

AL ARMENDARIZ

Assistant Professor
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EDUCATION

Massachusetts Institute of Technology - Chemical Engineering	S.B. 1993
University of Florida - Environmental Engineering	M.E. 1995
University of North Carolina at Chapel Hill - Environmental Engineering	Ph.D. 2002

PROFESSIONAL EXPERIENCE

2002-present, Assistant Professor, Department of Environmental and Civil Engineering, Southern Methodist University, Dallas, TX.

2002, Environmental Scientist, Multimedia Planning and Permitting Division, Environmental Protection Agency, Region 6, Dallas, TX.

1995-1998, Chemical Engineer, Radian Corporation (now URS Corp.), Morrisville, NC. Permitting and air quality compliance work for pulp and paper mills, wood products industry, and natural gas production and pipeline companies.

1994, Environmental Engineer, Camp Dresser & McKee (CDM), Metairie, LA. Worked on underground storage tank management program for Jefferson Parish, Louisiana.

1992-1993, Research Assistant, MIT Center for Global Change Science, Laboratory for Atmospheric Chemistry, Cambridge, MA.

State of Florida Board of Professional Engineers, Engineer In Training, Control # EIT 96-524.

PUBLICATIONS, PRESENTATIONS, PATENTS

Kim J., Armendariz A.J., Kim K., Al-Sheikhly M. "Mercury Oxidation with Electron Beam Irradiation," under review for the Power Plant Air Pollutant Control MEGA Symposium, Baltimore, MD, August 25-28, 2008.

Armendariz A.J., Farnoud A, Huang C. "Using Electrostatic Precipitation to Control Diesel Exhaust Particulate Emissions," accepted for the Proceedings of the 12th Mine Ventilation Symposium, Reno, NV, June 9-11, 2008.

Farnoud, A., Boger, W., Armendariz A.J., "Onset Electric Field in Small-Scale Electrostatic Precipitators with Very Fine Wires," (under review), 2008.

Armendariz A., K. Gowda, G. Carney, "Evaluation of a Technique for Detection of Petroleum Hydrocarbons in Soils", *Journal of Environmental Engineering* 134(2),145-149, 2008.

Farnoud A., A. Armendariz, "Fundamental Electrical Properties of a Small-Scale Electrostatic Precipitator." American Association for Aerosol Research Annual Conference, Reno, Nevada, proceedings and platform presentation, September 24-28, 2007.

Farnoud A., A. Armendariz, "A Compact System for the Generation & Sampling of Diesel Particulate Matter." American Association for Aerosol Research Annual Conference, Reno, Nevada, proceedings and poster presentation, September 24-28, 2007.

Farnoud A., A. Armendariz, " Electrostatic Control of Particulate Emissions from Diesel-Powered Machinery" American Association for Aerosol Research Annual Conference, Reno, Nevada, proceedings and poster presentation, September 24-28, 2007.

Farnoud A., A. Armendariz, "Design and Performance of a Small-Scale Electrostatic Precipitator for Diesel Particulate Control," Proceedings of the Annual Conference of the Air and Waste Management Association, Pittsburgh, PA, proceedings and poster presentation, June 26-29, 2007.

Farnoud A., A. Armendariz, "A Compact System for the Generation and Sampling of Diesel Exhaust Particulate," Proceedings of the Annual Conference of the Air and Waste Management Association, Pittsburgh, PA, proceedings and poster presentation, June 26-29, 2007.

Armendariz A. "Apparatus and Methods for Performing Ozone Filtration." Provisional Patent Application # 300814-US20PROV, 2007.

Armendariz A., K. Gowda, G. Carney, "A Technique for Hydrocarbon Soil Assessments in Katrina Impacted Areas and in other Large Site Characterization Programs", Proceedings of the Annual Conference of the Air and Waste Management Association, New Orleans, proceedings and platform presentation, June 20-23, 2006.

Dorsey N. and A. Armendariz, "Control of Microbial Growth in Metalworking Fluids," American Association for Aerosol Research Annual Conference, Austin, Texas, proceedings and poster presentation, October 17-21, 2005.

