

Robert James Rossi

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PROFESSIONAL EXPERIENCE

Sept 2017 – Present **Postdoctoral Research Fellow:** Stanford University Department of Earth System Science, Stanford, CA
Mar 2017 – Sept 2017 **Postdoctoral Research Fellow:** Temple University Department of Earth and Environmental Science, Philadelphia, PA
Jan 2017 – Mar 2017 **Visiting Scholar:** University of Pittsburgh Department of Geology and Environmental Science, Pittsburgh, PA

EDUCATION

The University of Pittsburgh, Pittsburgh, PA

Ph.D., Geology and Environmental Science, September 2016

Dissertation: *Characterizing Sources and Dynamics of Metals and Metalloids in Urban Soils*

Advisor: Daniel J. Bain, Ph.D.

The Pennsylvania State University, University Park, PA

B.S., Civil Engineering, December 2009

AWARDS

2017 NatureNet Science Fellowship, The Nature Conservancy (\$150,000)

2015 Henry Leighton Memorial Scholarship, University of Pittsburgh (\$2,000)

2015 Andrew Mellon Predoctoral Fellowship, University of Pittsburgh (\$21,932)

2015 Dept. of Geology & Planetary Science Student Research Expo Best Presented Poster, University of Pittsburgh

2014 Arts & Sciences Graduate Student Organization Travel Grant, University of Pittsburgh (\$150)

2013 Henry Leighton Memorial Scholarship, University of Pittsburgh (\$1,133)

2012 Henry Leighton Memorial Scholarship, University of Pittsburgh (\$1,000)

LICENSURE

2009 **Engineer in Training** (Fundamentals of Engineering), State of Pennsylvania

RESEARCH FUNDING

External – In Preparation

National Science Foundation – Earth Sciences: Geobiology and Low-Temperature Geochemistry (Co-Investigator, PI Scott Fendorf) *RAPID: Using Lead Stable Isotopes to Characterize Pyrogenic Lead Mobilization in Urbanized Areas* [\$50,000]

PEER-REVIEWED PUBLICATIONS

2017

Rossi, R.J., Bain, D.J., Hillman, A.L., Pompeani, D.P., Finkenbinder, M.S., Abbott, M.B. (2017) Reconstructing Early Industrial Contributions to Legacy Trace Metal Contamination in Southwestern Pennsylvania. *Environmental Science & Technology*. **51** (8), 4173-4181.

2016

Rossi, R.J., Bain, D.J., Elliott, E.M, Divers, M.T., O'Neill, B. (2016) Multiple Soil Water Flowpaths Influence the Mobilization of Roadside Soil Cation Pools by Road Deicers. *Hydrological Processes*. **31** (1), 177-190.

2015

Rossi, R.J., Bain, D.J., Jenerette, D., Weller Clarke, L. & Wilson, K. (2015) Responses of Roadside Soil Cation Pools to Vehicular Emission Deposition in Southern California. *Biogeochemistry* **124**, 131-144.

Submitted

Rossi, R.J., Toran, L. Exploring the Potential for Groundwater Inundation in Coastal U.S. Cities Due to Interactions Between Sewer Infrastructure and Global Change. Submitted to *Hydrogeology Journal*.

In Preparation

Rossi, R.J., Bain, D.J., Jenerette, D. Phosphorus deposition and accumulation in roadside soils: The need to consider traffic in large-scale phosphorus budgets. In preparation for *Science*.

Rossi, R.J., Bain, D.J., Elliott, E.M, Divers, M.T., O'Neill, B. Responses of Roadside Soil Trace Metals to Interactions of Vehicular Exhaust Deposition and Exchange Reactions with Road Deicer Runoff. In preparation for *Environmental Science & Technology*.

PUBLISHED ABSTRACTS

2016

Rossi, R.J., Bain, D.J. & Jenerette, D., Phosphorus deposition to roadside soils: contributions to a unique biogeochemical environment (**15o**). Paper, *Goldschmidt Conference*, Yokohama, Japan, June 2016.

2015

Rossi, R.J., Bain, D.J., Hillman, A.L., Pompeani, D.P., Abbott, M.B. Reconstructing Early Industrial Contributions to Legacy Trace Metal Contamination in Southwestern Pennsylvania (**GC51F-1143**). Poster, *American Geophysical Union Annual Fall Meeting*, San Francisco, CA, December 2015.

2014

Rossi, R.J. & Bain, D.J. Mobilization of Roadside Soil Cation Pools by Exchange with Road Deicers (**H11C-0897**). Poster, *American Geophysical Union Annual Fall Meeting*, San Francisco, CA, December 2014.

Rossi, R.J., Elliot, E.M., Bain, D.J., Crowley, K.J., Steiner, M.A., Divers, M.T., Hopkins, K.G., Giarratani, L., Gilmore, M.E., Tison Povis, K., & Scherloun, L. ENERGY-NET (Energy, Environment and Society Learning Network): Best Practices to Enhance Informal Geoscience Learning (**ED51B-3432**). Poster, *American Geophysical Union Annual Fall Meeting*, San Francisco, CA, December 2014.

Rossi, R.J. & Bain, D.J. Responses of Roadside Soil Cation Pools to Vehicular Emission Deposition in Southern California. Paper, *University of Pittsburgh Dietrich School of Arts and Sciences Grad Expo*, Pittsburgh, PA, March 2014.

