

Sara Perl Egendorf (Perl) (they/them or she/her), M.A., M.S., Ph.D.

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- ◆ I am an interdisciplinary Earth and environmental scientist conducting basic, applied, and participatory action research
- ◆ I use systems approaches and scientific tools to engage diverse communities and stakeholders in creating STEM research, promoting food-, environmental-, and climate-justice, and enhancing urban sustainability

Education	The CUNY Graduate Center , New York, NY Doctor of Philosophy (PhD) in Earth and Environmental Sciences	2020
	Brooklyn College , Brooklyn, NY Masters of Science (MS) in Earth and Environmental Sciences	2016
	University of Washington , Seattle, WA Masters in Teaching (MA), K-8 state teacher certification Earth and Space Sciences Post-Baccalaureate	2012
	Brown University , Providence, RI Bachelors of Arts (BA) in Education Studies, History & Policy of Education	2007
Professional Experience	Assistant Professor , <i>Pace University</i> , New York, NY ◆ Teaching undergraduate courses as full-time faculty member in Environmental Studies and Science Department ◆ Mentoring students in field and lab research ◆ Coordinating student-organized community garden with crop donations to local food pantry	2023 – present
	Researcher , <i>NYC Compost Project Hosted by Earth Matter</i> , New York, NY ◆ Conducting participatory research with composters, evaluating small-scale compost efficacy for crop growth, food justice, and climate justice at 10 sites across 5 boroughs of NYC ◆ Directly supervising NYC Compost Project staff and urban growers in research methods and analyses ◆ Working with growers to change paradigms in research, centering grower interests and expertise	2021 – 2023
	Postdoctoral Fellow , <i>Cornell Atkinson Center for Sustainability</i> , Ithaca, NY ◆ Conducted engaged-research with urban farmers on newly constructed urban soil health ◆ Developed the first virtual reality platform for urban ag. extension with Cornell Sch. of Integrative Plant Sci. and Cornell Tech ◆ Explored the use of Wi-Fi signals to detect metals in soil with Cornell Tech	2020 – 2022
	Co-Founder and Co-Director , <i>The Legacy Lead Consortium</i> , New York, NY ◆ Engaged 25+ environmental organizations in NYC to address soil lead contamination ◆ Facilitated network development, convened monthly meetings, and organized Town Hall for 100+ participants (see list of network organizations in Service and Outreach below) ◆ Engaged consortium in creating updated best practices and signage adopted by NYC.gov	2015 – 2020
	Research Assistant , <i>CUNY Brooklyn College and Advanced Sci. Res. Ctr.</i> , Brooklyn, and NY, NY ◆ Trained in standard soil analytical methods for biological, chemical, and physical parameters ◆ Developed proficiency with soil and plant tissue wet chemistry and ICP-MS analysis ◆ Developed proficiency with soil microbial activity lab protocols (carbon fumigation, denitrification) ◆ Conducted field and lab research with <i>Healthy Soils Healthy Communities</i> partnership with Cornell U. and NYS Dept. of Health ◆ Updated USDA Phytoremediation Database on plant interactions with lead (Pb)	2014 – 2020

Researcher, NYC Clean Soil Bank (CSB) Studies, New York, NY

2014 – present

- ◆ Initiated the first pilot study for the NYC CSB, collaborating with NYC GreenThumb and gardeners
- ◆ Co-created Just Soil follow up study with NYCHA youth and gardeners
- ◆ Co-created Carbon Sponge study with artists and horticulturalists on soil carbon sequestration
- ◆ Co-created East NY Healthy Soils Initiative with ENY Farms to study and distribute clean soils
- ◆ Co-creating the first pilot study using CSB soil mixtures for street trees with NYC Parks

Peer Reviewed Publications

Garcia, J., Bray, N., Son, Y., Butler-Jones, A., **Egendorf, S.P.**, Kao-Kniffin, J., 2023. Plant growth and microbial responses from urban agriculture soils amended with excavated local sediments and municipal composts. *Journal of Urban Ecology* 9, juad016. <https://doi.org/10.1093/jue/juad016>

Mielke, H.W., **Egendorf, S.P.**, 2023. Getting the Lead Out: A Career-Long Perspective on Leaded Gasoline, Dust, Soil, and Proactive Pediatric Exposure Prevention. *Medical Research Archives* 11. <https://doi.org/10.18103/mra.v11i5.3813>

Egendorf, S.P., Li, E.* , He, E.* , Cheng, Z., Spliethoff, H.M., Shayler, H.A., Russell-Anelli, J., King, T., McBride, M.B., 2022. Effectiveness of washing in reducing lead concentrations of lettuce grown in urban garden soils. *Journal of Environmental Quality* 51, 755-764. <https://doi.org/10.1002/jeq2.20357>

Mielke, H.W., Gonzales, C.R., Powell, E.T., **Egendorf, S.P.**, 2022. Lead in Air, Soil, and Blood: Pb Poisoning in a Changing World. *International Journal of Environmental Research and Public Health* 19, 9500. <https://doi.org/10.3390/ijerph19159500>

