

TAKE CARE OF YOUR OWN SHIT

NOVEMBER 15, 2023

9:30 am - 5 pm

Lower Manhattan Cultural Council Arts Center at
Governors Island
New York City

METABOLISM OF CITIES: PT.2

NOV. 15-17; NOV. 30 - DEC. 1

PRESENTATIONS & WORKSHOPS

Monitoring, modeling and managing urban soils and green infrastructure, *Presentation*
Elvira Dovletiarova

Writing Landscape, *Presentation & Exhibit*
Vanessa Dion Fletcher

Animate Soils, *Performance workshop*
Marina "Heron" Tsaplina

Dirtball: Art in the Critical Zone, *Discussion*
Walker Tufts

Community Culturing with Indigenous MicroOrganisms, *Presentation & workshop*
Candace Thompson, Liz Paredes, Nathan Hunter, Journei Bimwala, Sneha Ganguly

Soil Microbial Community of Constructed Technosols in Cities of Different Climatic Zones, *Presentation & Poster* Maria Korneykova

Implications of EPA's proposed dust Pb hazard standard on EPA soil-screening level for Pb lead (Pb) screening levels, *Presentation-discussion*
Mark Maddaloni

The Pristine and the Sullied: satisfying our desire for nature by exploring neglected human-made spaces., *Presentation* Jack Magai

INTERACTIVE EXHIBITS

Absence of Urgency: Guerrilla Garden Cart
Susan Smith

Clay Exchange Workshop
Margaret Boozer, Lisa Orr

Columbian X-Change iii
Emilie Houssart

Continuous Compost
Katerie H. Gladdys

DiG
Rebecca Murtaugh

Eco-Derives
Jack Magai

Foundations of Sustainability Book Talk
Daniel Fiscus, Brian Fath

From the Lutum Edge
Krista Dragomer, Ben Pagac

Green Maps
Wendy Brawer

Nature in Absentia: Monarch Migrations
Michele Brody

Practice 101.(Primal Ground)
Katherine Patiño Miranda

Soil Microbiology in Newtown Creek
Jason Sinopoli

Soil Phrases
Marina 'Heron' Tsaplina

Terra Dispositions
Alec Rovensky

USDA-NRCS People's Garden
USI & SWALE

Writing Landscape
Vanessa Dion Fletcher

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9:30 - 10	<i>Welcome & Opening Discussion</i> <i>USI Team, Elvira Dovletyarova (RUDN)</i> <i>Craig Peterson (President, LMCC)</i>	USI, RUDN University, LMCC
10:10 - 10:30	<i>Writing Landscape</i>	Vanessa Dion Fletcher
10:30 - 11:30	<i>Animate Soils</i>	Marina 'Heron' Tsaplina
11:30 - Noon	<i>Interactive Discussion</i>	
Noon - 12:30	Exhibit Interaction	
12:35 - 1:20	Catered Lunch	
1:30 - 2:30	<p><u>Concurrent Breakout Sessions:</u></p> <p>A) <i>Community Culturing with Indigenous MicroOrganisms Workshop</i> led by Candace Thompson, Liz Paredes, Nathan Hunter, Journei Bimwala, Sneha Ganguly (1 hr)</p> <p>OR</p> <p>B) <i>Eco-Dérives Walk</i> (led by Jack Magai, 40 mins.) & <i>Exhibit Interaction</i> (20 mins.)</p>	
2:45 - 3:10	<i>Getting Dirty: Art Projects Exploring Deeper Intimacy with Soil</i>	Walker Tufts
3:15 - 3:40	<i>Soil Microbial Community of Constructed Technosols in Cities of Different Climatic Zones</i>	Maria Korneykova
4:00 - 4:20	<i>Implications of EPA's Proposed Dust Hazard Standard on Lead Screening Levels</i>	Mark Maddaloni
4:35 - 5	The Pristine and the Sullied: satisfying our desire for nature by exploring neglected human-made spaces;	Jack Magai
5:10 - 5:45	<i>Introduction to Metabolism Repair - Take Care of Your Own \$hit</i>	<i>Moderated by Dr. Paul Mankiewicz and Collaborators</i>
5:45 - 7:45	Happy Hour	

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MODERATORS



George Lozefski | Master of Ceremonies

George Lozefski has conducted environmental research at Columbia University's Lamont Doherty Earth Observatory for over ten years and has been teaching geosciences courses for over ten years at CUNY - Brooklyn College. George teaches soil science courses at the New York Botanical Garden's School of Professional Horticulture. At USI George manages soil testing services. He designs and conducts soil science education and testing workshops and provides training in soil quality evaluation for academic and community settings. George manages technical and consulting services for soil restoration/remediation projects. He also collaborates on research in soil quality, biogeochemistry and green infrastructure. George received his B.S. in Geology at CUNY-Queens College and M.A. in Environmental Science at CUNY-Brooklyn College.

Paul S. Mankiewicz, PhD | Discussion Moderator

Dr. Paul S. Mankiewicz is an environmental engineer, plant biologist and green infrastructure pioneer with over 40 years of experience, currently serving as co-founder of Leaf Island, Inc. and founder of The Gaia Institute. A prolific innovator, Paul holds patents for GaiaSoil, an ultra-lightweight green roof medium made from recycled Styrofoam, HexTray™ Modular Green Roof, the first hydrologically-connected green roof tray system, and several others. Paul is also the past president of the Torrey Botanical Society, co-founder of the Urban Soils Institute, and chair of the NYC Soil & Water Conservation District.

Some of Paul's projects include: NYC's first stormwater capture brownfield redevelopment (El Jardin del Paraiso, East Village, NY, 2002), Zero-discharge industrial-scale stormwater capture system (SIMS Recycling, Bronx, NY, 2008), first greywater treatment green roof using GaiaSoil (Linda Tool, Red Hook, Brooklyn 2009), 12 of the first enhanced stormwater capture tree pits with the NYC Department of Environmental Protection (various locations in NY, 2010), 22,000 sq. ft. GaiaSoil green roof over blue roof using recycled pool water (Einstein Medical College, Bronx, NY, 2010), and many others.

Dr. Paul S. Mankiewicz received his Ph.D. from the CUNY/New York Botanical Garden joint program in plant sciences.



Max Lerner | Discussion Moderator

With nearly 20 years of experience developing green roofs and urban farms for New York City, Max Lerner directs environmental initiatives of the Emerging Technologies team of the NYC Department of Parks and Recreation. In that capacity, Max has implemented countless environment pilots for the city covering a broad range of sustainability goals. Max is able to achieve this bold scope of work through the collaborative efforts of a rotating think tank of approximately 100 scientific visionaries who continually manages to bring cutting-edge environmental ideas to life for the public.