2013

Rossi, R.J., Bain, D.J., Jenerette, D., Weller Clarke, L. & Wilson, K. Responses of Roadside Soil Cation Pools to Vehicular Emission Deposition in Southern California (**GC53A-1037**). Poster, *American Geophysical Union Annual Fall Meeting*, San Francisco, CA, December 2013.

Rossi, R.J. & Bain, D.J. Soil Cation Status in Southern California: Interactions of Vehicular Emissions. Poster, *University of Pittsburgh Dietrich School of Arts and Sciences Grad Expo*, Pittsburgh, PA, March 2013.

Rossi, R.J., Bain, D.J., Jenerette, D. & Weller Clarke, L. Soil Cation Status in Southern California: Interactions of Vehicular Emissions (**SG7**). Poster, *Environmental Chemistry and Microbiology Student Symposium*, University Park, PA, March 2013.

2012

Rossi, R.J., Bain, D.J., Jenerette, D., Weller Clarke, L. & Wilson, K. Soil Cation Status in Southern California: Interactions of Vehicular Emissions (**B31B-0416**). Poster, *American Geophysical Union Annual Fall Meeting*, San Francisco, CA, December 2012.

Rossi, R.J. & Bain, D.J. Effects of Road Density and Proximity on Soil Metal Concentrations. Poster, *University of Pittsburgh Dietrich School of Arts and Sciences Grad Expo*, Pittsburgh, PA, March 2012.

PRESENTATIONS TO BROADER AUDIENCES

Rossi, R.J. What is runoff? Interactive activity, *BiodiverCITY Pittsburgh @ Assemble*, Pittsburgh, PA, April 2016.

Rossi, R.J. What is Soil? *Canonsburg Middle School*, Canonsburg, PA, June 2015

Rossi, R.J. Putting the Pieces Together Fifteen Years Later. Paper, *The Drop Project Precipitate: Water Mixer*, Pittsburgh, PA, April 2014.

OUTREACH EXPERIENCE

Chatham University, Pittsburgh, PA

2016

BiodiverCITY Pittsburgh: Life Underfoot Technical Expert (advised interactive activity design)

University of Pittsburgh & the Carnegie Museum of Natural History, Pittsburgh, PA

2014-2015

ENERGY-NET Graduate Fellow (mentored 16 high school students)

TEACHING EXPERIENCE

Course number **Course name** (position, semester, class size, student evaluation score)

University of Pittsburgh, Pittsburgh, PA

2014

GEOL 1051/2151 **Groundwater Geology** (Teaching Fellow, Spring 2014, 30 students, 4.44/5.0)

2013

GEOL 1051/2151 **Groundwater Geology** (Teaching Assistant, Spring 2013, 30 students, 4.09/5.0)
GEOL 0800 **Geology** (Teaching Assistant, Fall 2013 48 students, 4.09/5.0)
CMU 99-234/734 **The Environment Today: The Three Es of Water** (Teaching Assistant, 22 – 24 Feb, n/a)

2012

GEOL 0820 **Natural Disasters** (Teaching Assistant, Spring 2012, 120 students, 4.56/5.0)
GEOL 0860 **Environmental Geology** (Teaching Assistant, Summer 2012, 25 students, n/a)
GEOL 0800 **Geology** (Teaching Assistant, Summer 2012, 18 students, 4.79/5.0)
GEOL 0860 **Environmental Geology** (Teaching Assistant, Fall 2012, 80 students, 4.32/5.0)
GEOL 0030 **Oceans, Atmospheres, and Climate** (Teaching Assistant, Fall 2012, 32 students, 4.30/5.0)

Pennsylvania State University, University Park, PA

2009

CE 360 **Fluid Mechanics** (Student Grader, Fall 2009)

SERVICE

Nov 2017 **Volunteer:** Bay Area Science Festival, San Francisco, CA
Mar 2016 **Earth/Space/Environment Senior Level Category Judge:** Pittsburgh Regional Science & Engineering Fair, Pittsburgh, PA
Sept 2015 – Aug 2016 **Social Coordinator:** University of Pittsburgh Department of Geology and Environmental Science, Pittsburgh, PA
Sept 2015 **Student Volunteer:** Association of Environmental & Engineering Geologists 2015 Annual Meeting, Pittsburgh, PA
Aug 2015 **Facilitator, Teaching Problem Solving Recitations:** University of Pittsburgh New TA Orientation, Pittsburgh, PA
Aug 2014 – Aug 2015 **TA Mentor:** University of Pittsburgh Department of Geology and Environmental Science, Pittsburgh, PA
May 2015 **Grand Awards Judge, Earth & Environmental Science:** Intel International Science and Engineering Fair, Pittsburgh, PA
Mar 2015 **Grad Expo Judge:** University of Pittsburgh Dietrich School of Arts and Sciences Graduate Exposition, Pittsburgh, PA
Mar 2015 **Earth/Space/Environment Senior Level Category Judge:** Pittsburgh Regional Science & Engineering Fair, Pittsburgh, PA
Mar 2014 **Earth/Space/Environment Intermediate Level Category Judge:** Pittsburgh Regional Science & Engineering Fair, Pittsburgh, PA
Summer 2011 **Summer Camp Counselor:** Pennsylvania Resources Council, Pittsburgh, PA
Jan – Aug 2011 **Allegheny Front Volunteer:** The Allegheny Front, Pittsburgh, PA

PROFESSIONAL ORGANIZATIONS

Aug 2012 – **American Geophysical Union**
Present
Sept 2007 – **American Society of Civil Engineers**
Dec 2009

REFERENCES

Daniel J. Bain (PhD advisor)
Assistant Professor
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