

ANNA PALTSEVA ♦ Curriculum Vitae

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EDUCATION

PhD in Earth and Environmental Sciences, Geology, The Graduate Center, City University of New York, New York, NY, 2019.

MPhil in Earth and Environmental Sciences, The Graduate Center, City University of New York, New York, NY, 2014-2018.

Advanced Certificate in Geographic Information Systems, Hunter College, City University of New York, New York, NY, 2016–2018.

*B.Sc. in Earth and Environmental Sciences, Brooklyn College, City University of New York, Brooklyn, NY
Diploma received with Degree Honors: Summa Cum Laude, Dean's List: Spring 2013, Fall 2013,
Spring 2014. Transferred from North Caucasus Federal University, 2013–2014.*

*B.Sc. in Ecology and Nature Management, North Caucasus Federal University, Stavropol, Russia
Tuition scholarship, Degree Honors: Summa Cum Laude, 2008–2014.*

TEACHING EXPERIENCE

*Adjunct Assistant Professor, Brooklyn College, City University of New York, Brooklyn, NY
Teach lectures and labs to undergraduate students in Stats & Data Analysis in Geosciences (developed course materials) and Intro to Environmental Sciences, 2020.*

Instructor, Farm School, NY, NY

Taught Growing Soils course to adult students with lectures and practical hands-on activities in the field. Developed course materials, 2019.

Adjunct Instructor, New York University, NY, NY

Teach Environmental Systems Science and Biogeochemistry of Global Change courses to undergraduate students, 2018-2020.

Soil Management Instructor, Brooklyn Botanic Garden, Brooklyn, NY

Teach lectures and labs on Soil Management and Intro to Environmental Sciences to adult students enrolled in Horticulture Certificate programs and an intensive Soil Management course for NYC Parks Department Master Gardener program. Developed Soil Management curriculum and course materials, 2016–Present.

Horticulture Instructor, New York Botanical Garden, Bronx, NY

Teach Soil Science and Introduction to Plant Science lectures and labs to adults with Bachelors or advanced degrees in Horticulture Certificate program. Developed curricula and course materials, 2015–Present.

Adjunct Lecturer, Brooklyn College, City University of New York, Brooklyn, NY

Taught lectures and labs to undergraduate students in Environmental Aspects of Urban Soils, Introduction to Environmental Sciences, Geographic Information Systems and Green Infrastructure

Summer Intensive Courses. Developed an urban soil lab manual for introductory soil classes, **2014–2019**.

Grad Assistant B, Brooklyn College, City University of New York, Brooklyn, NY

Taught lectures and labs to undergraduate students in Earth Dynamics (Core Geology) classes, **2014–2019**.

RESEARCH

RUDN University Agrarian and Technological Institute, Russia

Smart Technologies to Monitor, Model and Evaluate Ecosystem Services provided by Urban Green Infrastructure and Soils to Support Decision Making in Sustainable City Development under Global Changes, partnership with IBAF Institute, Italy and RUDN University, Russia, **2019–Present**

Design laboratory experiments, conduct field studies in Moscow and regions in order to develop tool kits for express monitoring of urban soil quality.

Modeling and Assessment Ecosystem Services of Urban Green Infrastructure Russian Science Foundation Project, partnership with IBAF Institute, Italy and RUDN University, Russia

Modeled and developed techniques to assess sustainable functioning of soil constructions in megapolises, **2016–2019**.

Brooklyn College Environmental Sciences Analytical Center (Urban Soils Lab)

Phytoremediation Database, partnership with USDA NRCS, **2017–2019**

Performed literature search and compiling database on heavy metal(loid)s and organic contaminants.

Characterization of Garden Soil Contamination in New York City with GIS Application, **2015–2018**

Investigated spatial distribution of Pb levels with GIS geostatistical, spatial and visualization tools. Calculated pollution and ecological risk from heavy metal(loid)s with different indexes.

Lead Stabilization and Arsenic Mobilization by Phosphate and Alternative Amendments: Implications on Urban Soil Remediation and Urban Agriculture, partnership with USDA NRCS and EPA, **2015–2018**

Studied the effect of different amendments, assessed bioaccessible Pb and As, grew experimental vegetables in suburban gardens and examined uptake of the metals in the plant tissue.

