NYU FACULTY
URBAN RESEARCH DAY

Thursday, May 4, 2017
295 Lafayette Street, 2nd Floor

AGENDA

Time	Location	Event
2:00 - 2:10	Rudin	**Welcome & Opening Remarks (Cybele Raver, Senior Vice Provost for Academic Analytics & Graduate Academic Affairs)**
2:10 - 2:15	Rudin	**Explanation of Event Format (Sherry Glied, Dean, NYU Wagner)**
2:15 - 2:20	--	**Transition to Presentation Rooms**
2:20 - 3:20	Various Rooms (see page 2)	**Round 1: Concurrent Presentations**
3:20 - 3:35	--	**Break & Transition to Presentation Rooms** *(Refreshments and snacks available in the lobby)*
3:35 - 4:35	Various Rooms (see page 2)	**Round 2: Concurrent Presentations**
4:35 - 4:45	Lobby	**Break & Transition to Rudin**
4:45 - 5:00	Rudin	**Summary of Research Themes (Cybele Raver & Sherry Glied)**
5:00 - 5:30	Rudin	**Collaboration Brainstorm**
5:30 - 6:30	Lobby	**Reception**

PRESENTATION ROOM ASSIGNMENTS

Round 1

Group	History, Narratives, and Storytelling	Sustainability & the Community	Health	Vulnerable Populations
Room	Murphy (2nd floor)	Rice (2nd floor)	Lafayette (3rd floor)	Mulberry (3rd floor)
Presenters	Mariela Alfonzo Neil Kleiman Jasmine Ma Harvey Molotch Claudio Silva Jonathan Soffer	Juan Pablo Bello Juliana Freire Cheryl Merzel Pamela Morris & Elise Cappella Jennifer Pomeranz Anne Rademacher & Mary Killilea	Emily Balcetis Jan Blustein Jane Carlton Dustin Duncan Eugenia Naro-Maciel Victor Rodwin	Kevin Cromar Kelly Doran Erica Foldy Priscilla Lopez Lorna Thorpe Beverly-Xaviera Watkins

Round 2

Group	Safety & Resilience	Mobility	Local Politics	Education
Room	Murphy (2nd floor)	Rice (2nd floor)	Lafayette (3rd floor)	Mulberry (3rd floor)
Presenters	Shlomo Angel Masoud Ghandehari Marc Gourevitch Tae Hong Park Rae Zimmerman	Yu Chen Kristen Day Zhan Guo Constantine Kontokosta Debra F. Laefer	Gene Cittadino Andrew Goodman Anna Harvey Joshua D. Lee Raul P. Lejano Mitchell Moss	Fabienne Doucet Brian Elbel Keng-Yen Huang Leanna Stiefel Audrey Trainor

Mariela Alfonzo, PhD

Research Assistant Professor
NYU Tandon School of Engineering

Show Me the Money: How Data-Driven Stories About the Economic Benefits of Place Can Boost Walkability

The myriad benefits of an increasing demand for walkability are well-documented. But most U.S. cities are not walkable; numerous fiscal, bureaucratic, legal, and political hurdles stand in the way of improving walkability. Indeed, the typical, cash-strapped planning official often has a lot of "convincing" to do around why these changes are warranted and faces much opposition. This presentation will show how data and predictive analytics can be used to quantify what people love about places, identify optimal improvements, and forecast the benefits of making them better to help make the (effective) case for great places.

Dr. Shlomo Angel

Professor of City Planning and Director, NYU Urban Expansion Program
The Marron Institute of Urban Management and the Stern School of Business

Atlas of Urban Expansion—2016 Edition: Methodology and Key Results

Using satellite imagery, we have identified the urban extents—the areas occupied by the built-up areas of cities and the urbanized open spaces they delimit—in a stratified global sample of 200 cities, a 5% sample of all 4,231 cities and metropolitan areas that had 100,000 people or more in 2010, for three time periods 1990, 2000, and 2010. This made it possible to identify, for the first time, the new urban peripheries, the urban areas built between 1990 and 2015, to measure them and to compare them with areas built before 1990, using high resolution satellite imagery. The presentation reports on the findings from the global sample of cities and their generalization to the universe of cities. The general conclusion reached by comparing the new urban periphery to areas built before 1990 is that, on the whole, there has been a significant deterioration in key parameters that measure the physical quality of the urban environment in cities the world over.

