serial No. 199/128
Virtual impactor to remove particles from an airstream, including method for using same, Serial No. 08/384, 251
Continuous ambient particle monitor, Serial No. 5,571,945
Continuous particle nitrate monitor, Serial No. 6,764,857

### **Publications (Selected Publications from a total of 170):**

Koutrakis, P. and Spengler, J.D. Source apportionment of ambient particles in Steubenville, OH, using specific rotation factor analysis. <u>Atmospheric Environment</u> , 21:1511-1519, 1987.
Koutrakis, P. Spengler, J.D., Chang, B.H., and Ozkaynak, H. Characterizing sources of indoor and outdoor aerosols using PIXE. <u>Nuclear Instruments and Methods in Physics Research</u> , 22:331-336, 1987.
Koutrakis, P., Wolfson, J.M., and Spengler, J.D. An improved method for measuring aerosol acidity: results from a nine-month study in St. Louis, MO, and Kingston, TN. <u>Atmospheric Environment</u> , 22:157-163, 1988.
Koutrakis, P., Wolfson, J.M., Slater, J.L., Brauer, M., Spengler, J.D., and Stevens, R.K. Evaluation of an annular denuder/filter pack system to collect acidic aerosols and gases. <u>Environmental Science and Technology</u> , 22:1463-1468, 1988.

- Spengler, J.D., Keeler, G.J., Koutrakis, P., Ryan, P.B., Raizenne, M.P., and Franklin, C.A. Exposure to acidic aerosols. Environmental Health Perspectives, 79:43-51, 1989.
- Koutrakis, P., Wolfson, J. M., Spengler, J. D., Stern, B., and Franklin, C. A. Equilibrium size of atmospheric aerosol sulfates as a function of relative humidity. Journal of Geophysical Research. 94(D5): 6442-6448, 1989.
- Koutrakis, P., Wolfson, J. M., Brauer, M., and Spengler, J.D. Design of a glass impactor for an annular denuder/filter pack system. Journal of Aerosol Science and Technology. 12: 607-612, 1990.
- Spengler, J.D., Brauer, M., and Koutrakis, P. Acid air and health. Environmental Science and Technology. 24:946-956, 1990.
- Brauer, M., Koutrakis, P., Keeler, G.J., and Spengler, J.D. Indoor and outdoor concentrations of acidic aerosols and gases. Journal of Air Pollution Control Association. 41:171-191, 1991.
- Koutrakis, P., Brauer, M., Briggs, S.L.K., and Leaderer, B. P. Indoor exposures to fine aerosols and acid gases. Environmental Health Perspectives, 95: 23-28, 1991.
- Weschler, C.J., Brauer, M., and Koutrakis, P. Indoor ozone and nitrogen dioxide: a potential pathway to generation of nitrate radicals, dinitrogen pentoxide, and nitric acid indoors. Environmental Science and Technology, 26: 179-184, 1992.
- Koutrakis, P., Briggs, S.L.K., and Leaderer, B.P. Source apportionment of indoor aerosols in Suffolk and Onondaga Counties, New York. Environmental Science and Technology, 26: 521-527, 1992.
- Koutrakis, P., Wolfson, J.W., Bunyaviroch, A., Froehlich, S. Hirano, K., and Mulik, J.D. Measurement of ambient ozone using a nitrite-coated filter, Analytical Chemistry, 65: No. 3, 209-214, 1993.
- Koutrakis, P. and Aurian-Blajeni, B. Measurement of partial vapor pressure by an integral method: vapor pressure of ammonia over ammonium sulfate. Journal of Geophysical Research, 98: No. D2, 2941-2948, 1993.
- Suh, H., Spengler, J.D., and Koutrakis, P. Personal exposures to acid aerosol and ammonia. Environmental Science and Technology, 26: 2507-2516, 1993.
- Liu, L-J.S., Koutrakis, P., Suh, H.H., Mulik, J.D., and Burton, R.M. Use of personal measurements for ozone exposure assessment - a pilot study. Environmental Health Perspectives, 101, 318-324, 1993.
- Suh, H.H., Koutrakis, P., Allen, G.A., and Burton, R. A Spatial variation in acid sulfate and ammonia concentration within metropolitan Philadelphia. Journal of the Air & Waste Management Association, 45:442-452, 1995.
- Sioutas, C., Wang, P.Y., Ferguson, S.T., Koutrakis, P., and Mulik, J.D. A laboratory and field evaluation of an improved glass honeycomb denuder/filter pack sampler. Atmospheric Environment, 30:885-895, 1996.
- Geyh, A.S., Wolfson, J.M., Koutrakis, P., Mulik, J.D., and Avol, E.L. A development and evaluation of a small active ozone sampler. Environmental Science and Technology, 31: 2326-2330, 1997.
- Clarke, R. W., Catalano, P. J., Koutrakis, P., Murthy, K., Sioutas, C., Paulauskis, J., Coull, B., Ferguson, S., Godleski, J. J. Urban air particulate inhalation alters pulmonary function and induces pulmonary inflammation in a rodent model of chronic bronchitis. Inhalation Toxicology, 11:637-656, 1999.
- Abt, E., Suh, H. H., Koutrakis, P. Characterization of indoor particle sources: a study conducted in the metropolitan boston area. Environmental Health Perspectives., 108: 35-44, 2000.
- Ding, Y., Ferguson, S., Wolfson, J., Koutrakis, P. Development of a high volume slit nozzle virtual impactor to concentrate coarse particles. Aerosol Sci. And Technol; 34: 274-283, 2001.
- Godleski, J. J., Clarke, R. W., Coull, B. A., Saldiva, P. H. N., Jiang, N-F., Lawrence, J., Koutrakis, P. Composition of inhaled urban air particles determines acute pulmonary responses. Ann. Occup. Hyg, 46(1S):419-424, 2002.
- Demokritou, P., Lee, S. J., Ferguson, S., Koutrakis, P. A compact multistage (cascade) impactor for the characterization of atmospheric aerosols. Journal of Aerosol Science. 35:281-299, 2003.
- Demokritou, P., Lee, S. J., Koutrakis, P. Development and evaluation of a high loading PM2.5 speciation sampler. Aerosol Science and Technology. 38:111-119, 2004.