Clean Soil Bank Pilot Study, partnership with NYC Mayor's Office of Environmental Remediation, GreenThumb

Evaluated the use of glacial sediments and compost to manufacture topsoil for urban agricultural use. Conducted soil and plant tissue analyses in community gardens, **2014–2017**.

Development of a Field Kit for Public Use to Screen Pb in Soils, partnership with Columbia University, NY

Developed a kit and XRF technique for rapid assessment of soil Pb bioaccessibility that can be conducted in the field, **2017–2019**.

Assessing Bioaccessibility of Lead and As in Urban Garden Soils, partnership with University of Molise, Italy

Assessed bioaccessibility of Pb using the standard and modified US EPA method 1340. Developed a diagnostic screening method for Pb and As bioaccessibility in urban soils using Vis-NIR, **2013–2018**.

Phosphate-Enhanced Remediation of Lead and Arsenic Contaminated Soil: A Greenhouse Experiment

Partnership with USDA NRCS and EPA, **2014–2015**

Tested the effectiveness of phosphate in enhancing As phytoextraction and Pb stabilization using

Mustard Greens and Chinese ferns.

PEER-REVIEWED PUBLICATIONS

Paltseva A., Cheng Z., Egendorf S.P., Groffman P.M. Remediation of an Urban Garden with Elevated Levels of Soil Contamination. *Sci. Total Environ*, p. 137965.

Tarasova E., Drogobuzhskaya S., Tapia-Pizarro F., Morev D.V., Brykov V., Dovletyarova E.A, Slukovskaya M., Navarro-Villarroel C., Paltseva, A.A., Neaman A. (2020) Vermiculite-Lizardite Industrial Wastes Promote Plant Growth in a Peat Soil Affected by a Cu/Ni Smelter: a Case Study at the Kola Peninsula, Russia. *J Plant Nutr Soil Sci*, pp. 1-6.

Tapia-Gatica, J., González-Miranda, I., Salgado, E., Bravo, M.A., Tessini, C., Dovletyarova, E.A., Paltseva, A.A., Neaman, A. (2019) Advanced Determination of the Spatial Gradient of Human Health Risk and Ecological Risk from Exposure to As, Cu, Pb, and Zn in Soils Near the Ventanas Industrial Complex (Puchuncaví, Chile). *Environ. Pollut*, p. 113488.

Landes F.C., Paltseva A., Sobolewski J.M., Mailloux B.J., Ellis T. K., Cheng Z., van Geen A. (2019) A Field Procedure to Screen Soil for Bioaccessible Lead. *Anal. Chem.* 91(13), pp. 8192-8198.

Joyner J.L., Kerwin J., Deeb M., Prithiviraj B., Lozefski G., Paltseva A., McLaughlin J., Groffman P.M., Cheng Z., Muth T. (2019) The Microbial Ecology of Green Infrastructure Soil. *Front. Microbiol.* 10:982, pp. 1-14.

Paltseva A., Cheng Z., Deeb M., Groffman P., Maddaloni M. (2018) Variability of Bioaccessible Lead in Urban Garden Soils. *Soil Science*, 183(4), pp. 123–131.

Deeb M., Groffman P.M., Joyner J.L., Lozefski G., Paltseva A., Lin B., Mania K., Cao D.L., McLaughlin J., Muth T., Prithiviraj B., Kerwin J., Cheng Z. (2018) Soil and Microbial Properties of Green Infrastructure Stormwater Management Systems. *Ecol. Eng.* 125, pp. 68–75.

Paltseva A., Cheng Z., Deeb M., Groffman P.M., Shaw R.K., Maddaloni M. (2018) Accumulation of Arsenic and Lead in Garden-grown Vegetables: Factors and Mitigation Strategies. *Sci. Total Environ*, 640–641, pp. 273–283.

Egendorf S.P., Cheng Z., Deeb M., Flores V., Paltseva A., Walsh D., Groffman P., Mielke H.W. (2018) Constructing Soil for Mitigating lead (Pb) Exposure and Promoting Urban Community Gardening: The New York City Clean Soil Bank pilot study. *Landsc. Urban Plan.* 175, pp. 184–194.