Paltseva, A.A., Cheng, Z., McBride, M., Deeb, M., **Egendorf, S.P.**, Groffman, P.M., 2022. Legacy Lead in Urban Garden Soils: Communicating Risk and Limiting Exposure. *Frontiers in Ecology and Evolution* 10. <https://doi.org/10.3389/fevo.2022.873542>

Parikh, T.[†], **Egendorf, S.P.**[†], Murray, I., Jamali, A., Yee, B., Lin, S., Cooper-Smith, K., Parker, B.* , Smiley, K.* , Kao-Kniffin, J., 2022. Greening the Virtual Smart City: Accelerating Peer-to-Peer Learning in Urban Agriculture With Virtual Reality Environments. *Frontiers in Sustainable Cities* 3. <https://doi.org/10.3389/frsc.2021.815937>

Egendorf, S.P., Groffman, P., Cheng, Z., Menser, M., Mun, J.* , Mielke, H., 2021. Applying a novel systems approach to address systemic environmental injustices: Constructing soil for limiting the legacy of lead (Pb). *Elementa: Science of the Anthropocene* 9. <https://doi.org/10.1525/elementa.2020.00174>

Egendorf, S.P., Mielke, H.W., Castorena-Gonzalez, J.A., Powell, E.T., Gonzales, C.R., 2021. Soil Lead (Pb) in New Orleans: A Spatiotemporal and Racial Analysis. *International Journal of Environmental Research and Public Health* 18, 1314. <https://doi.org/10.3390/ijerph18031314>

Egendorf, S.P., Spliethoff, H.M., Shayler, H.A., Russell-Anelli, J., Cheng, Z., Minsky, A.H.* , King, T., McBride, M.B., 2021. Soil lead (Pb) and urban grown lettuce: Sources, processes, and implications for gardener best management practices. *Journal of Environmental Management* 286, 112211. <https://doi.org/10.1016/j.jenvman.2021.112211>

Deeb, M., Groffman, P.M., Blouin, M., **Egendorf, S.P.**, Vergnes, A., Vasenev, V., Cao, D.L., Walsh, D., Morin, T., Séré, G., 2020. Using constructed soils for green infrastructure – challenges and limitations. *SOIL* 6, 413–434. <https://doi.org/10.5194/soil-6-413-2020>

Egendorf, S.P., Groffman, P., Moore, G., Cheng, Z., 2020. The limits of lead (Pb) phytoextraction and possibilities of phytostabilization in contaminated soil: a critical review. *International Journal of Phytoremediation*, 1–15. <https://doi.org/10.1080/15226514.2020.1774501>

Egendorf, S.P., Gailey, A.D., Schachter, A.E., Mielke, H.W., 2020. Soil toxicants that potentially affect children’s health. *Current Problems in Pediatric and Adolescent Health Care* 50, 100741. <https://doi.org/10.1016/j.cppeds.2019.100741>

Gailey, A.D., Schachter, A.E., **Egendorf, S.P.**, Mielke, H.W., 2020. Quantifying soil contamination and identifying interventions to limit health risks. *Current Problems in Pediatric and Adolescent Health Care* 50, 100740. <https://doi.org/10.1016/j.cppeds.2019.100740>

Schachter, A.E., Gailey, A., **Egendorf, S.P.**, Mielke, H.W., 2020. Mechanisms of children’s soil exposure. *Current Problems in Pediatric and Adolescent Health Care* 50, 100742. <https://doi.org/10.1016/j.cppeds.2019.100742>

Paltseva, A.A., Cheng, Z., **Egendorf, S.P.**, Groffman, P.M., 2020. Remediation of an urban garden with elevated levels of soil contamination. *Science of The Total Environment* 722, 137965. <https://doi.org/10.1016/j.scitotenv.2020.137965>

Mielke, H., Gonzales, C., Powell, E., Laidlaw, M., Berry, K., Mielke, P. Jr., & **Egendorf, S. P.**, 2019. The concurrent decline of soil lead and children’s blood lead in New Orleans. *Proceedings of the National Academy of Sciences* 116, 22058-222064. <https://doi.org/10.1073/pnas.1906092116>

Di Iorio, E., Circelli, L., Lorenzetti, R., Costantini, E. A. C., **Egendorf, S. P.**, & Colombo, C., 2019. Estimation of andic properties from Vis-NIR diffuse reflectance spectroscopy for volcanic soil classification. *CATENA* 182, 104-109. <https://doi.org/10.1016/j.catena.2019.104109>

Egendorf, S. P., Cheng, Z., Deeb, M., Flores, V.*, Paltseva, A., Walsh, D., Groffman, P., Mielke, H., 2018. Constructed Soil for Mitigating Lead (Pb) Exposure and Promoting Urban Community Gardening: The NYC Clean Soil Bank Pilot Study. *Landscape and Urban Planning* 175, 184-194. <https://doi.org/10.1016/j.landurbplan.2018.03.012>