PRESENTATIONS & WORKSHOPS



Vanessa Dion Fletcher

Vanessa Dion Fletcher is a Lenape and Potawatomi neurodiverse Artist; her family is from Eelūnaapëewii Lakhëewiitt (displaced from Lenapehoking) and European settlers. She uses porcupine quills, Wampum belts, and menstrual blood to reveal the complexities of what defines a body physically and culturally. Reflecting on an Indigenous and gendered body with a neurodiverse mind, Dion Fletcher primarily works in performance, textiles and video. She graduated from The School of the Art Institute of Chicago in 2016 with an MFA in performance and a Bachelor of Fine Arts from York University in 2009. She has exhibited across Canada and the USA at Art Mur Montreal, Eastern Edge Gallery Newfoundland, The Queer Arts Festival Vancouver and the Satellite Art show in Miami. Her work is in the Indigenous Art Centre, Joan Flasch Artist Book Collection, Vtape, Seneca College, Global Affairs Canada and the Archives of American Art.

Presentation Title: Writing Landscape

Vanessa Dion Fletcher will give an introduction to herself as a Lenape person and present Writing Landscape, a project from 2011, where she took steps to visit and return to significant places. Using copper plates and the intaglio printing process, Dion Fletcher recorded part of her life story through the earth and her body.

Marina 'Heron' Tsaplina

Marina 'Heron' Tsaplina is an eco-artist and disability culture activist who forms participatory poetic enchantments through puppetry performance and site-specific installations. Whether on the stage, in a classroom or in an endangered forest, she invites collective community participation into her artistic process and vision

Presentation Title: Animate Soils

This workshop is about the composing and decomposing life force of soils. What is the disconnection - the break - between people and soils made of? How do each of us carry that break in our minds, bodies, histories and imaginations? When we engage soils - whether as scientists, ecologists, artists, as people from diverse lineages - what practices and assumptions do we bring to this encounter? Led by eco-artist Marina 'heron' Tsaplina as part of her larger project, Soils and Spirit, this workshop will provide a reflective conversation space and an opportunity to interact with prototypes of enlarged 'soils phrases' objects that are inspired by the Lenapehoking/NYC Reconnaissance Soils Survey as well as the soils and plants of the forests in the Adirondacks and the northeast.



Walker Tufts

Hi, I'm Walker Tufts. I am an artist and game designer. My work explores our relationship to others (human and more-than-human) through games, exhibitions, dinner parties, and performances. With various collaborators I makes games that playfully place player's bodies in physical relationship with global systems, dirt, bodies and microbiomes.

Presentation Title: Getting Dirty: Art Projects Exploring Deeper Intimacy with Soil

How might we develop more affective relationships with dirt? I'll present Kosmologym's Dirtball and my project and film, Faceplant. Dirtball is a re-imagined basketball court where humans, plants, animals, minerals and microorganisms can play together to nurture soil and increase its carbon sequestration. Faceplant is a performance and short film about a human in love with soil bacteria.

PRESENTATIONS & WORKSHOPS



Maria Korneykova, PhD

Maria Korneykova has a PhD in Biology. She has 15 years of experience in ecology of microorganisms, soil and air mycology, bioremediation in the Arctic and Subarctic areas. She is author of more than 100 scientific publications, participant of more than 80 conferences, of which 37 are international, 15 outside the Russian Federation. Organizer of All-Russian and international conferences, scientific schools, including field ones. She is scientific supervisor of bachelors, masters and PhD students and also associate professor, lecturer of scientific courses «Microbiology», «Basis of mycology», «Ecology of soil organisms».

Presentation Title: Soil Microbial Community of Constructed Technosols in Cities of Different Climatic Zones

The research describes the chemical and microbiological properties of constructed technosols based on peat-sand mixtures created in regions with different climates (arid, temperate and subarctic). The 2-year dynamics of the soil properties was studied. The results were compared with background references

Mark Maddaloni, DrPH

Dr. Mark Maddaloni has 35 years of professional work experience in the areas of environmental health, toxicology, and human health risk assessment. Prior to joining Cardno ChemRisk, he served as a senior toxicologist and the Regional Risk Assessment Coordinator in the Office of the Regional Administrator for EPA - Region 2. Mark has served on numerous EPA National Work Groups including: metals, asbestos, chemical mixtures, PCBs, perfluoroalkyl substances, and bioavailability.

Presentation Title: Implications of EPA's Proposed Dust Hazard Standard on Lead Screening Levels.

On August 1, 2023 EPA proposed lowering the dust-lead hazard standard on floors from 10 ug/sq ft to any reportable level greater than zero. The relationship between soil and indoor dust Pb concentration is complex. EPA's IEUBK Pb Model for Children employs a default value of 70% of soil Pb concentration for indoor dust Pb concentration in the absence of dust sampling data. This dust:soil Pb concentration of 0.7 can vary widely. Regardless, EPA's current residential Pb soil screening level of 400 ppm would be insufficiently protective of a dust Pb hazard standard of any reportable level greater than zero. Discussion will be conducted on implications of a reduced soil Pb screening level, especially in urban environments, and its ancillary impacts - e.g., recommendations for gardening in lead contaminated soil. Further complicating matters is the need to convert between lead mass concentration (ppm) in soil and lead load (ug/sq ft) in dust.



Jack Magai

Jack Magai has written, choreographed and directed performances intended to increase audiences' awareness of their surroundings. Recently his day job as an arborist has led him to study the evolution of attitudes about nature, and has steered his artistic work towards investigations of post-industrial sites. He studied dance and literature at Bennington College.

Presentation Title: The Pristine and the Sullied: satisfying our desire for nature by exploring neglected human-made spaces

I'll present a hypothesis about wilderness, why we need it, and how we can get at least some of its rewards without leaving the city. Later in the Symposium I will lead a group outing, which I term an 'eco-dérive,' to put these ideas into practice.

BREAKOUT SESSION



Candace Thompson
*Performer & Media
Maker, Manager
Stuy Cove Park
SolarOne*



Liz Parades
*Land Steward and
Community
Educator,*



Nathan Hunter
*Sustainable
Community
Development
Professional*



Journei Bimwala
*Native Plant
Educator, Founder
of Each One Carry
One*



Sneha Ganguly
*Mycologist,
Founder of "The
Fungus Festival"*

Community Culturing with Indigenous
MicroOrganisms

In the summer of 2023 our sister organizations began the process of collecting IMO's (Indigenous Microorganisms) from various long standing ecosystems around NYC, such as the Thain Family Forest at NYBG, Greenwood Cemetery, Fort Tilden, Van Cortland Park and others. These collections were done using techniques borrowed from Korean Natural Farming (KNF), and the collected microbes were fermented and preserved. This winter we are interested in learning who, exactly, we have captured in this process through a Community Culturing workshop held in collaboration with community mycologist Sneha Ganguly and DNA barcoding support from the New York Mycological Society. We are also aiming to conduct a comprehensive DNA analysis that can contribute to science while also helping the greater public understand the importance of healthy soils in urban settings. From this we aim to design and implement a formal experiment that could contribute to our collective understanding of the relationships between the soil microbiome and the native plant species our sister parks maintain. while also helping the greater public understand the importance of healthy soils in urban settings.