Cheng Z., Paltseva A., Li I., Morin T., Huot H., Egendorf S., Su Z., 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, pp. 167–174.

PUBLICATIONS UNDER REVIEW

Vasenev V.I., Cheng Z., Paltseva A., Sconocchia A., Alekseev A., Shaw R.K., Romzaykina O.N., Dovletyarova E.A. A Comparative Assessment of Heavy Metals' Contaminated Urban Soils in Three World Megapolises: Discrepancy in Regulations and Outcomes for Management. *Heliyon*.

Romzaykina O., Vasenev V., Paltseva A., Kuzyakov Y., Neaman A., Dovletyarova E. Assessing and Mapping the Resistance to Heavy Metals' Contamination as a Key Ecosystem Service of Urban Soils in Moscow Megapolis. *J. Environ. Qual.*

Vasenev V.I., Slukovskaya M.V., Cheng Z., Paltseva A., et al. Anthropogenic Soils and Landscapes of European Russia: Summer School from Sea to Sea (3MUGIS). *J. Environ. Qual.*

PUBLICATIONS IN PREPARATION

Paltseva A., Deeb M., Cheng Z., Di Iorio E., Circelli L., Colombo C. Prediction of Lead Bioaccessibility in Urban Soils of New York City with Vis-NIR Diffuse Reflectance Spectroscopy.

Paltseva A., Cheng Z., McBride M., Groffman P.M. Is Urban Gardening Hazardous to Your Health?

Romzaykina O.N., Vasenev V.I., Khakimova R.R., Dovletyarova E.A., Paltseva A., Bhoobun B. Spatial Variability of Soil Properties and Vegetation Condition in an Urban Park after Restoration.

EDITED & TRANSLATED PUBLICATIONS

Kremenetskaya I., Alekseeva S., Slukovskaya M., Mosendz M., Drogobuzhskaya S., Ivanova L. Expanded Vermiculite-Reached Product Obtained from Mining Waste: the Effect of Roasting Temperature on the Agronomic Properties.

Slukovskaya M., Vasenev V.I., Ivashchenko K.V., Morev D.V., Drogobuzhskaya S.V., Ivanova L.A., Kremenetskaya I.P. (2019). Technosols on Mining Wastes in the Subarctic: Efficiency of Remediation under Cu-Ni Atmospheric Pollution.

Mikhaylova I., Slukovskaya M., Mosendz I., Kremenetskaya I., Karavayeva E., Drogobuzhskaya S. (2019). Application of Silicon-contained Mining Wastes in Urban Greening. In: Vasenev V., Dovletyarova E., Cheng Z., Prokof'eva T., Morel J., Ananyeva N. (eds) *Urbanization: Challenge and Opportunity for Soil Functions and Ecosystem Services. SUITMA 2017*. Springer Geography. Springer, Cham, pp. 145-152. DOI: 10.1007/978-3-319-89602-1_18.

Slukovskaya M., Kremenetskaya I., Mosendz I., Drogobuzhskaya S., Ivanova L. (2018). Serpentine Mining Wastes - Materials for Soil Rehabilitation in Cu-Ni Polluted Wastelands. *Soil Science*, 183(4), 141-149.

Slukovskaya, M. V., Ivanova, L. A., Kremenetskaya, I. P., Gorbacheva, T. T., Drogobuzhskaya, S. V., Lashchuk, V. V., & Markovskaya, E. F. (2018). Rehabilitation of Industrial Barren in Arctic Region Using Mining Wastes. *The Open Ecology Journal*, 11(1), 1-13.

Shchepeleva A.S., Vasenev V.I., Mazirov I.M., Vasenev I.I., Prokhorov I.S., Gosse D.D. (2016). Changes of Soil Organic Carbon Stocks and CO₂ Emissions at the Early Stages of Urban Turf Grasses' Development. *Urban Ecosyst*, 20, 309-231.

MENTORING EXPERIENCE

New York University

Academic Advising

Provide mentorship to 3 undergraduate students conducting research on Greenwood Cemetery soil contamination and developing a real-time soil pollution monitoring system with cutting edge technology, **2020**.