Walsh, D.C., Glass, K., Morris, S., Zhang, H., McRae, I., Holberton, S., Anderson, N., **Egendorf, S. P.**, Cheng, Z., Alfieri, A., Owrang, S.N., 2018. Sediment Exchange to Mitigate Pollutant Exposure in Urban Soil. *Journal of Environmental Management* 214, 354-361. <https://doi.org/10.1016/j.jenvman.2018.03.013>

Cheng, Z., Paltseva, A., Li, I., Morin, T., Huot, H., **Egendorf, S. P.**, Yolanda, R., Singh, K., Lee, L., Grinshtein, M., Liu, Y., Green, K., Wai, W., Wazed, B., Shaw, R., 2015. Trace Metal Contamination in New York City Garden Soils. *Soil Science* 180, 167-174. <https://doi.org/10.1097/ss.0000000000000126>

† = co-lead authorship

* = undergraduate or community member co-author

Grants and Awards

From September 2014 - October 2023, I have raised over \$1,000,000 to support research and collaborations

Cornell Atkinson Center Small Grants Program , <i>Cornell Atkinson Center</i> , Ithaca, NY	2022 – 2023
Participatory Researcher, supporting MS student PI in urban soil health index for food security	\$8,000
Northeast SARE Graduate Student Research Grant , <i>USDA-NIFA</i> , South Burlington, VT	2022 – 2023
Community Coordinator, supporting PhD student PI in beneficial microbiome urban ag research	\$15,000
Conservation Innovation Grant , <i>USDA-NRCS</i> , Washington, DC	2021 – 2023
Co-Principal Investigator, conducting research on urban composts with NY Dept. of Sanitation	\$400,000
Engaged Opportunity Grant , <i>Cornell U. Office of Engaged Initiatives</i> , Ithaca, NY	2021 – 2023
Principal Investigator, conducting participatory research with youth at East New York Farms	\$3,000
Conservation Innovation Grant , <i>USDA-NRCS</i> , Washington, DC	2020 – 2023
Researcher with Cornell Coop. Ext. studying high organic matter urban and rural soils	\$100,000
Cornell Atkinson Center Postdoctoral Fellowship , <i>Cornell Atkinson Center</i> , Ithaca, NY	2020 – 2022
Principal Investigator, fully funded postdoctoral position to conduct urban ag research	\$155,000

	Environmental Justice Grant , <i>NYS Dep. Of Environmental Conservation</i> , Albany, NY Lead Researcher, facilitating East New York Farms Healthy Soil Initiative	2019 – 2021 \$100,000
	Community Growers Grant , <i>NYS Agriculture and Markets</i> , Albany, NY Principle Investigator, conducting participatory action research (Just Soil) with NYCHA youth	2018 – 2019 \$25,000
	Weaver Student Travel Award , <i>Geological Society of America</i> , Seattle, WA Funding Recipient to attend and present at annual conference	2017 \$1,000
	Phytoscholars Travel Award , <i>International Phytotechnology Society</i> , Montreal, CA Funding Recipient to attend and present an annual conference	2017 \$3,000
	Student Oral Presentation Award , <i>SSSA Annual Conference</i> , Phoenix, AZ Competition Winner in Urban and Anthropogenic Soils division	2016 \$300
	Graduate Center Fellowship , <i>CUNY Graduate Center</i> , New York, NY Doctoral Student with fully funded PhD program for five years	2016 – 2021 \$187,000
	Lustig Science Scholarship , <i>CUNY Brooklyn College</i> , Brooklyn, NY Scholarship Recipient for outstanding science achievements	2015 – 2016 \$2,000
	Big Apple Brownfield Award , <i>Brownfield Partnership</i> , New York, NY Scholarship Recipient for work in Brownfield Industry	2015 – 2016 \$2,500
	Gianotta and Jacobs Scholarship , <i>CUNY Brooklyn College</i> , Brooklyn, NY Scholarship Recipient for outstanding academic achievement	2014 – 2015 \$2,000
Teaching Experience	Assistant Professor , <i>Pace University</i> , New York, NY Teaching Environmental Studies and Science 100: Water, Wildlife, and Windmills. Teaching intro course revolving around three problem-based learning modules, using focused questions to teach students about the relationship between science and policy.	2022 – 2023
	Adjunct Assistant Professor , <i>Brooklyn College</i> , Brooklyn, NY Teaching EESC 1201: Intro to Environmental Science, creating interdisciplinary syllabus, lectures, engaging students with justice-based approaches to understanding environments Developed course as Open Educational Resource: https://eesc1201.commons.gc.cuny.edu/	2022 – 2023
	Adjunct Lecturer , <i>Queens College</i> , Queens, NY Taught undergraduate discussion section of Urban Studies 101: Urban Poverty and Affluence	2017 – 2020
	Adjunct Faculty , <i>New York Botanical Gardens</i> , Bronx, NY Taught Soil Science I and II to adults in accredited Horticultural Certificate program	2015 – 2016
	Adjunct Lecturer , <i>Brooklyn College</i> , Brooklyn, NY Taught introductory Geology lecture and lab to undergraduate and College Now students	2014 – 2016
	Museum Educator , <i>Burke Museum of Natural History</i> , Seattle, WA Created curriculum for Seattle Public Schools, facilitated science programs for youth	2012 – 2013
	Assistant Teacher , <i>Wing Luke Elementary</i> , Seattle, WA Taught third-grade public school students in all academic subjects	2010 – 2011
	After-School Program Coordinator , <i>The Perkins School</i> , Seattle WA Facilitated daily enrichment activities for k-5 students, managed program administration	2009 – 2010