Emily Balcetis

Associate Professor of Psychology
NYU College of Arts and Science

Perception for Action: Improving Health and Empowering Leadership in Minority Populations

On physical health, our research shows that the physical construction of low-income housing neighborhoods impacts exercise habits, but interventions targeting how people look at their environments can improve exercise. On leadership, we are examining racial minority children's beliefs about leadership potential; unlike adults, it seems that children believe the best leaders are those with darker, not lighter, skin.

Juan Pablo Bello

Associate Professor, Music and Performing Arts Professions / Electrical and Computer Engineering
Director, Music and Audio Research Lab (MARL)
NYU Steinhardt

SONYC: A Cyber-Physical System for Monitoring, Analysis and Mitigation of Urban Noise Pollution

Noise pollution is one of the topmost quality of life issues for urban residents, with proven effects on public health, educational outcomes, and the economy. The Sounds of New York City project (SONYC) is a new initiative that seeks to inject technological solutions into the cycle of noise pollution. Our vision is that of a cyber-physical system integrating intelligent sensor networks capable of 24/7 noise monitoring in urban environments, data science solutions for the analysis of noise patterns at city scale, and the use of citizen science for motivating and coordinating the actions of the many humans in the loop towards the common goal of noise mitigation. This talk will present our vision, the progress that we have made to date, and the activities that we plan to pursue in the short- to mid-term.

Jan Blustein, MD, PhD

Professor of Health Policy and Medicine
NYU Wagner Graduate School of Public Service

Cesarean Delivery in China's Cities and Supercities

Starting as a primarily rural nation in the 1970's, China is now home to 17 supercities (cities with a population greater than 5 million). At the same time, the nation has devoted substantial resources to maternal and child health; even those living in the most rural areas have access to hospital care. We discuss the implications of urbanization for the rate of cesarean delivery. We focus on the high rates of cesarean delivery in the supercities (typically 45%), as well as some recent efforts to reduce those rates.

Jane Carlton, PhD

Professor of Biology
Director, Center for Genomics & Systems Biology
NYU Department of Biology

Mapping, Tracking, and Characterizing the Microbes in New York City

Microbes live in every part of the biosphere, and are crucial to ecosystems and to human life. Funded by an NYU Grand Challenge grant and by the Alfred P. Sloan Foundation, we have used advances in environmental metagenomics to identify, characterize, and map microbial communities of New York. We have swabbed bicycle seats, ATM buttons, circulating paper currency, and analyzed raw sewage collected from all 14 wastewater treatment plants. Our current project analyzes samples from pets (cats and dogs) and pests (rats, cockroaches, and pigeons) in all five boroughs. These data are revealing intricate patterns and seasonal differences of the microbes in the city.

Yu Chen, PhD, MPH

Associate Professor of Epidemiology
Departments of Population Health and Environmental Medicine
NYU School of Medicine

Association of Neighborhood Walkability with Physical Activity and Body Mass Index in the New York University Women's Health Study

Feasibility of constructing a neighborhood walkability index (NWI) using historical residential addresses and data is unknown. Using historical data, we determined NWI using baseline residential addresses of participants in the New York University Women's Health Study (NYUWHS), a prospective cohort of 14,274 women recruited between 1985-1991 from the NYC Metropolitan Region. Relationships between NWI, body mass index (BMI), and physical activity at baseline were assessed, using a population average model and generalized estimating equations approach to control for potential confounders at the individual and neighborhood levels. NWI was positively and significantly related to walking and vigorous activity, and inversely related to BMI.
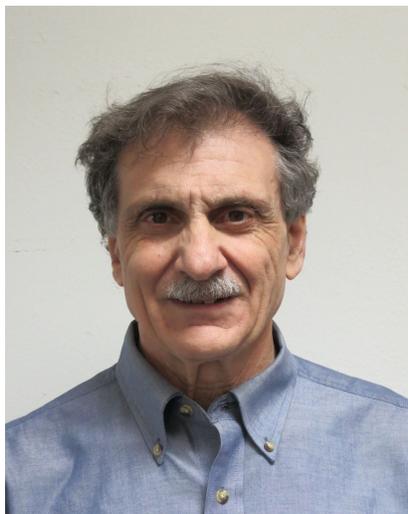
Gene Cittadino

Clinical Associate Professor
NYU Gallatin School of Individualized Study

Chicago, Henry Cowles, and the Emergence of Ecology

I am an historian of science and environmental historian. In recently reviving an earlier research project on Henry Chandler Cowles, a major turn-of-the-twentieth-century pioneer of the science of ecology at the University of Chicago, I identified three significant links between the city of Chicago and Cowles's ecological work: his religiously-motivated sympathies with the spirit of social reform among Chicago's civic leaders, his personal connection with one of the founders of the Chicago school of sociology, and his familiarity with Chicago's patchwork of neighborhoods and "natural areas" made accessible by the city's vast network of streetcars and interurban railways.

