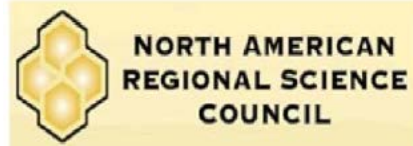# Call for Applications to the Inaugural NARSC/NERSA Summer School: "An Integrated Assessment of Climate Change Adaptation Plans for New York City's Waterfront."

The North American Regional Science Council (NARSC), in collaboration with the Northeastern Regional Science Association (NERSA), and Cornell AAP NYC, is pleased to announce that the inaugural NARSC/NERSA summer school will be held on the Cornell Tech Campus on Roosevelt Island in New York City from June 27th to July 1st 2022.

The thematic focus of this year's summer school will be "An Integrated Assessment of Climate Change Adaptation Plans for New York City's Waterfront."

Case-study Statement
Over the next decade, New York City's waterfront policies and programs will be driven by the climate justice principle that all New Yorkers should live, work, and play in safe and healthy environments. The intent of these policies and programs is that New Yorkers will have more equitable access to all that NYC's waterfront has to offer—from parks to jobs, as well as affordable and resilient places to live. (See https://www.waterfrontplan.nyc/.) The Financial District and Seaport Climate Resilience Master Plan addresses in detail how these policies and programs can change the waterfront of lower Manhattan from the Battery to the Lower East Side and East River Park to adapt the built environment to the effects of climate change, especially seal-level rise, make this environment more resilient to the increased incidence of extreme-weather events, and provide amenities that are available to all residents in an equitable fashion. (See https://fdiseaportclimate.nyc/.)

While the climate change adaptation plans referenced are careful, comprehensive, and far-sighted, the processes of their adoption and implementation are expected to extend over the next several decades, as are processes of seeking and obtaining approvals and permits from relevant agencies and the funding needed to implement them. Much of the analysis the implementation of the plans will entail has yet to be done and protocols for performing this work, which might be employed in similar situations in other locations, remain to be developed. This is a situation to which regional science has much to contribute!

Although a summer school event can only provide an introduction to the types of analysis needed for long-term plan implementation, the event can expose next-generation scholars to the kind of interdisciplinary research needed to support appropriate planning responses to climate change that will lead to adaptations in the built environment and increased resilience and social equity.

Program at a Glance
This Summer School will provide an immersive experience for 12 to 15 Ph.D. students, or post-doctoral researchers who have completed their doctoral studies within the last five years, to work together in interdisciplinary teams to examine aspects of implementing the "New York City Comprehensive Waterfront Plan" and the "Financial District and Seaport Climate Resilience Master Plan" in the Lower

Manhattan Waterfront. Tutorials on theories and methods relevant to this work will be provided. Participants will be expected to study background materials prior to the summer school and collaborate with other participants after the event to complete a project report and scholarly papers for presentation at the November 2022 NARSC meetings in Montreal and submission to a regional science journal for publication in a special issue.

<u>Key Dates</u>
Call for Applications	April 4th
Application Deadline	May 1st
Notification of Acceptance	May 15th
Registration Deadline	May 25th
Fee Payment Deadline	June 15th

<u>Program Structure (Tentative)</u>
Sunday, June 27th late afternoon and early evening:
Walking tour of the study area and a reception at AAP NYC at 21 Broadway.

Monday, June 28th morning:
1) Discussion of summer school philosophy, objectives, and intended products.
2) Orientation on the Comprehensive Plan for the NYC Waterfront and the Financial District and Seaport Climate Resilience Master Plan.
3) Demonstration of design-tech tools for visualizing proposed changes.

Monday, June 28th afternoon:
4) Introduction to principles of system-of-systems (SOS) analysis and demonstration of dynamic systems modeling tools with modules reflecting foci of participant teams.
5) Breakout sessions for participant team discussions with modular exercises.
6) Concluding plenary.

Tuesday, June 29th morning:
1) Backgrounding on housing, land use, and transportation conditions in the study area.
2) Introduction to open-source data analytics and scoping of targeted neighborhood census tracts with an emphasis on land use, housing, and transportation.
3) Overview of spatial dynamic panel data methods for analyzing impacts of policy interventions on housing markets illustrated with 'big data' examples.

Tuesday, June 29th afternoon:
4) Overview of principles of economic, environmental, and fiscal impact analyses with demonstration of tools and study-area data available through several toolboxes.
5) Breakout sessions for participant team discussions with hands-on opportunities.
6) Concluding plenary.

Wednesday, June 30th Morning:
1) Presentation on implementation/staging of the Financial District and Seaport Resilience Master Plan.
2) Discussion of the role of 'smart', agile, and multipurpose interdependent infrastructure systems in climate change adaptation planning.

3) Strategies for infrastructure financing when plan implementation is incremental and complementary.

Wednesday, June 30th Afternoon:
4) Overview and illustrations of Extended Mathematical Programming (EMP) features in GAMS to support multiple optimization problems with equilibrium constraints (MOPECS) relevant to modeling infrastructure system changes.
5) Breakout sessions for participant team discussions with opportunities to run test input-output.
6) Concluding plenary.