Armendariz A. "A Novel Technique for Determining Hydrocarbon Contamination in Soils," U.S. Environmental Protection Agency, Region 6, Environmental Research Seminar, Dallas, Texas, invited talk, 2004.

Armendariz A., D. Leith, M. Boundy, R. Goodman, L. Smith, G. Carlton, "Sampling and analysis of aircraft engine cold start particles and demonstration of an electrostatic personal particle sampler", *American Industrial Hygiene Association Journal* 64: 777-784, 2003.

Armendariz A., and D. Leith, "A personal sampler for aircraft engine cold start particles: laboratory development and testing", *American Industrial Hygiene Association Journal* 64: 755-762, 2003.

Armendariz A. and D. Leith, "Concentration measurement and counting efficiency for the aerodynamic particle sizer 3320", *Journal of Aerosol Science* 33: 133-148, 2002.

Armendariz A. and D. Leith, "Concentration measurement and counting efficiency for the aerodynamic particle sizer 3320," American Association for Aerosol Research, Annual Conference, Portland, Oregon, abstract and platform presentation, 2001.

Armendariz A., D. Leith, M. Boundy, "Testing an electrostatic sampler for semi-volatile particles: field tests," American Association for Aerosol Research, Annual Conference, St. Louis, Missouri, abstract and platform presentation (2000).

Armendariz A., D. Leith, M. Boundy, "Sampling and analysis of jet engine start-up aerosol," American Industrial Hygiene Conference and Exposition, Orlando, Florida, abstract and platform presentation, 2000.

Armendariz A., D. Leith, M. Boundy, "Testing an electrostatic sampler for semi-volatile particles: laboratory tests." American Association for Aerosol Research, Annual Conference, St. Louis, Missouri , poster presentation, 2000.

Armendariz A., J. LaPointe, "Effect of fluid properties on measurement error in the API Aerosizer," American Association for Aerosol Research, Annual Conference, Cincinnati, Ohio, poster presentation (1998).

Armendariz A., E. Allen, J. Kim, "Biogenic hydrocarbon emissions: development of a sampling technique and potential impacts on ambient air quality," Florida Environmental Expo, Tampa, Florida, poster presentation (1994).

HONORS AND AWARDS

Teaching Award: Outstanding Graduate Faculty, Department of Environmental and Civil Engineering, 2006-2007.

Teaching Award: Outstanding Graduate Faculty, Department of Environmental and Civil Engineering, 2004-2005.

Teaching Award: Outstanding Undergraduate Faculty, Department of Environmental and Civil Engineering, 2003-2004.

Teaching Award: Outstanding Graduate Faculty, Department of Environmental and Civil Engineering, 2003-2004.

Best Aerosol Paper Award, runner-up, selected by the Aerosol Technology Working Group of the American Industrial Hygiene Association in June 2004, for *Armendariz and Leith 2003*.

Royster Society Fellowship (UNC)

National Institute of Environmental Health Sciences Pre-doctoral Traineeship (UNC)

Camp Dresser & McKee Graduate Fellowship (UF)

Florida Section AWMA Scholarship (UF)

National Merit Hispanic Scholar (MIT)

Member of Delta Omega (public health), Tau Beta Pi (engineering), & Phi Kappa Phi (general academic) honor societies.

TEACHING

Graduate Level: "Aerosol Mechanics - ENCE 7335" - spring semesters.

Junior Level: "Fundamentals of Air Quality - ENCE 3431" - fall semesters.

Freshmen Level: "Meteorology and Atmospheric Sciences - ENCE 1331" - fall semesters.

UNIVERSITY SERVICE

Engineering Dean's Research Development Council, 2004, 2005, 2006, 2007.

Faculty search committee - Environmental Engineering, 2006, 2007.

Faculty search committee - ENCE Department Chair, 2002, 2003.

Faculty search committee - Transportation Engineering, 2003, 2004.

Faculty search committee - Geotechnical Engineering, 2002.

Instructor for Fundamentals of Engineering Exam (EIT) Mathematics Review, 2005, 2006, 2007, 2008.

Coordinated successful proposal to start Ph.D. program in ENCE department, 2003, 2004.