We invite the community to co-design with us a formal experiment that would contribute to the greater understanding of soil microbiome species diversity and their assorted functions in the greater NYC ecosystem.

Stuy Cove Park is a newly redesigned public greenspace in lower Manhattan that sits at the literal frontlines of manmade climate change. As the first park to be razed and rebuilt for the city's massive floodwall protection project, this all native plant park will now serve as a storm surge sacrifice zone in an increasingly wet and unpredictable future. **The Bronx River Foodway** is a community food forest which seeks to activate the notion of the commons in the South Bronx, a New York neighborhood deeply impacted by the systemic violence of food apartheid and environmental racism. Together these sister greenspaces collaborate regularly to center conversations about food and land justice through a lens of community care and collective action.

BREAKOUT SESSIONS



Walker Tufts
*Artist & Game
Designer*

Dirty Emoji Roving Workshop

Even though dirt is where our food comes from, is where our bodies get buried when we die, and is literally everywhere we go, it is not represented yet in the emoji universe. Somehow we have emojis for unicorns, pufferfish, poodles and Santa Claus, but not dirt! Dirty Time is planning to try to correct this oversight and will be submitting a proposal for a dirt emoji to the Unicode foundation in 2024.



Heather Kapplow
*Multidisciplinary
Artist*

The Dirt Emoji workshop will introduce participants to the predicament of the absent dirt emoji, challenge them to think creatively and loosely about what this emoji might look like and then narrow in on suggestions that fulfill Unicode's requirements for new emoji proposals.

Eco-Dérives

Eco-Dérives are public walks to explore the ecology of human-altered spaces, during which we stop to investigate the interplay between human and non-human influences. Following in the tradition of the Dérive, our focus is more poetics and the nature of our perception, than science. To this end, during the walk I lead one or more exercises in perception.

Afterwards we may gather to discuss our findings and the intellectual traditions available to frame them.

Jack Magai
Arborist, Artist,
Founder of More
Trees Arborist
Collective



PRESENTATIONS & WORKSHOPS

Go to the Garden,

Music performance; Kate Amrine

Clay in New York City Soils: Quality, Quantity, Relevance, Assessment

Presentation & Hands-on Workshop Discussion; Richard
K Shaw

The Clay Exchange Workshop: Have local clay? Bring
it. Make some things. Get dirty. Ask some questions.
Discover the dynamics of clay as art, as a part of
soils, a medium, a tool.

Margaret Boozer, Lisa Orr, Rebecca Murtaugh w/ Richard
Shaw

Urban Ag Soil Tests: Why They're Broken and How to Fix Themselves

Presentation/Guide; Sam Anderson

Terra Dispositions; digital fabrication, sustainable
construction materials, environmental inequity,

Presentation & Exhibit; Alec Rovensky

Assessment of the Urban Aerobiome Microclimate,

Discussion & Presentation; Diedre Brown, Harrison
Trethowan, Progga Bhuiyan, Tori Coleman

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10:00 – 10:10	<i>Go to the Garden</i>	Kate Amrine
10:20 – 11:20	<i>Clay in New York City Soils: Quality, Quantity, Relevance, Assessment</i>	Richard K. Shaw
11:20 – Noon	<i>Clay Exchange Workshop</i>	Margaret Boozer, Lisa Orr, Rebecca Murtaugh, Rich K Shaw
Noon – 12:30	<i>Exhibit Interaction</i>	
12:35 – 1:30	Catered Lunch	
1:35 – 2:00	<i>Urban Ag Soil Tests: Why They're Broken and How to Fix Themselves</i>	Sam Anderson
2:05 – 2:30	<i>Terra Dispositions</i>	Alec Rovensky
2:30 – 3:00	<i>Exhibit Interaction</i>	
3:05 – 3:40	<i>Assessment of the Urban Aerobiome Microclimate</i>	Diedre Brown, Harrison Trethowan, Progga Bhuiyan, Tori Coleman
4:00 – 4:40	<i>Introduction to Metabolism Repair – Take Care of Your Own \$hit</i>	<i>Moderated by Dr. Paul Mankiewicz and Collaborators</i>
5:00 – 6:00	<p><u>Concurrent Breakout Sessions:</u> A) 'Take Care' Series Think Tank (Led by USI Team, 1 hr.) OR B) Eco-Dérives Walk (led by Jack Magai, 40 mins.) & Exhibit Interaction</p>	
6:00 – 8:00	Happy Hour	

PRESENTATIONS & WORKSHOPS

George Lozefski | Master of Ceremonies

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Kate Amrine

A passionate and creative performer, **Kate Amrine** is a prominent trumpet player balancing a multifaceted career from developing new repertoire and curating concerts to freelancing with many different groups in the New York City area. Some favorite recent experiences include joining the pit for multiple musical productions on and off Broadway, as well as playing with Little Orchestral Society, Rodney Marsalis Philadelphia Big Brass, Contemporaneous, eGALitarian Brass, Pegasus Orchestra, Mariachi Zitlala, and Spark Duo.

Performance Title: Go to the Garden

This will be a short 10 minute performance of a trumpet and electronics piece that is about the creation and upkeep of a garden while simultaneously about the upkeep and maintenance of one's mental health.

Richard K. Shaw, PhD

Richard Shaw served the USDA-NRCS for 24 years as State Soil Scientist providing leadership for technical soil service delivery for the state of New Jersey and the City of New York, including site inspections, soils training, distribution of soils information and technical assistance for soils based research. Rich served as primary state contact with two MLRA regional offices and three Soil Survey offices to maintain quality soil survey information. He also served as state liaison to National Cooperative Soil Survey cooperators and other federal, state, local users of soils data in the state. Rich received his PhD and MS in soil science from Rutgers University and his BSc in Natural Resources Management from University of Maine. His many publications include *Estimation of Carbon Stocks of Two Cities: New York City and Paris*, *Carbon Storage in Urban Soils* and *Urban Soil Mapping*.

Clay in New York City Soils: Quality, Quantity, Relevance, Assessment

An overview of clays in soil, their mineralogy and reactions; a discussion of clay contents and types in both native and human-altered NYC soils, based on data from the USDA-NRCS city-wide soil survey.