Teaching Artist , <i>Youngstown Cultural Arts Center</i> , Seattle, WA Facilitated weekly sessions in 3D garment construction integrating math skills for youth	2008 – 2010
Lead Classroom Teacher , <i>Public School 8</i> , Bronx, NY Taught second-grade students in all academic subjects	2007 – 2008
Teaching Assistant / Seminar Leader , <i>Brown University Education Dept.</i> , Providence, RI Led weekly seminar for Education 11: The Craft of Teaching	2006
Teaching Assistant / Seminar Leader , <i>Brown U. Environmental Studies Dept.</i> , Providence, RI Led weekly seminar for Environmental Studies 11: Intro to Environmental Issues	2003

**Scientific
Conference
Oral
Presentations**

- Soil Science Society of America National Conference, “*Carbon and Nitrogen Cycling in an Urban Constructed Technosol: The Carbon Sponge Pilot Study.*” Baltimore, MD. November 9, 2022.
- CUNY Advanced Science Research Center Symposium on The Impact of Climate Crisis on Ecosystem and Human Health, “*A Critical Systems Approach to Climate Change: Connecting Root Causes, Participatory Research and Urban Soil Carbon Storage.*” CUNY Advanced Science Research Center. April 28, 2022
- Soil Science Society of America National Conference, “*The limits of lead (Pb) phytoextraction and potentials of phytostabilization in contaminated soils.*” Virtual. November 10, 2020.
- Soils in Urban Industrial Traffic and Mining Areas International Conference, “*Safe produce from contaminated soils? Quantifying sources of lead (Pb) deposition on vegetables grown in urban and rural settings.*” Seoul, Korea. June 18, 2019.
- American Association of Geographers Annual Conference, “*JUST SOIL: Participatory research for limiting the legacy of lead.*” Washington, DC. April 4, 2019.
- American Association of Geographers Annual Conference, “*A Systems Approach to Soil Remediation: Multiple Scales of Participatory Research for the NYC Clean Soil Bank.*” New Orleans, LA. April 13, 2018.
- The NYC Urban Soils Symposium, “*Update of the USDA Phytoremediation Database.*” Bronx, NY. November 29, 2017.
- Geological Society of America National Conference, “*Human and Natural System Interactions: Modeling Biogeosociochemistry for the NYC Clean Soil Bank.*” Seattle, WA. October 24, 2017.
- International Phytotechnology Society Conference, “*Update of the USDA Phytoremediation Database.*” Montreal, Canada. September 27, 2017
- The NYC Urban Soils Symposium, “*Mitigating Soil Contamination and Promoting Urban Gardening: The NYC Clean Soil Bank Pilot Study.*” Brooklyn, NY. December 9, 2016.
- Soil Science Society of America National Conference, “*The NYC Clean Soil Bank Pilot Study: Manufacturing Topsoil from Glacial Sediments and Compost.*” Phoenix, AZ. November 7, 2016.
- Northeast Biosolids and Residuals Association Annual Conference, “*Organic Waste in Urban Agriculture: The NYC Clean Soil Bank Pilot Study.*” Cromwell, CT. October 12, 2016.
- Geological Society of America National Conference, “*Healthy Urban Gardening and Soil Contaminant Mitigation: The New York City Clean Soil Bank Pilot Study.*” Baltimore, MD. November 4, 2015.

Invited Talks and Lectures

Keynote Speaker, CUNY Advanced Science Research Center's Climate Stress Across the Biosphere, "*Climate Stress on the Built Environment: Environmental Justice*." New York, NY. September 21, 2023.

Guest Lecturer, Professor Winner's NYU Environmental Studies Course, "*Developing an Environmental Justice Systems Approach for Participatory Urban Agriculture*." Virtual. August 14, 2023.

Invited Facilitator, Queens Botanical Garden Workshop, "*Soil Testing, Safety, and Community Partnerships*" with Nathan Hunter. Queens, NY. June 11, 2023.

Invited Facilitator, Brooklyn Botanic Garden Workshop, "*Invaluable Soil: Memory, Legacy Contaminants, and New Possibilities*." Brooklyn, NY. May 17, 2023.

Invited Speaker, Rockefeller University Soil Symposium, "*Invaluable Soil: Memory, Legacy Contaminants, and New Possibilities*." New York, NY. May 2, 2023.

Guest Lecturer, Professor Groffman's Brooklyn College Graduate Seminar on *Issues in Earth and Environmental Sciences*, "*Just Compost: Constructing Urban Soils to Address Systemic Environmental Injustices*." Brooklyn, NY. March 28, 2023

Guest Lecturer, Professor Winner's NYU Environmental Studies Course, "*Developing an Environmental Justice Systems Approach for Participatory Urban Agriculture*." Virtual. August 9, 2022.