Faculty participant in Mustang Corral, 2003.

Interviewer for President's Scholars Program, 2002, 2006.

Engineering Computer and Programming Committee, member, 2003, 2004.

Faculty sponsor of SMU student chapter of Texas Society of Professional Engineers and annual "Mathcounts" event, 2005, 2006, 2007, 2008.

Presentation to the Math, Science and Technology Readiness Institute Summer Camps, 2005.

PROFESSIONAL ACTIVITIES

Air and Waste Management Association, principal area lead, EP-1 Air Pollution Policy and Regulations, 2008 Annual Conference, "Attainment Strategies for the New Ozone Standard - panel discussion."

American Association for Aerosol Research, conference session chair, October 2005.

American Association for Aerosol Research, Chair - Control Technology Working Group, 2004-2005.

American Association for Aerosol Research, Vice-Chair - Control Technology Working Group, 2003-2004.

American Association for Aerosol Research, conference session co-chair, October 2002.

FUNDED RESEARCH PROPOSALS

[pending] Eight Northern Indian Pueblos, Environmental Department. "Detection of Petroleum Hydrocarbons in Contaminated Soils," \$56,809.

Centers for Disease Control and Prevention (CDC) / National Institute for Occupational Safety and Health (NIOSH), "Control of Workplace Diesel Exhaust Particulate," \$101,050, August 2007 - July 2008.

Centers for Disease Control and Prevention (CDC) / National Institute for Occupational Safety and Health (NIOSH), "Control of Workplace Diesel Exhaust Particulate," \$98,865, August 2006 - July 2007.

Centers for Disease Control and Prevention (CDC) / National Institute for Occupational Safety and Health (NIOSH), "Control of Workplace Diesel Exhaust Particulate," \$99,117, August 2005 - July 2006.

Cherokee Nation Office of Environmental Services via a grant from the Environmental Protection Agency (EPA), "Development of a Field Test for Detecting Hydrocarbons in Soils," \$45,000, June 2004 - June 2005.

RESEARCH ADVISOR TO GRADUATE STUDENTS

Ali Farnoud (current Ph.D. student - graduating May 2008)

Chenbo Huang (current M.S. student – graduating December 2008)

Whitney Boger (M.S. student - graduated August 2007)

Kushala M.C. Gowda (M.S. student - graduated May 2005)

Nancy Dorsey (M.S. student – graduated August 2004)

MEMBERSHIP IN SCIENTIFIC AND PROFESSIONAL SOCIETIES

Air and Waste Management Association
American Association for the Advancement of Science
American Industrial Hygiene Association
American Association for Aerosol Research

JOURNAL, PROPOSAL, TEXTBOOK REVIEWER

Journal of the Air and Waste Management Association, 2006, 2007, 2008.
Environmental Science and Technology, 2007.
National Science Foundation Graduate Research Fellowship Program Panelist, 2007.
textbook: John Wiley and Sons, publishers, *Weather and Climate*, 2007.
textbook: Prentice Hall, publishers, *Understanding Weather and Climate*, 2007.
U.S. Civilian Research and Development Foundation Proposal Reviewer, 2006.

COMMUNITY SERVICE

Member of the advisory board of the Texas office of the [Environmental Defense Fund \(EDF\)](#).
Volunteer technical advisor to citizen groups working on air quality issues in Texas.

OTHER PUBLICATIONS/REPORTS/PRESENTATIONS

"Hazed and Confused: Making Sense of our Air Quality Problems," an interdisciplinary panel discussion, SMU, November 2007. <http://people.smu.edu/ecoclub/events.html>
Boundy M., D. Leith, and A. Armendariz, "Performance of the Trion ATS-2 Electrostatic Precipitator" a report prepared for the Ford Motor Company Scientific Research Laboratory, February 1999.
Boundy M., D. Leith, and A. Armendariz, "Performance of the Wyatt Mist Filtration System," a report prepared for the Ford Motor Company Scientific Research Laboratory, July 1998.
Boundy M., D. Leith, and A. Armendariz, "Performance of the Monsanto Mist Filtration System," a report prepared for the Ford Motor Company Scientific Research Laboratory, March 1998.