Kevin Cromar, PhD

Director, Air Quality Program
Marron Institute of Urban Management

Opportunities for Improvement in Local Air Quality Management

Despite indications of a general pullback on environmental regulations at the federal level, there remains significant opportunities at the state and local level for improving air quality. The Air Quality Program at the Marron Institute works directly with local policymakers to reduce the health impacts of air pollution through improved monitoring, quantification, and communication of health relevant levels of air pollution. Insights from our recent work, both domestically and internationally, will be presented along with concrete suggestions for areas in which cities can take immediate action to better urban air quality.

Kristen Day

Professor and Associate Dean of Academic Administration
Department of Technology, Culture and Society
NYU Tandon School of Engineering

Active Living in China

China faces rising rates of overweight, obesity, and physical inactivity among its citizens. China is also urbanizing at a rapid rate. Current patterns of urban design and planning may exacerbate inactivity in China's major cities. This research examines urban environments and physical activity in Shanghai and Hangzhou, and suggests directions for future research to better understand this relationship.

Kelly Doran, MD, MHS

Assistant Professor, Departments of Emergency Medicine
and Population Health
NYU School of Medicine

Homelessness Prevention Among Urban Emergency Department Patients and Social Determinants of Health Registry

Homelessness prevention interventions in NYC are effective, but do not reach most at-risk people. Emergency departments (EDs) serve a large, vulnerable group of people who may not access other social services. We are using multi-method cross-system data analysis to develop a brief screening tool to identify ED patients who are at significant risk for future homelessness. In addition, we are developing a novel "Social Determinants of Health (SDH) Registry" by linking ED patient surveys with the New York all-payer health care database. This SDH Registry will allow us to gain new knowledge about the influence of SDH on health outcomes.

Fabienne Doucet

Associate Professor of Early Childhood Education
Department of Teaching and Learning
Affiliated Faculty of the Institute for Human Development
and Social Change and the Metropolitan Center for
Research on Equity and the Transformation of Schools

Fostering Culturally Relevant Play in Pre-K

The purpose of the Fostering Culturally Relevant Play in Pre-K project is to design, implement, and study a professional development (PD) program for Pre-K teachers that fosters the development of culturally relevant play for young children in Pre-K. The PD program will center on a series of short documentaries, created as part of this proposed project, featuring teachers planning, implementing, and engaging in culturally relevant play with young children across settings. Documentaries will address key themes to which Pre-K teachers should attend in designing opportunities for culturally relevant play in their classrooms.

Dustin Duncan

Assistant Professor
Department of Population Health
NYU School of Medicine

Perceived Neighborhood Safety is Associated with Poor Sleep Health Among Gay, Bisexual and Other Men Who Have Sex with Men in Paris, France

No studies have examined associations of neighborhood characteristics and sleep health among men who have sex with men (MSM). The purpose of this study was to examine associations between perceived neighborhood safety and sleep health among a sample of MSM in Paris, France. We placed broadcast advertisements on a popular smartphone application for MSM in October 2016 to recruit users in the Paris (France) metropolitan area (n=580). In multivariate regression models, perceived neighborhood safety was associated with poor sleep quality, short sleep duration, and having sleep problems. Interventions to increase neighborhood safety may improve sleep health among MSM.

Brian Elbel, PhD, MPH

Associate Professor of Population Health and Health Policy
Department of Population Health, NYU School of Medicine
NYU Wagner Graduate School of Public Service

The Food Environment and Childhood Obesity in NYC

Using data on all NYC public school kids, we use census tract fixed effects to estimate the impact of the food environment (distance to nearest fast food location; wait service restaurant; corner store; supermarket) on childhood obesity.