Guest Lecturer, Professor Menser's Brooklyn College Urban Sustainability Capstone Course, "*Critical Systems Science in Urban Agriculture*." Virtual. February 25, 2022.

Invited Panelist, The Spitzer School of Architecture at the City College of New York, Master of Landscape Architecture Crossing Disciplines Speaker Series, "*Crossing Disciplines: multiscale systems of participatory research on urban soil*." Virtual. December 14, 2021.

Invited Panelist, CUNY Graduate Center Earth and Environmental Sciences Department Alumni Panel, "*Perspectives as a Postdoc*." Virtual. November 11, 2021.

Invited Speaker, Brooklyn College Department of Earth and Environmental Sciences Seminar Series, "Critical Systems Science: Developing an Applied and Participatory Methodology in Urban (Agro) Ecology Research." Virtual. November 9, 2021.

Invited Speaker, Duke University Soil Lead Seminar, "*Soil Pb: A Systems Approach for Limiting Exposure and the Limits of Phytoextraction*." Virtual. November 3, 2021.

Invited Speaker, SUNY Purchase Natural and Social Science Lecture Series, "*Constructing Urban Soils to Address Systemic Environmental and Climate Injustices*." Virtual. March 9, 2021.

Guest Lecturer, Professor Menser's Brooklyn College Urban Sustainability Capstone Course, "*Constructing Urban Soils to Address Systemic Environmental and Climate Injustices*." Virtual. February 26, 2021.

Invited Speaker, Hunts Point Library Environmental Speaker Series, "*Soil 101*." Virtual. November 28, 2020.

Guest Speaker, Professor Lennon's Brown University "Reimagining Climate Change" course, "*Anti-Colonial STEM and Soil Science*." Virtual. October 29, 2020.

Invited Speaker, New York Restoration Project Webinar, "*Mitigating Lead's Legacy in NYC Soils*." Virtual. June 17, 2020.

Guest Lecturer, Professor Gruberg's Hunter College "Urban Ecosystems Policy and Planning" course, "*Mitigating Lead's Legacy in NYC Soils*." Virtual. July 27, 2020.

Keynote Speaker, Lehman Student Scholars Conference, *“Building New Soil for Healthier Communities and Environments.”* Virtual. May 8, 2020.

Invited Speaker, Lunch with GreenThumb Webinar Series, *“Contaminants in Your Soil? Best Practices to Reduce Risks for a Healthy Garden.”* Virtual. April 29, 2020.

Guest Lecturer, Professor Groffman and Professor Chamberlain’s Brooklyn College “Issues in Earth and Environmental Science in NYC” graduate course, *“Applying a Systems Approach to the Legacy of Lead.”* Virtual. March 26, 2020.

Invited Presenter, Cornell Cooperative Extension NYC Farm Survey Update, *“Building New Ground: Constructing Soil for Contaminant Mitigation, Food Justice and Carbon Sequestration.”* Brooklyn, NY. February 6, 2020.

Invited Facilitator, The Horticultural Society Workshop, *“Just Soil: A Community-Science Partnership for Limiting the Legacy of Lead.”* New York, NY. July 24, 2019.

Invited Speaker, Lead Free NYC and Healthy Homes Advisory Board Meeting, *“Lead in NYC Soil: What do we Know and What can we do?”* New York, NY. June 4, 2019.

Invited Presenter, Institute for Local Self Reliance’s National Community Composting Conference, *“Constructing Soil: the Key Element for Sequestering Lead and Carbon.”* New York, NY. May 20, 2019.

Invited Facilitator, Brooklyn Botanic Garden Workshop, *“Just Soil: A Community-Science Partnership for Limiting the Legacy of Lead.”* Brooklyn, NY. May 2, 2019.

Invited Speaker, Queens College Commoner Center, *“Applying a Systems Approach to the Legacy of Lead in Soil.”* Queens, NY. March 20, 2019.

Guest Lecturer, Howard Mielke’s Tulane University School of Public Health course, *“Minimizing Lead Exposure through Constructing Topsoil.”* New Orleans, LA. March 14, 2016

Invited Speaker, Sierra Club Lecture Series, *“The Dirt on Dirt: Making Sense of Soil.”* New York, NY. November 11, 2015.

Community-Engaged Talks and Workshops

GreenThumb’s GrowTogether Annual Conference, *“Soil Safety in a Public Food Forest”* with Nathan Hunter, Bronx River Alliance. New York, NY. April 1, 2023.

GreenThumb’s GrowTogether Annual Conference, *“Research Updates and the Clean Soil Bank”* with Joshua Cheng, Saidan Qi, Kevin McCarty, and Mark McIntyre. New York, NY. April 1, 2023.