Brooklyn College*Intern Supervision*

Provided mentorship and supervision of 6 high school and undergraduate students in lab work, taught how to perform basic (pH, salts, NPK, soil texture, XRF, organic matter) and advanced (heavy metal analysis in soil and plant tissues) tests, **2016**.

Academic Advising

Provided mentorship and academic support for 3 undergraduate students conducting research on urban soils, **2013–2016**.

RELEVANT PROFESSIONAL EXPERIENCE*Researcher*, RUDN University, Moscow, Russia

Conduct research on soil metal contamination and develop express methods to study urban soil quality. Manage an international team of 10 graduate and postgraduate students, **2019–Present**.

Program Coordinator & Research Fellow, NYC Urban Soil Institute, NY

Develop educational materials (Urban Soil Health Assessment Kit and Urban Soil Lab Manual), lead soil workshops, conduct on-site assessments, and coordinate collaborations with local and international researchers, **2016–2019**.

MEDIA COVERAGE

Civileats - “The New York Artist Reintroducing Wild, Edible Foods” Jan. 3, 2020. <https://civileats.com/2020/01/03/the-new-york-artist-reintroducing-wild-edible-foods/>.

CBS News - “Research Shows Dangerous Levels of Lead in New York City Soil” Nov. 4, 2019. <https://newyork.cbslocal.com/2019/11/04/new-york-city-gardens-soil-lead-concerns/>.

New York Post - “High Levels of Lead in Soil Poses Threat to City Gardens” by Sheehan, K., Narizhnaya, K., O'Neill, N. Nov. 3, 2019. <https://nypost.com/2019/11/03/high-levels-of-lead-in-soil-poses-threat-to-city-gardens/>.

Gotham Gazette - “Opinion Soil Scientists’ Advice to Urban Gardeners: Test for Lead” by Paltseva, A.A., Cheng, Z., Deeb, M., Egendorf, S.P., Groffman, P.M., Sep. 26, 2019. <https://www.gothamgazette.com/opinion/8810-soil-scientists-advice-to-urban-gardeners-test-for-lead>.

ACADEMIC & ORGANIZATIONAL SERVICE***Committee work***

Faculty Membership Committee, CUNY Graduate Center, **2017–2019**.

Elections Committee, CUNY Graduate Center, **2015–2016**.

Summer School Organizing Committee, RUDN University, Moscow, Russia, **2017–Present**.

Conference organizer

Smart and Sustainable Cities conference, Moscow, Russia, **2018**.

NYC Annual Urban Soils Symposiums, New York, NY, **2016–2019**.

9th International Congress of Soils in Urban, Industrial, Traffic, Mining, Military Areas (SUITMA)
Moscow, Russia, **2015–2017**.

Invited speaker

The 15th Annual Cornell Extension Conference: Managing Landscapes Sustainably, Brookhaven, NY, **2019**
An Intentional Design: A Key to Remediation of a Contaminated Landscape.

Swale House Exhibition: The Art & Science of Urban Gardens and Soil, Governor's Island, NY, **2019**
Heavy Metal Remediation and the Illinois River Project in collaboration with Don Daedalus

The 2nd Annual Inside the Graduate Center: Dissertation Showcase, New York, NY, **2019**
Lead and Arsenic Contamination in Urban Soils in New York City.

The 3rd Annual Urban Soils Symposium: Urbans Soils and Remediation, New York, NY, **2018**
A Story of an Urban Garden.

The 11th Sino-French International Workshop on Contaminated Soil Remediation: Innovations for the
Circular Economy by Recycling Secondary Resources Presentation, Guangzhou, China, **2018**
Reduction of Pb and As in Plants by Soil Amendments.

PechaKuchaNight New York City at Design Week Presentation, Brooklyn, NY, **2018**
Soil Contamination and Urban Agriculture: Problems and Solutions.

The 2nd Annual Urban Soils Symposium Soils of Our City: Soils Our Resource Our Future, Bronx, NY, **2017**
Heavy Metal(Ioid)s Accumulation in Suburban Farm Vegetables.

North Caucasus Federal University Guest Lecture, Stavropol, Russia, **2017**
Peculiarities of Higher Education in the United States of America.

Manhattanville College "Just Food" Panel discussion, Purchase, NY, **2017**
How to Grow Healthy Food – From Community gardens to school, backyard, and beyond.