Erica Gabrielle Foldy

Associate Professor of Public and Nonprofit Management
NYU Wagner Graduate School of Public Service

Walking Contradictions: Power, Inclusion and Employee Resource Groups

Organizations tackling urban issues face numerous challenges related to inclusion of diverse employees, clients, residents, citizens and constituencies in the work. This theory paper draws on a range of research to argue that power is critical: without power, people are unlikely to feel included. It then suggests employee resource groups (or affinity groups) as one mechanism to increase power, but only if they meet certain conditions. They must be able to balance independence from management with integration into the organization. The paper concludes with propositions for enhancing both independence and integration.

Juliana Freire

Professor, Data Science & Computer Science Engineering
NYU Center for Data Science & NYU Tandon School of Engineering

Democratizing Urban Data Analytics

Today, 50% of the world's population lives in cities and the number will grow to 70% by 2050. Cities are the loci of economic activity and the source of innovative solutions to 21st century challenges. At the same time, cities are also the cause of looming sustainability problems in transportation, resource consumption, housing affordability, and inadequate or aging infrastructure. The large volumes of urban data, along with vastly increased computing power open up new opportunities to better understand cities. Encouraging success stories show better operations, more informed planning, improved policies, and a better quality of life for residents. However, analyzing urban data often requires a staggering amount of work, from identifying relevant data sets, cleaning and integrating them, to performing exploratory analyses over complex, spatio-temporal data.

Our long-term goal is to enable domain experts to crack the code of cities by freely exploring the vast amounts of data cities generate. This talk describes challenges which have led us to fruitful research on data management, data analysis, and visualization techniques. I will present methods and systems we have developed to increase the level of interactivity, scalability, and usability for spatio-temporal analyses.

Masoud Ghandehari

Associate Professor
NYU Tandon School of Engineering

Thirty Years After the Montreal Protocol

Following the discovery of the Ozone hole in the 1970's, the Montreal Protocol led to near complete elimination of types of refrigerant gases responsible for that effect. The interim replacements (such as Freon), once known to be benign, are now considered to have four orders of magnitude higher global warming potential than CO_2. In 2016, the Kigali accord signed by the same parties as the Montreal protocol, agreed to eliminate these compounds by 2020. Information on the sources and cycles of emissions of refrigerant gases are mainly derived from country reports of materials purchase and production. I will present results of an eight day spectroscopic imaging campaign, continuously mapping 8 kilometers of Manhattan's skyline once every 3 minutes. This study which lead to unprecedented phenomenology of refrigerant gas emissions is expected to appear in the Nature magazine this spring.

Andrew Goodman, MD, MPH

Clinical Professor
NYU College of Global Public Health

A Survey of Worksite Wellness Programs for New York City Hospital Workers

An on-line worksite wellness survey, adapted from the Centers for Disease Control and Prevention Worksite Health Scorecard, was completed by 39 of 40 hospitals belonging to the League of Voluntary Hospitals in New York City. The median hospital score was 79 out of a possible 155 points. About half of the respondents had a budgeted worksite wellness program and 21% had dedicated staff. While over half had active wellness committees, only one-third had committees jointly chaired by the union and management. Program areas in need of improvement included healthy eating, physical activity supports, and stress reduction.

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Marc Gourevitch, MD, MPH

Professor and Chair, Department of Population Health
NYU School of Medicine

Measurement as Tool for Urban Health Improvement

Cities cannot manage what they cannot measure. A huge data gap regarding city-level indicators of health and health determinants impedes more focused health improvement efforts. In collaboration with 4 cities (Waco, Kansas City, Flint, Providence), we have developed and launched a publicly available online "city health dashboard" that responds to two key challenges: 1) most US health data is not readily available at the city level yet 80% of residents live in cities; and, 2) no standardized tools exist to help city leaders benchmark their communities' performance on widely accepted indicators of health and its determinants.

Zhan Guo

Associate Professor of Urban Planning and Transportation Policy
NYU Wagner Graduate School of Public Service

Impact of Mandatory Affordable Housing on Housing Market in London

This research analyzes the impact of the mandatory affordable housing regulation in London on three aspects of the housing market: supply of affordable housing units, number of developments subject to the regulation, and the total number of housing units. Key findings include: such mandates indeed increase the supply of affordable housing, but decrease the number of developments subject to the mandates, and have a negative but insignificant effect on the total number of housing units. The results suggest that such mandate might improve housing affordability in the short-term, but the long-term effect is unclear.