New York City Compost Project Hosted by Earth Matter Conservation Innovation Grant Training, *“Understanding Lab Results,”* with Autumn Lewis. Virtual. February 28, 2023

New York City Compost Project Hosted by Earth Matter Conservation Innovation Grant Workshop, *“Demystifying the Research Process,”* with Ilex Chu-Jacoby and Autumn Lewis. Virtual. January 28, 2023.

Prospect Farm Winter Workshop, *“Testing and Remediating Our Farm’s Urban Soil,”* with Ilex Chu-Jacoby. Prospect Farm, Brooklyn, NY. January 7, 2023.

New York City Compost Project Hosted by Earth Matter Conservation Innovation Grant Training, *“Compost Testing and Analysis”* with Jean Bonhotal. Snug Harbor Cultural Center, Staten Island, NY. October 25, 2022.

New York Restoration Project Community Workshop, *“What’s in your soil?”* Riley Levin Community Garden, New York, NY. September 10, 2022.

Bronx River Alliance First Saturday Event, *"From Waste to Soil: Why Compost?"* Concrete Plant Park, Bronx, NY. September 3, 2022.

New York City Compost Project Hosted by Earth Matter Conservation Innovation Grant Workshop, *"Participatory Action Research on NYC Composts."* Virtual. August 25, 2022.

Bronx River Alliance First Saturday Event, *"How does Soil Health impact Human Health?"* Concrete Plant Park, Bronx, NY. August 6, 2022.

Red Hook Initiative Workshop, *"Community Soil Testing and Mapping."* Red Hook, NY. July 21, 2022.

Bronx River Alliance First Saturday Event, *"Environmental Justice and Food Justice."* Concrete Plant Park, Bronx, NY. June 4, 2022.

Greene Hill Food Co-Op Community Event, *"Soil, Food and Community Health."* Brooklyn, NY. June 1, 2022.

NYCHA Red Hook Houses / Wolcott Farm Workshop, *"Soil Testing and Community Science."* Wolcott Farm, Brooklyn, NY. April 5, 2022.

Bronx River Alliance Spring Equinox Season Launch, *"Soil Testing and Mapping."* Bronx, NY. March 20, 2022

GreenThumb's GrowTogether Annual Conference, *"Growing Healthy Soils: Gardeners' Roles in Protecting Human and Environmental Health"* with Hannah Shayler, Cornell University. Virtual. February 23, 2022.

The Urban Farmer-to-Farmer Summit (TUFFS), *"Research Updates from NYC Urban Farms and Gardens."* with Sam Anderson, Cornell University. Red Hook Farms. December 10, 2021.

East New York Farms! Saturday Market Workshop, *"Soil Testing with X-Ray Fluorescence."* UCC Farm. September 25, 2021.

East New York Farms! Workshop, *"Constructing New Soil: Why and How."* Virtual. September 14, 2021.

East New York Farms! Hands-On Workshop, *"Soil Testing with X-Ray Fluorescence."* NYCHA Pink Houses. August 20, 2021.

Bronx Foodway Youth Workshop, *"Limiting the Legacy of Lead."* Virtual. March 18, 2021.

New York Botanical Garden's Crazy for Composting Conference, *"Clean Soil Bank Research Updates."* Virtual. March 13, 2021.

Red Hook Farms Youth Workshop, *"Soil 101."* Virtual. March 11, 2021.

East New York Farms! Workshop, *"Soil 101."* Virtual. March 9, 2021.

GreenThumb's GrowTogether Annual Conference, *"Agricultural Soils of the City: Growing Healthy Soils for Healthy Communities,"* with Hannah Shayler, Cornell University. Virtual. February 22, 2021.

East New York Farms! Workshop, *"Building New Ground: Limiting Garden Risks with Knowledge and New Soils."* Virtual. August 28, 2020.

GreenThumb's GrowTogether Annual Conference, *"Just Soil: A Community-Science Partnership for Limiting the Legacy of Lead,"* with Zani Simmons, Erycka de Jesus, and Vic Gillon. New York, NY. March 30, 2019.

New York Botanical Garden and Bronx Green Up's Crazy for Composting, "Safe Gardening and Clean Soil Bank Research." Bronx, NY. February 16, 2019.

Greenpoint Library Greening Series, "Just Soil: Limiting the Legacy of Lead." Brooklyn, NY. January 31, 2019.

GreenThumb's GrowTogether Annual Conference, "Healthy Soils, Healthy Gardens: Research Update," with Hannah Shayler, Cornell University. Bronx, NY. March 31, 2018.

Brooklyn Botanic Garden's Making Brooklyn Bloom Annual Conference, "Facing our Lead Legacy," with Joshua Cheng, Brooklyn College. Brooklyn, NY. March 10, 2018.

GreenThumb's GrowTogether Annual Conference, "Answers to Legacy Lead in Our Community Spaces," with Hannah Shayler, Cornell University. Bronx, NY. March 25, 2017.

Brooklyn Botanic Garden's Making Brooklyn Bloom Conference, "Facing our Lead Legacy," with Franziska Landes, Columbia University. Brooklyn, NY. March 11, 2017

The Graduate Center Student Research Colloquium, "Mitigating Soil Contamination and Promoting Urban Gardening at Multiple Scales." New York, NY. November 17, 2016.