To be followed by a hands-on, mess-making session evaluating different clay types by "feel," and estimating the clay content of some local soils.



Clay Exchange Workshop

Have local clay? Bring it. Make some things. Get dirty. Ask some questions. Be part of the clay collective. Add to the clay 'petting zoo'. Discover clay as art, as a part of soils, a medium, a tool; get to know the dynamics of clay!



Margaret Boozer

I live and work in Prince George's County, MD, outside Washington, DC. Over the years, my studio practice of digging native clays has led to collaborations with soil scientists and work that explore intersections of art and science. As I prospect, I notice cause and effect in the environment, stealing strategies to bring back to the studio. I am interested in ways that beauty can foster stewardship. how a small souvenir of soil can carry great meaning, stories and emotional impact. I am the Founder and Director of Red Dirt Studio, an artist incubator in Mt. Rainier, MD, and I'm also Co-Director and founding member of NY Urban Soil Institute's Art Extension Service. In both of these capacities, I get to create and foster new work in the world in partnership with amazing, smart and talented Co-Directors and colleagues.



Lisa Orr

For 30 years Lisa Orr has been professional potter and student of ceramics. She completed an MFA at the NYSCC at Alfred University in 1992 and later received grants including a Fulbright and a MAAA/NEA. Her work is in numerous public and private collections including the Fine Arts Museum of San Francisco, and the permanent collection of WOCEF in Korea. Currently she teaches, lectures and shows nationally and internationally



Rebecca Murtaugh

Rebecca Murtaugh is a sculptor working in a variety of materials that explore the relationship between nature and the human made world. She has exhibited her work in fifteen solo and over seventy group exhibitions in cities such as New York, Philadelphia, Washington, D.C., Baltimore, Pittsburgh, Richmond, Nashville, Dallas, Seattle, and San Francisco. Murtaugh's work has been included in *The New York Times*, *The New Yorker*, *The New Criterion*, *BUST*, *Huffington Post*, *Artweek*, *American Craft*, and *Bushwick Daily*. She was the recipient of the John R. Hatch Excellence in Teaching Award in 2009 and received the Dean's Scholarly Achievement Award for Notable Year in 2016. Her work can be viewed at www.rebeccamurtaugh.com.

+ guest potters joining live

PRESENTATIONS & WORKSHOPS



Sam Anderson

Sam Anderson is an urban agriculture specialist with Cornell Cooperative Extension's Harvest NY team. He provides technical assistance and educational programming for urban farmers throughout New York City. His work is primarily focused on soil health and integrated pest management (IPM) for vegetable crops, with an emphasis on uplifting the expertise of historically underserved urban farmers.

Presentation Title: Urban Ag Soil Tests: Why They're Broken and How to Fix Themselves

When urban farmers and gardeners get their soil tested for nutrients like potassium and phosphorous, the results often range from misleading to wildly inaccurate. What's so different about urban ag soils? How can we adjust these tests to make them more useful? We have new answers to these questions, and we'll walk through the steps and demonstrate to greatly improve the predictive power of your soil test results.

Alec Rovensky

Alec is a first generation Ukrainian, currently based in New York where he is a Residency Director at the Institute for Public Architecture, a 501(c)(3) not-for-profit organization that uses design to challenge social and physical inequities in the city. He is currently overseeing the IPA's overnight residency program for design professionals on Governors Island in New York Harbor. He has been with the IPA since 2018. Alec has worked as an architectural designer at Jenny Peysin Architecture, a Ukrainian-led design firm based in Greenpoint, Brooklyn. He is a member of the Next Generation Council at Madame Architect, a digital publication. Previously, he has worked as an office co-manager at the Renée Crown Honors Office and as an engineering aide at the World Trade Center site with the Port Authority of NY & NJ. He holds a Bachelor of Architecture Degree from the Syracuse University School of Architecture.

Presentation Title: Terra Dispositions

This project aims to expose the ecological transformations of territories laced with human agency by examining the residues left by water. The project uses clay, a residue historically significant for its elasticity and widespread availability. Clay becomes a registrant of hydrological transformations. Through the integration of traditional slip-casting and contemporary digital fabrication methods, the project attempts to reveal these changes through the form-making of a temporal ecological monument. Firing the deployed objects "seals" the recorded hydrological phenomena, as the block will no longer react to water. In this phase, the blocks become artifactual objects, indexes of the various phenomena that acted upon them – similar to the cycle of their production. They are articulated and displayed as they would appear in the soil, but in a static state, reminiscent of a filing cabinet containing data.

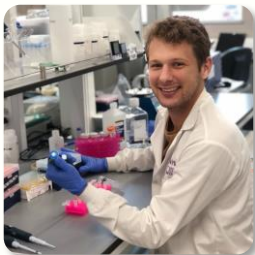


PRESENTATIONS & WORKSHOPS



Diedre Brown

A Brooklyn native, Diedre is interested in the interwoven and interdependent relationships between living things and their environment. As a designer and data scientist, she is interested in how data can express and reveal the correlations within this relationship. This interest supports her research endeavors as a PhD Candidate in the Urban Systems program at New York University's Tandon School of Engineering. Working with Dr. Elizabeth Hénaff and the Laboratory for Living Interfaces, she applies earth observation techniques to assess area-level conditions of the environmental microbiome (the microorganisms that inhabit specific environments and are associated with beneficial (increased biodiversity) and pathogenic (source of contagion) public health effects) of the urban microclimate as they relate to microbial diversity.



Harrison Trethowan

Harrison graduated from Macquarie University, Australia, with a BABSc majoring in Human Biology and Creative Writing. He is currently an MS student in the Recombinant DNA Technology track at NYU GSAS. In his undergraduate studies, he obtained DNA isolation experience through researching cryptic speciation in Australian stingaree populations using phylogenetic analyses. In the lab, Harrison is interested in the microbial composition of the aerobiome that can be influenced by urban design characteristics and how this in turn affects human health. Currently, he is developing a novel DNA extraction protocol to gather metagenomic data from the aerobiome.



Progga Bhuiyan

Progga Bhuiyan is an undergraduate majoring in Chemical and Biomolecular Engineering and minoring in Environmental Engineering at NYU Tandon. She wants to pursue a career in sustainability focused on developing eco-friendly methods and technology—which makes the Henaff lab and its projects the ideal place for her. Progga was born in Bangladesh and came to the US in 2014. She loves any type of physical activity ranging from dancing, playing sports, and exercising. As a new member of the lab, Progga is looking forward to learning new laboratory skills and research methods for further improvement of human life.



Tori Coleman

Tori is an urban beekeeper in NYC receiving their Master of Public Health from SUNY Downstate. Their research interests include urban pollinator health, active commuting as protective health behavior, and environmental health equity.