Thursday, June 31st morning:
1) Discussion of consensus building for plan formulation and implementation.
2) Overview of equity indicators and principles of Structural Path Analysis of impacts of policy interventions on particular demographic groups.
3) Overview of Thomas Saaty's Analytical Hierarchy Process (AHP) for resolving conflicts between stakeholders.

Thursday, June 31st afternoon:
4) Role playing in conflict resolution exercises.
5) Overview and examples of principles and evaluative criteria of integrated assessment.
6) Review of good principles of professional presentation, policy recommendation, and report production.

[Thursday Evening: Summer School Dinner]

Friday, July 1st morning:
1) Team presentations of modular analyses and critiques.
2) Interactive integrative assessment exercise with a dynamic systems model.

Friday, July 1st afternoon:
3) Mockup of project report outline.
4) Plans for follow-up and publications and assignment of responsibilities.
5) Summer school evaluations and wrap-up.

Application and Admission Process
Applications are invited from domestic and international Ph.D. students or post-doctoral scholars who have completed their doctoral studies within the last five years in relevant physical and social sciences and will be vetted by an admissions panel. Applicants should submit in a single PDF document a one-page CV and a one-page cover letter describing their motivation for joining the summer school and listing their relevant studies and skills. The PDF document should be sent to admin@neregionalscience.org.

In selecting participants the admissions panel will seek to balance applicants' disciplinary backgrounds, skills, genders, ages, and regions of origin.

Registration
Participants will be notified of acceptance to the summer school by May 15th. Participants will need to register for the Summer School by May 25th through a registration link that will be sent to all accepted participants.

Fee
The fee for participating in the summer school is $500.00. This amount includes accommodation for five nights in a shared room in the Graduate Roosevelt Island Hotel, lunches and coffee breaks throughout the summer school, and a welcome reception and Summer School dinner. Participants (or their institutions) must cover their own expenses for travel to and from the Summer School venue.

Staffing
The summer school will be staffed by, among others,
- Robert Balder, Executive Director of the Gensler Family AAP NYC Center
- Christa Court, Food and Natural Resource Economist of the University of Florida
- Timur Dogan, Cornell Urban Designer, Architect, and Visualization Software Developer
- Kieran Donaghy, Cornell Professor Emeritus of Regional Science
- John Carruthers, Director of Graduate Studies in Regional Science at Cornell, Housing Market Expert and Spatial Statistician
- Emily Goldman, Data Analyst at Mercy College (recently of BetaNYC)
- Yuri Mansury, Regional Scientist and Associate Professor of the Illinois Institute of Technology
- Bjorn Markeson, Academic Divisional Executive, LIMDEP
- Shriya Rangarajan, Ph.D. candidate in Regional Science studying the role of social capital in the circular economy of small-scale agriculture
- Michael Samuelian, Founding Director of the Cornell Tech Urban Tech Hub

Other staff will include current members of the New York City Department of City Planning, the Mayor's Office of Climate Resiliency, and the Bureau of Public Housing. The principal planner who oversaw completion of the NYC comprehensive Waterfront Plan, Michael Marrella, will assist in providing backgrounding and supporting documents.

Scientific Committee/Organizing Committee
Iwan Azis, Adjunct Professor, SC Johnson College of Business, Cornell University
Robert Balder, Executive Director of the Gensler Family AAP NYC Center
Manas Chatterji, Bartle Professor, School of Management, Binghamton University
John Carruthers, Director of Graduate Studies in Regional Science, Cornell University
Christa Court, Assistant Professor, Food and Natural Resources, University of Florida
Timur Dogan, Assistant Professor, Architecture, Cornell University
Kieran Donaghy, Professor Emeritus, City & Regional Planning, Cornell University
Emily Goldman, Assistant Professor, Data Analytics, Mercy College and BetaNYC
Geoffrey Hewings, Professor Emeritus, Departments of Geography, Economics, and Planning, University of Illinois at Urbana-Champaign
Michael Lahr, Distinguished Research Professor of Planning and Public Policy, Rutgers Univesity
Jaewon Lim, Associate Professor, School of Public Policy and Leadership, University of Nevada, Las Vegas (UNLV)
Yuri Mansury, Associate Professor, Illinois Institute of Technology
Bjorn Markeson, Academic Divisional Executive, LIMDEP
Shriya Rangarajan, Ph.D. Candidate in Regional Science, Cornell University

Neil Reid, Professor, Department of Geography and Planning, University of Toledo
John Sporing, U.S. Department of Commerce Bureau of Economic Analysis (Retired)
Ting Zhang, Associate Professor, Department of Accounting, Finance, and Economics, University of Baltimore
Siqi Zheng, STL Champion Professor of Urban and Real Estate Sustainability, M.I.T.

Venue
Most Summer School activities will be held in the Bloomberg Building on the Cornell Tech Campus.
https://tech.cornell.edu/campus/

Travel Information
After arriving at one of the New York Metropolitan Area Airports and traversing to Manhattan, Roosevelt Island can be reached by the F Train. It is one subway stop from the Upper East Side, or three subway stops from Grand Central.

Contacts
NERSA Administration
admin@neregionalscience.org
John Carruthers
jc3474@cornell.edu
Kieran Donaghy
kpd23@cornell.edu
Shriya Rangarajan
sr2248@cornell.edu