Greenpoint Bioremediation Project's Urban Soil Workshop Series, "Know Your Urban Soils," with Tatiana Morin, NYC Urban Soils Institute. Brooklyn, NY. May 22, 2016

GreenThumb's GrowTogether Annual Conference, "Growing Urban Soil: The New York City Clean Soil Bank." Bronx, NY. March 19, 2016

Manuscript Reviewer *Journal of Environmental Quality, Environmental Science and Pollution Research, Elementa, Science of the Total Environment, Journal of Environmental Management*

Professional Associations	Soils of Urban Industrial Traffic and Mining Areas	2019 – present
	American Association of Geographers	2018 – present
	International Phytotechnology Society	2017 – 2020
	Soil Science Society of America	2015 – present
	Geological Society of America	2014 – present

Scientific Advising and Mentorship	◆ Vanessa Pluviose, Undergraduate Student, Brooklyn College	2023 - present
	◆ Nathalie Huang, Undergraduate Student, Brooklyn College	2023 - present
	◆ Kayla Gillins, Undergraduate Student, Brooklyn College	2023 - present
	◆ Cheyenne Diaz, Undergraduate Student, Brooklyn College	2023 - present
	◆ Anthony Infante, Undergraduate Student, Brooklyn College	2023 - present
	◆ Autumn Huang, Undergraduate Student, Brooklyn College	2023 - present
	◆ Carina Alessandro, Undergraduate Student, Brooklyn College	2023 - present
	◆ Emma Marin, Undergraduate Student, Brooklyn College	2023 - present
	◆ Brandon Guasaquillo, Undergraduate Student, Brooklyn College	2022 - present
	◆ Mindy Argueta, Undergraduate Student, Brooklyn College	2022 - present
	◆ Brandon Pierre-Louis, Undergraduate Student, Brooklyn College	2022 - present
	◆ Marcus Fridman, Undergraduate Student, Brooklyn College	Fall 2022
	◆ Marcello Ursic, Undergraduate Student, NSF REU, Brooklyn College	Summer 2022
	◆ Ilexis Chu-Jacoby, PhD Student, Cornell University	2021 – 2022
	◆ Jennifer Berkowitz, PhD Student, Cornell University	2021 – 2022
	◆ Taelor Matos, Undergraduate Student, Cornell University	2021 – 2022
	◆ Kendra Cooper-Smith, Undergraduate Student, Cornell University	2021 – 2022
◆ Sammi Lin, Undergraduate Student, Cornell University	2021 – 2022	
◆ Yejin Son, PhD Student, Cornell University	2020 – 2022	

◆ Emily Li, Undergraduate Student, Hunter College	Spring 2020
◆ Shakira Fernandez, Undergraduate Student, Hunter College	Spring 2020
◆ Bud Cannizzo, High School Student, Lab Intern	Summer 2019
◆ Ruthann Richard, Undergraduate Student, NSF REU, Brooklyn College	Summer 2019
◆ Paula Torres, Undergraduate Student, NSF REU, Brooklyn College	Summer 2019
◆ Elise He, Undergraduate Student, NSF REU, Brooklyn College	Summer 2018
◆ Stephen Medina, Undergraduate Student, NSF REU, Brooklyn College	Summer 2018
◆ Tesia Singh Ragen, High School Student, Lab and field intern	Summer 2018
◆ Esmeralda Huerta, Undergraduate Student, Queens College	2018 – 2019
◆ Genesis Urena, Undergraduate Student, Queens College	2018 – 2019
◆ Maliyah Smith, High School Student, Participant in Just Soil	2018 – 2020
◆ Sophia Marek, High School Student, Participant in Just Soil	2018 – 2020
◆ Olivia Payne, High School Student, Participant in Just Soil	2018 – 2020
◆ Prince Hill-Gordon, High School Student, Participant in Just Soil	2018 – 2020
◆ Jay Johnson, High School Student, Participant in Just Soil	2018 – 2020
◆ Julian Webster, High School Student, Participant in Just Soil	2018 – 2020
◆ Isaiah Brown, High School Student, Participant in Just Soil	2018 – 2019
◆ Makayla Jackson, High School Student, Participant in Just Soil	2018 – 2019
◆ Janiya Isaac, High School Student, Participant in Just Soil	2018 – 2019
◆ Blessings McNeil, High School Student, Participant in Just Soil	2018 – 2020
◆ Nasir Mendez, High School Student, Participant in Just Soil	2017 – 2019
◆ Ashley Paulino, High School Student, Participant in Just Soil	2017 – 2018
◆ Terryann Smith, High School Student, Participant in Just Soil	2017 – 2019
◆ Emily Mohammed, High School Student, Participant in Just Soil	2017 – 2019
◆ Vangely Galvan, High School Student, Participant in Just Soil	2017 – 2020
◆ Oolade Thomas, Undergraduate Student, NYS Department of Health Intern, Brooklyn College	Summer 2016
◆ Anna Minsky, Field and Lab Research Assistant	2016 – 2019
◆ Jasleen Kaur, High School Student, Midwood High School	2015 – 2017
◆ Marzana Rafa, High School Student, Midwood High School	2015 – 2017
◆ Zenab Jamil, High School Student, Midwood High School	2015 – 2017
◆ Zainab Salahudin, High School Student, Midwood High School	2015 – 2017
◆ LiLin Liu, High School Student, Midwood High School	2015 – 2017
◆ Sophia Khoja, High School Student, Midwood High School	2015 – 2017
◆ Katharhy G., Undergraduate Student, Brooklyn College	2015 – 2020
◆ Shruti Singh, High School Student, Midwood High School	2015 – 2016
◆ JD Rachid, Undergraduate Student, Brooklyn College	2015 – 2016
◆ Tamar Saimbert, Undergraduate Student, Brooklyn College	2015 – 2016
◆ Fanny Mai, Undergraduate Student, Brooklyn College	Summer 2015
◆ Tiffany Mai, Undergraduate Student, Brooklyn College	Summer 2015
◆ Norma Sutton, Undergraduate Student, Brooklyn College	2014 – 2015