Assessment of the Urban Aerobiome Microclimate

Known as one of the most biodiverse habitats affecting the growth of plants and animals, the dynamics of the soil microbiome are in dialogue with numerous boundaries of the earth system, including the aerobiome. Unlike soil or water microbiomes, aerobiome microbes come from other sources—including the soil, water, buildings, people, plants, and animals—making them transiently present in the atmosphere but still capable of impacting weather patterns, the transmission of pathogens, and, through exposure, immunotherapy. However, the atmosphere presents a challenging ecosystem for profiling these microbial inhabitants due to incredibly low biomass and poses additional challenges in sampling, extraction, identification, and quantifying airborne microbes. Using Fort Greene Park as a test site in the summer of 2023, our team prototyped a methodology to observe the dynamics of airborne microbial communities and identify correlations between this metagenomic data and area-level conditions that constitute environmental and social justice metrics of the surrounding urban microclimate. In this informal and interactive 20-minute discussion and slide presentation, our team will present preliminary findings and highlight how parallels in soil and aerobiome urban microclimate research could yield further insights into how exposure shapes human health through exposure to diverse environmental microbiomes.

Breakout Sessions

'Take Care' Series Think Tank

Opportunities for sustainable development and quality of life improvements are possible through metabolism repair, where anthropogenic waste streams and energy flows are reconnected back into a healthy exchange supported by soils.

This is the kick-off event for the 'Take Care' Series, a series of workshops and demonstrations continuing into 2024. We welcome your thoughts, questions, ideas for future 'Take Care' topics.

USI Team



Walker Tufts
Artist & Game Designer

Dirty Emoji Roving Workshop

Even though dirt is where our food comes from, is where our bodies get buried when we die, and is literally everywhere we go, it is not represented yet in the emoji universe. Somehow we have emojis for unicorns, pufferfish, poodles and Santa Claus, but not dirt! Dirty Time is planning to try to correct this oversight and will be submitting a proposal for a dirt emoji to the Unicode foundation in 2024.

The Dirt Emoji workshop will introduce participants to the predicament of the absent dirt emoji, challenge them to think creatively and loosely about what this emoji might look like and then narrow in on suggestions that fulfill Unicode's requirements for new emoji proposals.



Heather Kapplow
Multidisciplinary Artist

Eco-Dérives

Eco-Dérives are public walks to explore the ecology of human-altered spaces, during which we stop to investigate the interplay between human and non-human influences. Following in the tradition of the Dérive, our focus is more poetics and the nature of our perception, than science. To this end, during the walk I lead one or more exercises in perception.

Afterwards we may gather to discuss our findings and the intellectual traditions available to frame them.

Jack Magai
Arborist, Artist,
Founder of More
Trees Arborist
Collective



PRESENTATIONS & WORKSHOPS

Community Culturing with Indigenous MicroOrganisms: Come get your hands on an IMO cake and learn more about the Korean Natural Farming techniques with Candace Thompson. Liz Parades, Nathan Hunter, Journei Bimwala and Sneha Ganguly

USI's People's Symbiosis Garden; A Hybrid, Collective Ecology garden: The first of its kind coming to SWALE house on Governors Island thanks to USDA-NRCS People's Garden Initiative funding. Be a part by collaborating in design and programming for this living lab, ecosystem service forage garden, and storm water capture garden that will model various native and indigenous edible ecosystems.

Foundations for Sustainability: A Book talk with expansive discussions on how soils connect regenerative economics and sustainability. An invitation and introduction to "*Foundational Tenets of Holistic Organic Living System Science*" with Dan Fiscus and Brian Fath (authors)

Rain/Gray/Green Water Workshop: water, climate, and invasive species will drive discussion, with food and hot mulled cider to serve as a catalyst for these porcheside chats. An open studio workshop & exhibition by Creature Conserve program with Daniel Pravit Fethke & Sonja Petermann

SCHEDULE

11 - Noon	<i>Community Culturing with Indigenous MicroOrganisms</i>	Candace Thompson, Liz Parades, Nathan Hunter, Journei Bimwala, Sneha Ganguly
Noon - 1	<i>People's Symbiosis Garden Programming Collaboration</i>	Invitation for collaborative building and programming for People's Garden Sponsored by USDA-NRCS
1 - 2	<i>Sustainability for Regenerative Economics discussion and Foundations for Sustainability book talk</i>	Dan Fiscus, PhD & Brian Fath PhD
2 - 3	<i>DREDGE/CHOP/CATCH/GROW</i>	Daniel Pravit Fethke, Sonja Petermann

Discussions



Candace Thompson
*Performer & Media
Maker, Manager
Stuy Cove Park
SolarOne*



Liz Parades
*Land Steward and
Community
Educator,*



Nathan Hunter
*Sustainable
Community
Development
Professional*



Journei Bimwala
*Native Plant
Educator, Founder
of Each One Carry
One*



Sneha Ganguly
*Mycologist,
Founder of "The
Fungus Festival"*

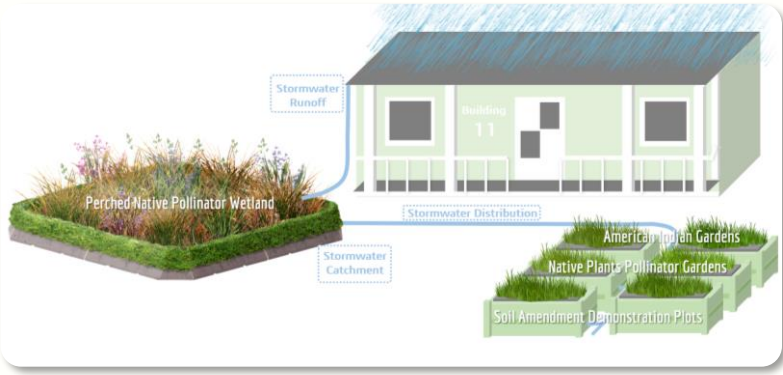
Community Culturing with Indigenous MicroOrganisms

A follow up on our Wednesday presentation "Community Culturing with Indigenous Microorganisms" this informal session will allow you to come get your hands on an IMO cake and learn more about the Korean Natural Farming techniques we are attempting to explore with our research.

In the summer of 2023 our sister organizations began the process of collecting IMOs (Indigenous Microorganisms) from various long standing ecosystems around NYC, such as the Thain Family Forest at NYBG, Greenwood Cemetery, Fort Tilden, Van Cortland Park and others. These collections were done using techniques borrowed from Korean Natural Farming (KNF), and the collected microbes were fermented and preserved. This winter we are interested in learning who, exactly, we have captured in this process through a Community Culturing workshop held in collaboration with community mycologist Sneha Ganguly and DNA barcoding support from the New York Mycological Society. We are also aiming to conduct a comprehensive DNA analysis that can contribute to science while also helping the greater public understand the importance of healthy soils in urban settings. From this we aim to design and implement a formal experiment that could contribute to our collective understanding of the relationships between the soil microbiome and the native plant species our sister parks maintain. while also helping the greater public understand the importance of healthy soils in urban settings.

