

MOLLY (MARY ELIZABETH) FINSTER

Environmental Health Risk
Environmental Science Division
Argonne National Laboratory

Education:

Ph.D. Northwestern University, Civil and Environmental Engineering, 2005
M.S. Northwestern University, Chemical Engineering, 1999
B.S. University of Detroit Mercy, Chemical Engineering, 1997

Professional Experience:

2005-2008 Post-Doctoral Appointee, Environmental Science Division, Argonne National Laboratory, Argonne, Illinois
2008-Present Assistant Environmental Systems Engineer, Environmental Science Division, Argonne National Laboratory, Argonne, Illinois

Conducting scientific analysis in the Environmental Health Risk Section. Primary responsibilities include: evaluating and integrating chemical, physical, and biological toxicity and fate data to support health-based exposure levels and assessments for priority contaminants. Project activities performed for Environmental Protection Agency (EPA), Department of Energy (DOE), and Department of Homeland Security (DHS) include: conducting comprehensive literature searches and evaluating and synthesizing scientific data to address key information needs; organizing and maintaining extensive reference databases (thousands of records); integrating scientific data into written materials including clear displays of complex information such as fate, transport, and toxicity; researching, obtaining, and organizing dose-response data from animal bioassays and health effect data from clinical/case and epidemiological studies into toxicity matrices and exposure-response array plots that reflect data across species, exposure duration, effect type, and severity; and evaluating health-based benchmarks for drinking water and air. Project management activities include: serving as deputy project manager, preparing progress reports, schedules, and staffing plans; tracking budgets; developing, managing, and coordinating staff and student intern activities; and assisting in preparing essentially all project management documents, including quality management and assurance plans.

Summary of Previous Experience:

2000-2005 Department of Civil and Environmental Engineering, Northwestern University, Evanston, Illinois

Researched the application of phytoremediation as a remediation approach for soil lead in urban residential areas while utilizing a combination of laboratory experiments and field studies. Served as a laboratory and teaching assistant for two environmental engineering courses (duties included organizing and coordinating the laboratory section of the class, holding office hours to address student questions, and assisting the professor in grading). Tutored engineering undergraduates for the McCormick School of Engineering and Applied Science.

2003-2005 Law Offices of Munday & Nathan, Chicago, Illinois

Performed environmental research, investigative fieldwork, and historical data collection and analysis for a case.

2005 Department of Civil and Environmental Engineering, Northwestern University, Evanston, IL

Acted as the instructor for the Fundamentals of Environmental Engineering (CIV ENG 260) class, which included topics such as air/water pollution and regulations, water distribution and treatment systems, and waste management. Taught and designed course materials for the class in its entirety.

2000 Chicago Legal Clinic, Chicago, Illinois (Client: Chicago Housing Authority)

Worked on a project related to the implementation of phytoremediation in urban residential neighborhoods through the use of a decision tree model. Co-authored a report entitled: *A Resource Guide: The Phytoremediation of Lead in Urban, Residential Areas*.

1997-1999 Department of Chemical Engineering, Northwestern University, Evanston, Illinois

Research encompassed an investigation of the urban heat island effect in Chicago through the analysis of temperature data, photochemical smog records, and the urban fabric. Served as a teaching assistant for two chemical engineering courses (duties included teaching recitation sessions relating to homework and problem solving, holding office hours to address student questions, and assisting the professor in grading).

1998 Illinois Environmental Protection Agency, Office of Pollution Prevention, Springfield, Illinois

Worked at Morton Industrial Coatings, Batavia, IL, as an intern in the Pollution Prevention (P2) Program. Tracked and mapped in plant solvent usage in order to identify ways to control and optimize solvent utilization, reduce waste, and decrease annual volatile organic material (VOM) emissions.

1995-1997 ANR (American Natural Resources) Pipeline Company, a subsidiary of El Paso Corporation, Detroit, Michigan

Worked for three semesters in the Corrosion Engineering Department as a cooperative engineering student. Analyzed and maintained data; created reports and recommendations for items such as monitoring programs, mitigation strategies, and changes in current policies; maintained local, state, and federal regulatory compliance; provided technical support for field technicians; and coordinated a continuous correspondence with the laboratory and field.

Professional Activities:

American Public Health Association (APHA)
Society of Environmental Toxicology and Chemistry (SETAC)
Society for Risk Analysis (SRA)
Society of Women Engineers (SWE)

Publications:

Author or co-author of 20+ journal, report, and conference publications and presentations.