Academic Committees	Brooklyn College Urban Sustainability Program Advisory Board	2022 – present
	Cornell University Participatory Action Research Network Organizing Committee	2020 – 2022
	Cornell University School of Integrative Plant Science: Diversity, Equity, and Inclusion Committee	
	Communications Team and Co-Creator of Allies for Indigenous Reconciliation Working Group	2020 – 2022
	City University of New York Graduate Center and Queens College Adjuncts Unite Committee	2017 – 2020
	City University of New York Graduate Center Earth and Env. Science Dept., Executive Committee	2017 – 2020
Trainings and Certificates	Applied Data Science Certificate, <i>MIT Professional Education</i> , Virtual	2023
	Backwards Design Planning Course, <i>Cornell Center for Teaching and Innovation</i> , Virtual	2023
	Teaching Portfolio Workshop, <i>Brooklyn College</i> , Virtual	2023
	Sustainability Leadership Transdisciplinary Collaboration Training, <i>Env. Defense Fund</i> , NY, NY	2022
	ABT Framework Communication Training, <i>Randy Olson</i> , Virtual	2022

	Postdoctoral Leadership Training, <i>Cornell University</i> , Virtual	2021
	Co-Designing Research for Impact, <i>Cornell Atkinson Center</i> , Virtual	2021
	R Statistical Training Series, <i>Cornell Statistical Consulting Unit</i> , Virtual	2020 – 2022
	Sustainability Leadership Science Communication Training, <i>American Institute of Biological Sciences</i> , Virtual	2020, 2022
	Critical Participatory Action Research Summer Intensive, <i>The Public Science Project</i> , NY, NY	2018
	Phytotechnology Training, <i>The International Phytotechnology Society</i> , Montreal, CA	2017
Service and Outreach	Co-Organizer , The Urban Farmer-to-Farmer Summit, NYC ◆ A platform for sharing farmer-created knowledge, co-created with NYC urban farmers and Cornell Cooperative Extension	2019 – present
	Co-Founder and Co-Director , Legacy Lead, NYC, developing ongoing relationships with: ◆ 462 Halsey Community Farm, 596 Acres, Bronx Green Up, Brooklyn Botanic Garden, Brooklyn Queens Land Trust, Cornell Cooperative Extension, Columbia University, Common Ground Compost, Earth Justice, East New York Farms!, Ecoschools, the Greenpoint Bioremediation Project, GreenThumb, the Lead Roundtable, New York Lawyers for Public Interest, New York Restoration Project, Newtown Creek Alliance, North Brooklyn Neighbors, the NYC Compost Project (NYCCP) Hosted by Big Reuse, the NYCCP hosted by Brooklyn Botanic Garden, the NYCCP Hosted by the Lower East Side Ecology Center, the NYCCP Hosted by the New York Botanical Garden, the NYCCP Hosted by Queens Botanical Garden, the NYC Department of Health, the NYC Mayor’s Office of Environmental Remediation, the NY State Department of Health, Smiling Hogshead Ranch	2015 – 2020
	Soil-Testing and Workshop Provider , ongoing collaborations with: ◆ BK Rot ◆ Bronx Green Up ◆ Bronx River Alliance ◆ Brooklyn Botanic Garden ◆ Brooklyn Queens Land Trust ◆ Community and home gardeners upon request ◆ GreenThumb NYC ◆ East New York Farms! ◆ The NYC Compost Project ◆ New York Restoration Project ◆ Queens Botanical Garden ◆ Red Hook Initiative	2014 – present
Professional References	◆ Hannah Shayler, Cornell University School of Integrative Plant Science, has34@cornell.edu ◆ Peter Groffman, The Advanced Science Research Center at the Graduate Center of the City University of New York, pgroffman@gc.cuny.edu ◆ Joshua Cheng, Brooklyn College, zcheng@brooklyn.cuny.edu ◆ Howard Mielke, Tulane University, hmielke@tulane.edu	