We invite the community to co-design with us a formal experiment that would contribute to the greater understanding of soil microbiome species diversity and their assorted functions in the greater NYC ecosystem.

Discussions



*People's Symbiosis Garden:
Programming Collaboration*

USI's People's Symbiosis Garden; A Hybrid, Collective Ecology garden: The first-of-its-kind coming to SWALE house on Governors Island thanks to USDA-NRCS People's Garden Initiative funding. The core design utilizes a GaiaSoil™ Floating Wetland to capture stormwater runoff from nearby roofs and channel it into a series of raised beds. The purpose of this installation is to offer stewardship and educational opportunities through the demonstration of excavation-free, adaptive reuse and low impact construction concepts for green stormwater infrastructure that could be utilized for urban agriculture. Educational opportunities exist in the observation and monitoring of stormwater infiltration and filtration, evapotranspiration, cooling, habitat development, pollination, of this perched wetland garden, and so much more.

Be a part by collaborating in design and programming for this living lab, ecosystem service forage garden, and storm water capture garden that will model various native and indigenous edible ecosystems. Join USI @ 12pm-1pm

Generously funded by USDA-NRCS, sponsored by The Center for the Study of the Force Majeure, Design by USI and SWALE, technology by Leaf Island, Inc.



Discussions

Foundations for Sustainability Book Talk

A Book talk with expansive discussions on how soils connect regenerative economics and sustainability. Socio-economic systems such as cities would benefit from mimicking ecological design and function with a first goal to understand deeply and act accordingly on the difference between life (entropy minimizing systems) and machines (entropy maximizing systems). Our discussion will explore these concepts in context of our recent book *Foundations for Sustainability* and our recent work in regenerative economics. This holistic life-environment relation, is the continuing and everyday reality, and the one we need to heed now to make a radical course correction.

An invitation and introduction to “*Foundational Tenets of Holistic Organic Living System Science*” with Dan Fiscus and Brian Fath (authors) @ 1-2pm



Brian Fath, PhD

Brian D. Fath is a Professor in the Department of Biological Sciences at Towson University (Maryland, USA) teaching courses on Ecosystem Ecology, Environmental Science, and Human Ecology. He is also a Senior Research Scholar at the International Institute for Applied Systems Analysis (Laxenburg, Austria) and since 2011, the Scientific Coordinator of IIASA's Young Scientists Summer Program. He has published over 200 research papers, reports, and book chapters on environmental systems modeling, specifically in the areas of network analysis, urban metabolism, and sustainability. He co-authored, among others, the books *A New Ecology: Systems Perspective* (2020), *Foundations for Sustainability: A Coherent Framework of Life-Environment Relations* (2019), and *Flourishing within Limits to Growth: Following Nature's Way* (2015). He served as Editor for 6-volume *Handbook of Environmental Management* (2020) and 4-volume *Encyclopedia of Ecology* (2019).

Dr. Fath is also Editor-in-Chief for the journal *Frontiers in Sustainable Resource Management* and past Editor in Chief of *Ecological Modelling* (2009 – 2020). He was the 2016 recipient of the Prigogine Medal for outstanding work in systems ecology and twice a Fulbright Distinguished Chair (Parthenope University, Naples, Italy, in 2012 and Masaryk University, Czech Republic, in 2019).



Daniel Fiscus, PhD

Dan Fiscus is a researcher in sustainability, systems ecology, food systems, and regenerative economics. He has degrees in electrical engineering, ecology with a minor in biomathematics, and a PhD in Environmental Science. He studies holistic, sustainable human-environment and life-environment relations, theoretical ecology and ecological modeling, ecological network analysis and sources of leverage for change to benefit humanity. He is also a member of the Western Maryland Food Council, which works to increase local food production and for systemic change and improvement to the food system in the Western Maryland region. Dan also collaborates with colleagues in the Research Alliance for Regenerative Economics (RARE).

Discussions

Swale House in Process: *DREDGE/CHOP/CATCH/GROW*

An open studio-style exhibition at Swale House on Governor's Island in conjunction with the Creature Conserve Residency program. Over the course of 6 weeks, interdisciplinary artists Daniel Pravit Fethke, Sonja Petermann, and Kathleen Dalton have been in the process of making responsive artworks in relation to the dynamic landscape of Governors Island. On display at Swale House is a snapshot of site-specific artworks including video installations, mixed media sculpture, and ephemera from research ventures, with the descriptions as follows:

DREDGE: A series of dance-film performances in response to the history of dredging Governors Island's Buttermilk Channel

CHOP: A mixed-media installation about invasive species and their relationship to the land.

CATCH: An asynchronous collection of rainwater documenting the passage of time in residence.

GROW: A guided workshop/discussion (featuring hot mulled beverages!) on Swale House's front porch reflecting on the artwork on display, facilitated by Daniel Pravit Fethke's prompts around the work's relationship to soil

Daniel Pravit Fethke

Daniel Pravit Fethke is a Mixed-Race interdisciplinary artist, filmmaker, educator, and activist. He has worked in the New York film industry for 10+ years, having started in the Cinematography department and recently pivoting into a role as a Producer. Daniel has shown films and documentaries at various festivals, including the Bushwick Film Festival, Atlanta Docufest, and at the CUNY Graduate Center. Since 2019, teaching has become a central part of his practice. Daniel regularly facilitates workshops, cooking classes, and creative gatherings that center food and recipes as ways to explore identity and culture. He has exhibited work internationally in Bangkok, Berlin, Barcelona, and New York City, having shown at the Yale School of Art, Recess Art Space, and the Knockdown Center. Daniel has published writing in the Berlin-based *Soft Eis Magazine*, as well as with *Commercial Type's* online catalog. He co-founded the mutual aid food pop-up *Angry Papaya*, and has hosted workshops at the CUNY Graduate Center as well as the Ox-Bow School of Art. Daniel received his BA in Modern Culture & Media Studies from Brown University in 2015. He recently published an autobiographical Thai-American cookbook through Pratt Institute, where he also received his MFA in Integrated Practices in 2023. He currently lives and work in Crown Heights, Brooklyn.