Anna Harvey

Professor of Politics, Faculty of Arts and Science
Interim Dean, Graduate School of Arts and Science
Senior Research Scientist, The Policing Project at NYU Law

Democratic Policing

The Policing Project at NYU Law, in partnership with the Laura and John Arnold Foundation and the Police Foundation, is launching a wide-ranging research project on the subject of Democratic Policing. We are interested in the broad social impacts of policing on communities, and in developing metrics that allow both policing agencies, and the communities they serve, to assess those impacts. We are currently working with six jurisdictions, including several urban police districts, to assess the impacts of six discrete policing tactics, including body-worn cameras, ShotSpotter gunshot detection technology, de-escalation training, limited pursuit policies, crime analytics units, and stop/question/frisk policies.

Keng-Yen Huang

Associate Professor
Department of Population Health
NYU Langone Medical Center

Integrating Mental Health in Diverse Community Settings

The integration of preventive mental health services into primary and community settings has been advocated as a lower-cost public health solution to increase access of mental health services and improve community members' quality of life. However, systematic research on the applications of this integration model in urban planning or in high need communities is limited. Our Be-Well project attempts to address this issue by applying recent emerged implementation science and integrated health service development models (e.g., community engagement) to develop and test new strategies to overcome resource and structural barriers, and improve related service access, support, and population mental health.

Constantine E. Kontokosta, PhD, PE

Assistant Professor
Department of Civil and Urban Engineering Center for Urban Science and Progress (CUSP) and NYU Tandon School of Engineering

Urban Informatics and Participatory Sensing to Understanding the Nexus between Poverty, Health, and the Built Environment

The Quantified Community (QC)—a long-term neighborhood informatics research initiative—is a network of instrumented urban neighborhoods that collect, measure, and analyze data on physical and environmental conditions and human behavior to better understand how neighborhoods and the built environment affect individual and social well-being. This research focuses on initial projects to deploy novel urban sensors in the economically-distressed communities of Red Hook and Brownsville, Brooklyn, to collect and analyze quality-of-life measurements at high spatial and temporal resolution. This effort is complemented by a citizen science initiative to engage local residents in the data collection and problem-solving process to drive evidenced-based community decision-making and improve local and city governance.

Debra F. Laefer

Professor of Urban Informatics
Center for Urban Science and Progress

City-Scale Modeling v1.0

City-scale modeling should be much more than a numerical model or a fancy three-dimensional visualization. What will be presented here is a comprehensive vision for an integrated spatial data tool that will host a wide range of text, image, and data in three dimensions in a manner that multiple researchers and stakeholders can both contribute and query the resulting compound datasets as well as supporting direct analysis. The critical elements of such a system will be presented herein.

Neil Kleiman

Clinical Assistant Professor of Public Service
NYU Wagner Graduate School of Public Service / Wagner
Innovation Labs

Accessing Data for Urban Policy Analysis

The use of data can change the way in which governments do business, and, in turn, change the environment for businesses. We describe the development of an approach that has enabled sensitive data from different sources to be discovered, integrated, and analyzed in a carefully controlled manner, and that has allowed city researchers and government staff to share analysis methods, results, and expertise in ways not possible before. We believe that our approach is resulting in a fundamental change in how data on human beings from governments, statistical agencies, research institutions, and other organizations, are made available for urban research.

Joshua D. Lee, MS, MSc

Associate Professor
Department of Population Health / Section on Tobacco Alcohol
and Drug Use

Opioid Relapse Prevention at Release From NYC Jail

We are conducting an N=255 RCT of XR-naltrexone vs. usual care and compared to a quasi-experimental cohort newly initiated on methadone maintenance in the NYC jails. Preventing opioid and other drug relapse following incarceration is a public health and overdose prevention priority.

Raul P. Lejano, PhD

Associate Professor of Environmental Education
NYU Steinhardt School of Culture, Education, and Human
Development

Narrative and the City

I am engaged in two relevant lines of research:The first is the role of narrative communication on fostering resilience to extreme weather events among urban poor. The second is the link between narrative, personal identity, and the city—i.e., how the meanings of the city intertwine with autobiography.

