# CV - Shelly L. Miller

Associate Professor, Department of Mechanical Engineering

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## Professional Preparation

Harvey Mudd College, Applied Mathematics *with honors*, B.S., 1986

Claremont Graduate School, Operations Research and Statistics, M.S., 1987

University of California, Berkeley, Environmental Engineering, M.S., 1991

University of California, Berkeley, Civil and Environmental Engineering, Ph.D., 1996

Chancellor’s Fellow, University of Colorado, Boulder, 1996-1998

## Appointments/Professional Appointments

University of Colorado, Boulder Mechanical Engineering, Associate Professor, 2006-present

University of Colorado, Boulder Mechanical Engineering, Assistant Professor, 1998-2006

University of Colorado, Boulder, Mechanical Engineering, Chancellor’s Fellow, 1996-1998

## Select Publications (out of 45 peer-reviewed publications in total)

Xie, M., Piedrahita, R., Dutton, S.J., Milford, J.B., Hemann, J.G., Peel, J.L., Miller, S.L., Kim, S.-Y., Vedal, S., Sheppard, L., Hannigan, M.P., Positive matrix factorization of a 32-month series of daily PM2.5 speciation data with incorporation of temperature stratification. *Atmospheric Environment*, 65:11-20, 2013.

Clements, N., Piedrahita, R., Ortega, J., Peel, J.L., Hannigan, M., Miller, S.L., Milford, J.B., Characterization and nonparametric regression of rural and urban coarse particulate matter mass concentrations in northeastern Colorado, *Aerosol Science & Technology*, 46:108-123, 2012

DiGuiseppi, C., Goss, C.W., Dao, L., Allshouse, A., Bardwell, R.A., Hendrikson, E., Miller, S.L., and Litt, J., Safety practices in relation to home ownership among urban Mexican immigrant families, *Journal of Community Health*, 37:165-175, 2012.

VanSciver, M., Miller, S., and Hertzberg, J., Particle image velocimetry of human cough, *Aerosol Science & Technology*, 45:415-422, 2011

Ryan, K., McCae, K., Clements, N., Hernandez, M., and Miller, S.L., inactivation of airborne microorganisms using novel ultraviolet radiation sources in reflective flow-through control devices, *Aerosol Science & Technology*, 44:541-550, 2010

Dutton, S.J., Vedal, S., Piedrahita, R., Milford, J.B., Miller, S.L., and Hannigan, M.P., Source Apportionment Using Positive Matrix Factorization on Daily Measurements of Inorganic and Organic Speciated PM2.5, *Atmospheric Environment*, 44:2731-2741, 2010

Litt, J.S., Goss, C., Diao, L., Allshouse, A., Diaz-Castillo, S., Bardwell, R.A., Hendrikson, E., Miller, S.L., DiGuiseppi, C., Housing environments and child health conditions among recent Mexican immigrant families: a population-based study, *Journal of Immigrant and Minority Health*, 12:617-625, 2010

Miller, S.L., Scaramella, P., Camp, J., Goss, C., Diaz-Castillo, S., Hendrikson, E., DiGuiseppi, C., Litt, J., An assessment of indoor air quality in recent Mexican immigrant housing in Commerce City, Colorado, *Atmospheric Environment*, 43:5661-5667, 2009

Vedal, S., Hannigan, M.P., Miller, S.L., Milford, J.B., Rabinovitch, N., Kim, S.-Y., Sheppard, L., The Denver aerosol sources and health (DASH) study: overview and early findings, *Atmospheric Environment*, 43:1666-1673,2009

Kujundzic, E., Hernandez, M., Miller, S. L., Particle size distributions and concentrations of airborne endotoxin using novel collection methods in homes during the winter and summer seasons, *Indoor Air*, **16**:216-226, 2006

Kujundzic, E., Matalkah, F., Howard, D. J., Hernandez, M., Miller, S. L., Air cleaners and upper-room air UV germicidal irradiation for controlling airborne bacteria and fungal spores, submitted to *Journal of Occupational and Environmental Hygiene*, **3**:536-546, 2006

Xu, P.Kujundzic, E., Peccia, J., Schafer, M. P., Moss, G., Hernandez, M., Miller, S. L., Impact of environmental factors on efficacy of upper-room air ultraviolet germicidal irradiation for inactivating airborne Mycobacteria, *Environmental Science & Technology*, **39**:9656-9664, 2005

Henderson, D. E., Milford, J. B., Miller, S. L., Prescribed burns and wildfires in Colorado: impacts of mitigation measures on indoor air particulate matter, *Journal of the Air and Waste Management Association*, **55**:1516-1526, 2005

Fabian, P., Miller, S. L., Hernandez, M. T., Ambient bioaerosol indices for indoor air quality assessments of flood reclamation, *Journal of Aerosol Science*, **36**:762-783, 2005

Dutton, S. J., Hannigan, M., and Miller, S. L., Indoor pollutant levels from the use of unvented natural gas fireplaces in Boulder, Colorado, *Journal of the Air & Waste Management Association*, **51**:174-185, 2001

## Synergistic Activities

American Association for Aerosol Research, Finance Committee current. AAAR has over 800 members and publishes the scientific journal Aerosol Science & Technology.

Consultant to the Veterans Hospital Administration, National Center Occupational Health and Infection Control, 2008 – present

Served on three national committees for the American Society of Heating, Refrigerating and Air-Conditioning Engineers to develop a standard for indoor air quality on aircraft, a test method for in-duct UV systems, and on the presidential-appointed Environmental Health Committee, 2000-present

Served as co-chair on the American Society of Heating, Refrigerating, and Air-Conditioning Engineers committee that authored Position Document *Airborne Infectious Diseases*, 2009

Reviewer for clinical trial grant applications for the National Institutes of Health, National Institute of Allergy and Infectious Diseases, 2007-2012

Faculty Advisor for the Environmental Engineering NSF REU Program, University of Colorado, Summer 2002-present. Students work in the Miller Research Group on air quality projects.

Served on National Academy of Sciences Review Panels: Decontamination of Harmful Biological Agents: How Clean is Safe? 2005; Air Quality in Passenger Cabins of Commercial Aircraft, 2001.