The 1st Annual Urban Soils Symposium Soils of Our City: Features and Applications, Brooklyn, NY, **2016**
Lead Stabilization and Arsenic Mobilization by Phosphate and Alternative Amendments.

Russian University of People Friendship Guest Lecture, Moscow, Russia, **2015**
*Peculiarities of Higher Education in the United States of America in the Perspective of Creating a Joint
Master's Program.*

Community service

XR-fluorescence technician, EPA Soil Kitchen Events, Soil-SHOP, NAG, USI workshops
Newburg, Utica, Brooklyn, Bronx, NY, **2014–2018**.

Conducting XRF analysis of soils brought by the public, advising on remediation strategies.

Workshop leader, Brooklyn Bloom, NYC Housing Authority, NAG, NYC Compost, Understory, USI annual
events, NY, **2013–2018**.

Lecturing with hands on activities on soil basics and soil interpretations. Presenting issues associated
with urban gardening and how to remediate the impact.

PRESENTATIONS

Soil Science Society of America International Annual Meeting Oral Presentation: *Remediation of a Highly Contaminated Urban Gardening Site*. San Antonio, Texas (USA), Nov. 10, 2019.

21st World Congress of Soil Science Poster Presentation: *Estimating Bioaccessible Pb and As in Urban Soils: Application of Vis-NIR Diffuse Reflectance Spectroscopy*. Rio de Janeiro (Brazil), August 16, 2018.

Smart and Sustainable Cities International Conference Oral Presentation: *Assessment of NYC Garden Ecosystems with GIS Tools*. Moscow (Russia), May 25, 2018.

FAO Global Symposium on Soil Pollution Oral Presentations: *Application of GIS to Characterize Garden Soil Contamination in New York City and Bioaccessibility of Pb and As in Contaminated Urban Soil Evaluated by Chemical Extraction and Vis-NIR Spectroscopy* with Claudio Colombo. Rome (Italy), May 3, 2018.

Soil Science Society of America International Annual Meeting Oral Presentation: *Rapid Screening of Bioaccessible Pb in Soils Using pXRF*. Tampa, FL (USA), October 23, 2017.*- *1st place in Oral Presentation Competition*.

The 9th Congress of Soils in Urban, Industrial, Traffic, Mining and Military Areas Oral Presentations *Accumulation of As and Pb in Garden-grown Vegetables: Factors and Mitigation Strategies” and Screening for Bioaccessible Pb in Soils Using a Rapid XRF Analyzer Method*. Moscow (Russia), May 23, 26, 2017.* - *Best Young Scientist’s Presentation Award*.

Green Infrastructure: Nature Based Solutions for Sustainable and Resilient Cities Conference Oral Presentation: *Urban Agriculture as a Type of Green Infrastructure: a Case Study of Soil Remediation by Amendment*. Orvieto (Italy), April 6, 2017.

Soil Science Society of America International Annual Meeting Oral Presentation: *Lead Stabilization and Arsenic Mobilization by Phosphate and Alternative Amendments: Implications on Urban Soil Remediation, Urban Agriculture and Public Health*. Phoenix, AZ (USA), November 7, 2016.

“MegaCities 2050” International Conference Oral Presentation: *Assessing Bioaccessibility of Lead in Urban Garden Soils*. Moscow (Russia), September 13, 2016.

The 8th Congress of Soils in Urban, Industrial, Traffic, Mining and Military Areas Poster Presentation: *Assessing Bioaccessibility of Lead in Urban Garden Soils: the Effect of P-bearing Amendments*. Mexico City (Mexico), September 25, 2015.*- *Best Poster Award*.

Geological Society of America National Conference Oral Presentations: *Arsenic Mobilization and Lead Stabilization by Phosphate and Alternative Amendments: Implications on Urban Soil Remediation and Urban Agriculture and Phosphate-Enhanced Remediation of Lead and Arsenic Contaminated Soil: A Greenhouse Experiment* with Zulema Garcia Blanco. Baltimore, MD (USA), November 4, 2015.

Geological Society of America National Conference Oral Presentations: *Assessing Bioaccessibility of Lead in Urban Garden Soils and Screening for Bioaccessible Pb in Soils Using a Rapid XRF Analyzer Method* with Kayo Green. Bretton Woods, NH (USA), March 23, 2015.