Priscilla Lopez

Research and Evaluation Coordinator
Department of Population Health
NYU School of Medicine

Financial Barriers to Health Care and the Role of the Health Advocate Model

Public housing residents face health system barriers like poor care coordination and difficulty navigating the healthcare system. There is evidence to suggest that low-income families with insurance struggle with unaffordable co-pays, insurance deductibles, and prescription drug costs, and have limited access to information about free/discounted medical care, child-care, and transportation to health care—resulting in unmet health needs. Thus, the NYC DOHMH launched a community health worker-health advocate intervention in East Harlem public housing units. This presentation will describe the barriers to care experienced by intervention participants and the wider East Harlem public housing population.

Jasmine Y. Ma

Assistant Professor of Mathematics Education
Department of Teaching and Learning
NYU Steinhardt School of Culture, Education, and Human
Development

Mapping Urban Youths' Learning Pathways

This ethnographic study investigates urban youths' mathematical learning pathways across diverse settings, seeking new understandings of continuities and disjunctures they may experience as they participate in the many contexts that constitute their lives, including but not limited to school. The study is motivated by the conjecture that understanding and addressing educational inequity in mathematics education requires a more multi-sited approach than has typically characterized research in this area, an approach that takes into account the multiplicity of formal and informal settings in which mathematics learners spend their time, as well as the diverse pathways they chart across these settings.

Cheryl Merzel, DrPH, MPH, MS

Clinical Associate Professor
NYU College of Global Public Health

Smoking Cessation Among Latinos

We examined smoking cessation among Latinos using data from the Hispanic Community Health Study/Study of Latinos, a population-based study of 16,415 Latinos ages 18-74 from Chicago, Miami, the Bronx, and San Diego. Findings indicated that the likelihood of quitting varied by national background among men, however, Puerto Rican and Cuban smokers of both genders were least likely to quit. Among women only, younger and more socially acculturated individuals had lower odds of sustaining cessation. Findings suggest that heterogeneity in smoking behaviors among Latinos should be taken into account when developing and delivering smoking cessation interventions and public health campaigns.

Harvey Molotch
Professor of Sociology
NYU Sociology

Consuming Abu Dhabi

The rise of the "showcase' Gulf Cities, like Abu Dhabi, Dubai, and Doha, not only reconfigure parts of the Middle East landscape, they also challenge our prior understandings of how modern cities gain their shapes, sort their populations, and order their governance. In this paper, based primarily on the case of Abu Dhabi but drawing on other sites as well, I examine how such cities can operate when usual conditions of urbanism are not evident.

I inquire about presence or absence of such tried and true urban "forces" as industrial agglomeration, social capital, cultures of innovation and civic participation. I explain how substitutes or "work-arounds" help compensate for what otherwise would be deficiencies—including a lack of normal real estate markets.

The key work-around, one not given sufficient primacy in urban studies, is consumption. I work out how acquiring the goods—everyday as well as luxury goods—serves to bond citizens to the state as well as to one another. I also consider spectacles like architectural wonders, western museums, and institutions like NYU for their potential (somewhat mixed) to enhance stability or instability.

I try to "Learn from the Gulf" to discern possible emerging alternative patterns as they impact not only locally, but also development elsewhere.

Pamela Morris

Vice Dean for Research and Faculty Affairs and Professor
NYU Steinhardt

Elise Cappella

Associate Professor of Applied Psychology and Director, Institute of Human Development and Social Change
NYU Steinhardt

Strengthening the Architecture for High Quality Universal Pre-K: A University-District Partnership

Based on research suggesting that early education is key to solving the problem of children's risk of academic failure, senior leaders in New York City (NYC) launched a policy initiative—Pre-K for All—to offer free, full-day, high quality pre-kindergarten to every NYC four-year-old child. Initial goals of our research-policy partnership were to enhance the research capacity of education policy partners and map the expansion of pre-kindergarten programs and seats around the city. Long-term goals involve understanding implementation of NYC early education programs and tracking program and child outcomes across the diversity of neighborhoods and children served.

Mitchell L. Moss

Henry Hart Rice Professor of Urban Policy and Planning
NYU Wagner Graduate School of Public Service

Urban Policy and Planning

Streets and highways are vital for political protests; this research highlights the way in which highways, bridges and airports were the site of protests by Black Lives Matter in 2014-15, the women's protest marches of January 21, 2017, and protests towards immigration policies in 2017. Rather than occupy buildings or public parks, recent protest marches have taken over major public infrastructure—disrupting the flow of people and goods. There is now new pressure to adopt policies that will severely restrict protest activity on public arterials. This research will present data on protests in major cities and include maps of the major public infrastructure that has been occupied. Finally, we will identify the emerging efforts to limit the use of transportation systems for protest activity.