Sonja Petermann

Sonja Petermann is an interdisciplinary artist who utilizes printmaking and film to grapple with the psychological and sociological impacts of local water calamities. She often approaches art collaboratively, developing experimental dance performances with the collective she co-founded, *Molar Movement Projects*. Sonja's practice prioritizes both critical examination and free-form play. She is currently based in New York City

Absence of Urgency: Guerrilla Garden Cart | Susan Smith

Absence of Urgency: Guerrilla Garden Cart, Trees not Tarmac, pollinator seed library, chlorophyll prints, compost
Weaponizing gardening requires planning and risk; guerilla gardens are on the front line from the start. This fight addresses where we find ourselves; in communities with food scarcity, with increasing corporate and privatized occupation of once common spaces, and economic struggle. Guerrilla gardening creates art by tagging the landscape, producing exhibitions that evolve with the seasons, but also providing a window into the essential adaptations industrialized societies need to make to preserve biodiversity and become more resilient to global heating - and all the while challenging the liberal capitalist state. Urban greenery levels directly reflect socioeconomic inequality; focusing on these spaces and plant diversity, with perennial and pollinator species promoting soil health, continuously feeding the soil. In the guerrilla gardening arsenal, plants replace bombs and bullets.

The guerrilla gardener's toolkit can be as simple as a metal fork and a few seeds, although the covert operations sometimes require the use of a headlamp, which free the hands for gardening. "Tactical urbanism", a movement of people taking ownership of their shared urban spaces, began as early as 1649, when The Diggers, a guerrilla group organized by Gerrard Winstanley, took on the battle for equitable use of land. Today, garden activists such as Chido Govera (Future of Hope) and Michael Robinson (Rust Belt Riders) use similar tactics to provide community centered ways of returning to connection and care.

Every garden is a microcosm of possibility, a signal of the potential for change and a move toward stewardship and responsibility for the environment. Guerrilla gardening takes that step regardless of the obstacles and risks, breaking rules and choosing to tend and take responsibility where others have not.

Susan L Smith, is a practicing artist and educator, Associate Research Professor of Art, and Graduate Coordinator of the Intermedia Programs at the University of Maine. Smith's research is situated within issues of land/power and questions concerning extractivist practices, economic and climate forced migration. Her practice encompasses community-based collaboration, and site-based research. Smith believes the physical work is not the art, but an "artifact," the art lies in the process of immersion and witness of place and community. Recent work focuses on work at the southern border, on riverbanks and industrial sites contaminated with PFAS chemicals, and a project of fruit tree reforestation and pollinator seed library. Susan is currently developing "uprooted collective" as a vehicle to create work that focuses on stewardship and interdependency as a way to imagine an alternative future.

Columbian X-Change iii | Emilie Houssart

A countercolonial monument made from red clay, industrially farmed potatoes and my own humanure. This bust is a reproduction of a reproduction of a reproduction, alluding to the history of the potato in growing the workforce of the Industrial Revolution. The project connects the American icon Columbus with contemporary toxic industrial farming practices. The work has been watered by the public during its time at Swale House and is barely recognizable. Potatoes have fallen and sprouted at the base of the pedestal. I would show the work itself and a series of photos of various states.

Continuous Compost | Katerie H. Gladdys

Continuous Compost is a non-narrative video that documents and aestheticizes the cycle of transforming "waste" into rich fertile soil. The first section of the video shows chickens feeding and excreting food scraps collected from local restaurants at Grow Hub, a non-for-profit plant nursery supporting the lives of adults living with disabilities. Next, steaming decomposing mulch and manure piles at day break depict large-scale composting at Siembra Farms, an organic CSA farm. And finally, the third section illustrates composting with the assistance of fungi and insects on a personal scale in my backyard.

DiG | Rebecca Murtaugh

DiG is an ongoing explorative sculpture project that is at the intersection of art and science. I've been foraging local native clays from Central NY and Long Island for the past two years. Clays range from rich terracottas to high temperature clay bodies that resemble stoneware and porcelain. The objects exhibited include samples that investigate the plasticity, shrinkage, and maturation temperatures to modest sculptures that explore malleability and form. Works are exhibited on and within "The Unit", which is a transportable contained exhibition vehicle, that references the pack in pack out process of digging from sites that are often off the beaten path.

This project hopes to entice the curiosity of the viewer to further investigate their relationship to nature and the constructed world

From the Lutum Edge | Krista Dragomer & Ben Pagac

Red Hook's identity comes from its soil. The Lenape called it Ihepetonga, which translates to "high point of sandy soil." The Dutch named the area Roode Hoek (anglicized to Red Hook by the British) for its red clay soil and the shape of its peninsula. Red Hook's marshlands and creeks were filled to create more land to build smelting and refinery works which leaked lead and other toxins into its soils. Climate researchers speculate that Red Hook's soil could be underwater in 2050. From the Lutum Edge is a site specific installation of Krista Dragomer's field guide *Drawing on the End of the World: Red Hook, Brooklyn*. The project is an online guided tour that explores Red Hook's geologic, environmental, and industrial history speculatively and sensorially. Participants are guided through a series of exercises prompting an exploration of the terrain through human and more than human perspectives, asking: what forms of sensory experiencing put us in relation with the complex layering of life and time that we were all entangled within, and what possibilities exist as we stay with the trouble of this ecological moment? Participants may access a public folder to share their responses to the exercises. For the 2023 Urban Soils Symposium, the guide has been expanded to include an audio collaboration with Ben Pagac, entomologist, sound ecologist and audio documentary producer, with contributions from Dr. Beatrice Marovich, author of *"Sister Death: Political Theologies for Living and Dying"* (Columbia University Press, 2023). In this expansion, Krista invites reflection on how waste is both a materiality and a conceptual byproduct generated via the creation of concepts like "nature" and "the human." This installation includes a sculptural artwork created from locally sourced red clay and Red Hook soil mixed with recycled paper from Red Hook's local printer and environmental debris.

Krista Dragomer is a Brooklyn-based interdisciplinary artist working in visual art, text, and sound, often in collaboration with new media artists, musicians, and academics in the fields of religion, philosophy, anthropology, and biology. In symbiosis with her artwork is her teaching and mentorship practice, *Drawing on the Senses*. Krista has presented her art and workshops in academic conferences, art and science museums, concert venues, public parks, storefronts, DIY artist-run spaces, podcasts, and galleries. She is the Artist-in-Residence for the 2023 iteration of Dr. Bayo Akomolafe's global online course-festival "We Will Dance With Mountains." A short list of past venues and conferences include: the ICA Boston, Prix Ars Electronica where Krista received the 2021 Award of Distinction in Digital Music & Sound for her work with Rashin Fahandej, "Machines in Between," An Immersive Online Audio Program curated by Dr. John Modern, *After Earth: Religion and Technology on a Changing Planet*, put on by the International Society for the Study of Religion Nature and Culture, and the Ecomusicology Listening Room at the American Musicological Society conference. Krista has co-curated several of Dr. Eben Kirksey's *Multispecies Salon* exhibitions and programs centering the intersection of art, academia, and activism in local and global responses to the global climate crisis. A selection of her drawings is included in Dr. Beatrice Marovich's book "Sister Death: Political Theologies for Living and Dying" published by Columbia University Press, 2023.