Soil Science Society of America International Annual Meeting Oral Presentation: *Assessing Bioaccessibility of Lead in Urban Soils: The Effect of Amendments*. Long Beach, CA (USA), November 3, 2014.

AWARDS, GRANTS & FELLOWSHIPS

NYU Adjunct Faculty Professional Development Fund, NYU School of Art & Science, New York, NY, **2019**.

CUNY Academy Travel Award Grant for Adjunct Faculty, CUNY Graduate Center, New York, NY, **2019**.

Graduate Center Award for Excellence in Teaching, CUNY Graduate Center, New York, NY, **2019**.

Wilford Gardner Travel Fellowship, U.S. National Committee for Soil Science, Soil Science Society of America, **2018**.

“Excellence in Reviewing” Award, The Journal of Soils and Sediments, Springer, **2016, 2018**.

Teaching and Learning Center Grant, CUNY Graduate Center, New York, NY, **2016**.

Dr. Louise Lennihan Arts & Sciences Grant, CUNY Graduate Center, New York, NY **2016**.

Urban Soils as the Foundation for Urban Agriculture: a Technical Assistance Program for Urban Farmers in New York City Fellowship, NYC Urban Soil Institute, Brooklyn, NY **2016-2017**.

The USS Donald and Mary Ellen Passantino International Students Scholarship, CUNY Student Senate, **2016**.

University Fellowship, CUNY Graduate Center, New York, NY **2016**.

Travel Award, Geologic Society of America, **2015**.

Tuition Award, CUNY Graduate Center, New York, NY **2014–2019**.

Travel & Research Award, CUNY Presidential Research Fund, New York, NY **2014–2018**.

Science Fellowship, CUNY Graduate Center, New York, NY **2014–2016**.

Graduate B Teaching Fellowship, CUNY Brooklyn College, Brooklyn, NY **2014–2019**.

Angelo Tagliacozzo Memorial Geological Scholarship, American Institute of Professional Geologists, **2014**.

PROFESSIONAL MEMBERSHIPS & SERVICE

Global Soil Partnership, Food and Agriculture Organization of the United Nations, **2018–Present**
Coauthor, Guidelines for measuring, mapping, monitoring and reporting on soil pollution.

New York Academy of Science, **2017–2019**.

Working group of Soils in Urban, Industrial, Traffic, Mining and Military Area (SUITMA), **2015–Present**.

Geological Society of America, **2015–2017**.

American Institute of Professional Geologists, **2014–Present**.

Soil Science Society of America, **2014–Present**

Oral & Poster Presentation Judge, Urban/Anthropogenic Soils, Global Climate Change Divisions, 2019
Graduate Student Liaison, Urban/Anthropogenic Soils Division, 2016–2017.

REVIEWER

Scientific Reports, Nature, **2020**.

Journal of Soil Science and Plant Nutrition, Environmental Science and Pollution Research, Springer, **2020**.

Agronomy, American Society of Agronomy, **2019–Present**.

Journal of Food Quality, Wiley-Blackwell, **2019–Present**.

Chemosphere, Science of Total Environment, Elsevier, **2019–Present**.

PLOS ONE, the Public Library of Science, **2019–Present**.

Land Degradation and Development, Willey, **2018–Present**.

Environmental Science and Pollution Research, Springer, **2018–Present**.

Toxin Reviews, Taylor & Francis, **2018–Present**.

Catena, Elsevier, **2018–Present**.

Smart and Sustainable Cities – 2018, Proceedings, Springer Geography, **2018**.

Urbanization: Challenge and Opportunity for Soil Functions and Ecosystem Services, Proceedings of the 9th SUTMA Congress, Springer Geography, **2017**.

Journal of Environmental Quality, ASA, CSSA, SSSA, **2016–Present**.

Journal of Soils and Sediments, Springer, **2016–Present**.

Megacities 2050: Environmental Consequences of Urbanization, Proceedings of the VI International Conference on Landscape Architecture to Support City Sustainable Development, Springer Geography, **2016**.

LANGUAGES

Russian (native).

English (fluent).