Eugenia (Genia) Naro-Maciel, PhD

Clinical Assistant Professor of Liberal Studies
NYU

Next Generation Environmental DNA Technology: Applications for Urban Ecology

Environmental DNA (eDNA), or DNA sequenced directly from water, soil, or other mixed samples, represents a novel and transformative technology for assessing biodiversity. Next-generation high-throughput sequencing has numerous advantages, including furnishing voluminous data from readily available samples, such as water, and improving representation of cryptic or elusive organisms. Urban communities, however, remain relatively understudied in this new field. This presentation therefore aims to: 1) Provide an overview of eDNA; 2) Discuss our studies monitoring aquatic restoration in the Bronx River and on Staten Island; and 3) Offer suggestions for incorporating eDNA analysis into urban ecology research in New York City.
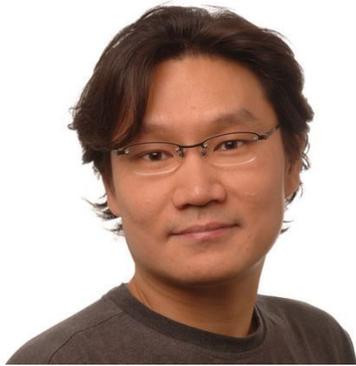
Tae Hong Park, PhD

Associate Professor
Director, Composition Program
Faculty, Music Technology
Department of Music & Performing Arts Professions

Citizen-Science-Driven Urban Sensing

Citygram is a project that aims to capture, analyze, and visualize urban spatiotemporal energies in real-time to create maps—e.g. soundmaps and airmaps—which can ultimately inform and improve well-being of urbanites. The system is designed to enable effective and efficient rapid sensor network growth and make practicable, large spatial coverage through "edge compute" and citizen-scientist engagement. The project has developed into a collaboration and partnership with IBM and Weather Underground where the aim is to augment existing weather maps and render multimodal environmental maps for the public, policy-makers, and researchers.

Jennifer L. Pomeranz

Assistant Professor and Interim Chair
Department of Public Health Policy and Management
NYU College of Global Public Health

Preemption: A Threat to Local Progress

Preemption is when a higher level of government blocks the ability of lower levels of government to act. Although it applies equally to urban, suburban, and rural communities, it is more likely to negatively affect urban locations because they tend to be the ones to enact progressive legislation. There has been a surge in state preemption of local laws recently on topics as diverse as paid sick days, anti-discrimination, food policy, fire sprinklers, and firearm safety.

Anne Rademacher

Associate Professor
Departments of Environmental Studies & Anthropology

Mary Killilea

Clinical Associate Professor of Biology
Department of Environmental Studies

Urban Greening Lab Initiative

The Urban Greening Lab is a collaborative research and curricular design initiative. Our core faculty include two members of the Environmental Studies Department in New York, and faculty from NYU-Berlin. Our website reviews the major research and curricular projects underway through the Lab.

Victor G. Rodwin

Professor of Health Policy and Management; Co-Director with Michael Gusmano of Rutgers U. School of Public Health, World Cities Project
NYU Wagner Graduate School of Public Service

Cities and Health: The World Cities Project

Although world cities—New York, London, Paris and Tokyo—consider themselves unique within their respective nations, because of the many characteristics they share in common, the World Cities Project (WCP) compares them to one another. WCP aims to identify promising practices and interesting failures and to suggest lessons from experience in wealthy nations. WCP has focused on three substantive areas: 1) urban aging; 2) emergency preparedness; and 3) the healthcare system. I propose to present some of our completed work on (3) and to discuss some research in progress on capital cities in BRIC nations: Brazil, Russia, India and China.

Claudio Silva

Professor
NYU Tandon School of Engineering and Center for Data Science

Analysis and Visualization of Urban Data

Analyzing urban data often requires a staggering amount of work, from identifying relevant data sets, cleaning and integrating them, to performing exploratory analyses over complex, spatio-temporal data. Our long-term goal is to enable interdisciplinary teams to crack the code of cities by freely exploring the vast amounts of data cities generate. This talk describes challenges which have led us to fruitful research on data management, data analysis, and visualization techniques. I will present methods and systems we have developed to increase the level of interactivity, scalability, and usability for spatio-temporal analyses.