Ben Pagac is an entomologist by day but also an independent radio producer, sound artist, and musician based in Annapolis, Maryland. His interests include insect communication, public health, and the impact of climate change on disease vector ecology. His latest collaborative piece exploring how insects might perceive sound is entitled "Secret Reception" (Diekman, Pagac, Allard) and has been shown in sound ecology forums internationally and will be included in the Central European Network for Sonic Ecologies: Beyond Listening Symposium held in Budapest this November

Green Maps | Wendy Brawer

Green Maps spread awareness of local progress toward sustainability, highlighting resources that help communities meet the challenges of the climate crisis. Impacting 65 countries, Green Map System supports local leadership by sharing open source icons and adaptable tools for meaningful engagement and collaborative development, including the versatile new Green Map Platform.

This poster will highlight the new open source, free to use platform and engagement resources. Note that all these locally made maps are linked by the Green Map Icons. We have a new set of Local Food Icons, too. We'd also note our upcoming climate action mapping project. Asset mapping is an important way to surface the metabolism of the city, and it can ignite action and networks for positive change.

Wendy E. Brawer is a New York-based eco-designer, climate creative and connector. She's best known as the founding director of Green Map System, a locally-led community sustainability mapping movement that has impacted 65 countries. Now open source, the new Green Map Platform, iconography and engagement resources are free to use, as seen at [GreenMap.org](https://www.greenmap.org). Wendy's honors include being appointed a TED Resident, the Designer in Residence at the Smithsonian National Design Museum and a Lower East Side Hero. Wendy is on several boards, including the Trust for Governors Island. She also involved in cycling, regeneration and infrastructure reuse projects around NYC, and beyond, as seen at [WendyBrawer.com](https://www.WendyBrawer.com).

Nature in Absentia: Monarch Migrations | Michele Brody

"Nature in Absentia: Monarch Migrations" integrates suspended origami butterflies folded from sheets of milkweed/mugwort papers inscribed with community members' migration stories in a range of languages. The exhibit features extra-large test tubes incubating milkweed seedlings over a floor map of North America illustrating the annual migrations of Monarch butterflies between Mexico and Canada, alongside projections of the butterflies at the Mexican Nature Preserve in Michoacán. This multi-media installation includes a soundscape animating the Monarch Butterfly's annual migrations as a symbol for current events at U.S. borders. The installation focuses on comparing the life cycles and threatened migratory patterns of Monarch Butterflies with recent mass migrations for safety from climate crises and social/political unrest. The installation also includes a small desk where guests are invited to write and share their stories of migration to be folded into a butterfly and set aloft with the 150 I have already gathered.

These two phenomena are inversely correlated; while migratory Monarch butterfly populations decline due to disturbances like pesticides and loss of native habitats, human populations, threatened by political and economic upheaval, are on the rise. The goal of this project is to encourage community and individual engagement through the art of sharing stories, poems or drawings about migration in its many forms. With the knowledge that the constant movement of species across the planet is an elemental part of maintaining our survival through Bio Diversity.

Practice 101 (Primal Ground) | Katherine Patiño Miranda

This installation points out to the fact that all living beings, from plants to humans evolved from the ancient common ancestor: the first living cell. The different colors from these paintings come as well from a single source: red cabbage pigments. Using different plants that I sprouted and grew out of my own compost the installation presents an image where we all emerge from a single primal ground. We share a common heritage, not only of chemistry but of consciousness, of the need to survive in a cosmos whose matter we share but which is itself indifferent to our living and self-concern.

I study the vegetable kingdom to highlight the invisible state of interdependence among diverse organisms on our planet through painting, performance, pedagogy and installation. My works, that I refer to as practices, have a durational and repetitive component involving the participation of plants, microbes and people making visible our connection with nonhuman forms. I am interested in revealing the unseen poetics of bats that bring mangoes to our plates, the rhizobia bacteria that fixates through black beans nitrogen in our planet and the creation of paintings by turning into natural pigments and sprouts my own waste. My current artistic exploration begins by cooking, eating, recycling, composting, extracting pigments, sprouting, planting and researching indigenous Mesoamerican agroecological technologies and soils. I see plants, fruits, and soils as political and historical agents that have shaped significantly the world, we live in.

Soil Microbiology at Newtown Creek | Jason Sinopoli

In 2021, USI received a generous grant from the genetics lab Biome Makers to conduct a soil microbiology census of NYC, looking for examples of in situ microbial bioremediation of legacy heavy metals, as discussed by Geoffrey Gadd and others in the academic literature, or as the EPA calls it, 'natural attenuation' by bacteria and fungi which are known to immobilize heavy metals in soil via a variety of biogenic mechanisms. So for this project we took almost 600 soil microbiology samples from the multi-contaminated shoreline of Newtown Creek, as well as soil microbiomes from healthier sites around the city including restored brownfields, urban farms, community gardens, native wildflower nurseries, old growth forests, restored river grasses, for reference. In 2023, OpenAI released GPT4, a computational platform we have been using to create python language tools to filter and analyze this data. At the symposium, we will be informally showing these tools and discussing our results with the many stakeholders, scientists and collaborators who volunteered to assist in this effort, as well as anyone else who may be interested.

Jason Sinopoli is a citizen scientist exploring heavy metals-contaminated soil in New York City

Soil Phrases | Marina 'Heron' Tsaplina

Prototypes of enlarged 'soils phrases' objects that are inspired by the Lenapehoking/NYC Reconnaissance Soils Survey as well as the soils and plants of the forests in the Adirondacks and the northeast.

Terra Dispositions | Alec Rovensky

This project consists of an articulated surface of slip-cast "blocks" deployed onto a site. There are two phases for the objects: as a collective assemblage, and as individual indexical artefacts. In an assembly, the objects function as a temporal ecological monument, which can be deployed in sites adjacent to increased human activity that is altering underlying hydrology. An MDF rack serves as a post-deployment "archive" of clay artefacts, displaying a snap-shot of the blocks after their erosion in a manner similar to their deployment in the landscape.

Writing Landscape | Vanessa Dion Fletcher

Vanessa Dion Fletcher will give an introduction to herself as a Lenape person and present Writing Landscape, a project from 2011, where she took steps to visit and return to significant places. Using copper plates and the intaglio printing process, Dion Fletcher recorded part of her life story through the earth and her body.