Jonathan Soffer

Professor of History and Department Chair
Department of Technology, Culture & Society
NYU Tandon School of Engineering
Affiliated Faculty Department of History

The Concept of Corruption in Urban History

For the last sixty years, since Richard Hofstadter published The Age of Reform, historians, for a variety of reasons, have been minimizing, relativizing, and problematizing "corruption" out of our disciplinary vocabulary, particularly in the discipline of urban history. This trend coincided with the period of the strongest enforcement of anti-corruption in US history, from roughly 1900-1975. I will argue, that despite the moral content of the term, corruption is a useful term in understanding the degree of equality, and relative autonomy of the state that citizens enjoy.

Leanna Stiefel

Professor of Economics and Education Policy
NYU Wagner Graduate School of Public Service and NYU
Steinhardt (IESP and ASH)

Special Education Policy in NYC

Over 20% of NYC public school students receive special education services and yet we know little about the system wide patterns of disparities and outcomes. In this research, we look over time at progress of students with disabilities in NYC, with generalizations to other large city districts.

Lorna Thorpe, PhD

Professor, Division of Epidemiology Director
Department of Population Health
NYU School of Medicine

New York City Health and Nutrition Survey (NYC HANES)

New York City Health and Nutrition Examination Survey (NYC HANES) is a cross-sectional health examination survey of NYC adults conducted in 2004 and again in 2013-2014. Using a 3-stage cluster household sampling design, participants underwent a detailed health interview, physical exam, and gave biospecimens. This presentation will describe the data resource, including the biorepository, and give an overview of key findings to date. Data are public use and biospecimens are available through a proposal process.

Audrey Trainor

Associate Professor, Department of Teaching & Learning, Special Education
NYU Steinhardt School of Culture, Education, & Human Development

Transition by Design: Improving Equity and Outcomes

While there have been marked improvements in the adult lives of individuals with disabilities, post-school outcomes are not equitable across groups of students. For example, adolescents of color are more likely to face exclusionary discipline procedures in school resulting in detention and court involvement (known as the school-to-prison pipeline). These and other lost opportunities to learn limit access to inclusive education.

In this book-length research synthesis, Transition by Design (2017), I use a sociocultural theoretical lens and argue for a more contextualized, strengths-based, diversity-embracing approach to both research and practice to deliberately shape equitable opportunities for youth with disabilities in transition.

Beverly-Xaviera Watkins

Associate Professor and Interim Chair, Environmental
Health Sciences
NYU College of Global Public Health

**Academic Community Collaborative to Engage
Stakeholders**

Low SES communities are generally resistant, almost
impervious to the introduction of new information from
outside their group because the ties among community
members are strong—the result of close and stable
interactions over time. In order to advance PCOR we
need to build sustainable innovative mechanisms for
establishing weak ties within these communities; "local bridges" that create "ties between two
persons that are the shortest (and often the only plausible) route by which information might
travel from those connected to one to those connected to the other." The ACCESS, online
platform creates a virtual bridge for engaging diverse, hard to reach, socioeconomically
disadvantaged, underrepresented communities in PCOR; and serves as a nexus for
stakeholders—patients, caregivers, local, state and federal advocacy organizations,
researchers, healthcare providers, payers, industry and policymakers to gather, share
information, co learn, build trust and form partnerships.

Rae Zimmerman

Professor of Planning and Public Administration
Director, Institute for Civil Infrastructure Systems
NYU Wagner Graduate School of Public Service

**Adapting Infrastructure Services for Extreme
Weather Events**

The effects of extreme weather events and climate
change on infrastructure services often compromise
social conditions and necessities such as safety,
livelihoods, and equity. This research draws from
several projects pertaining to (1) the way infrastructure
services are interrelated in terms of spatial proximity and functional dependence that can
increase vulnerabilities to users in extreme events, (2) the role of adaptation measures such as
green infrastructure and its financing to reduce the vulnerability of infrastructure to flooding, and
(3) the ability of transportation infrastructure in urban areas to enable residents and workers to
access safe areas in extreme events.