Urban Climate, Remote Sensing, Ground Observations and Community

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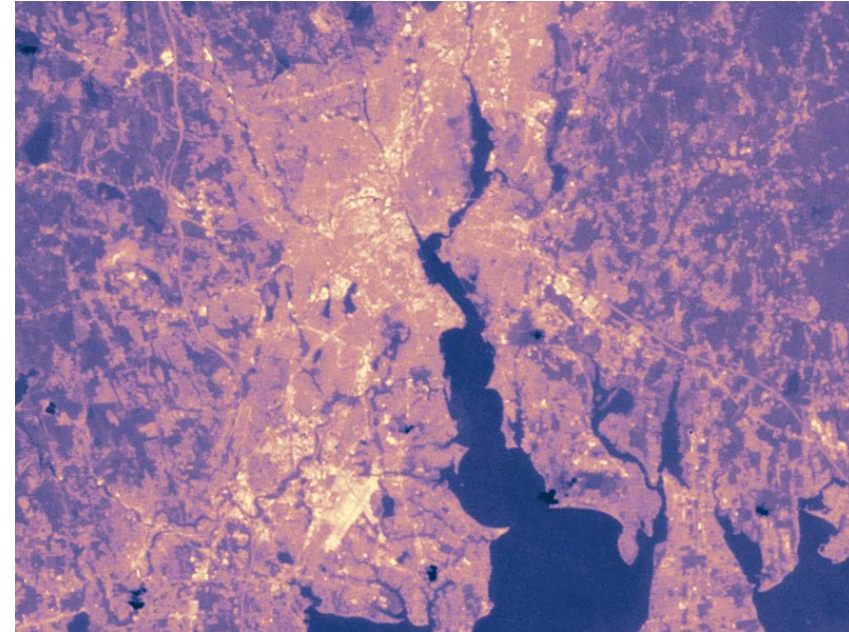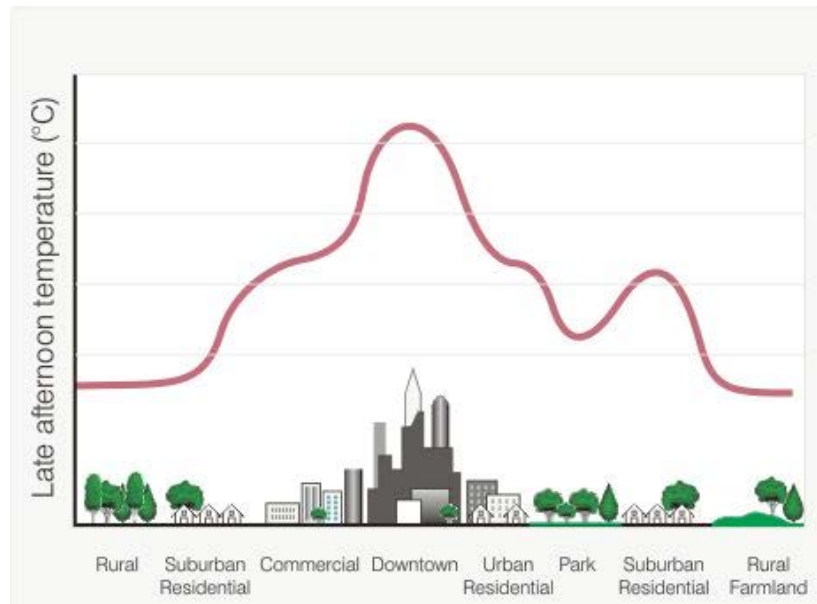
hnorouzi@citytech.cuny.edu

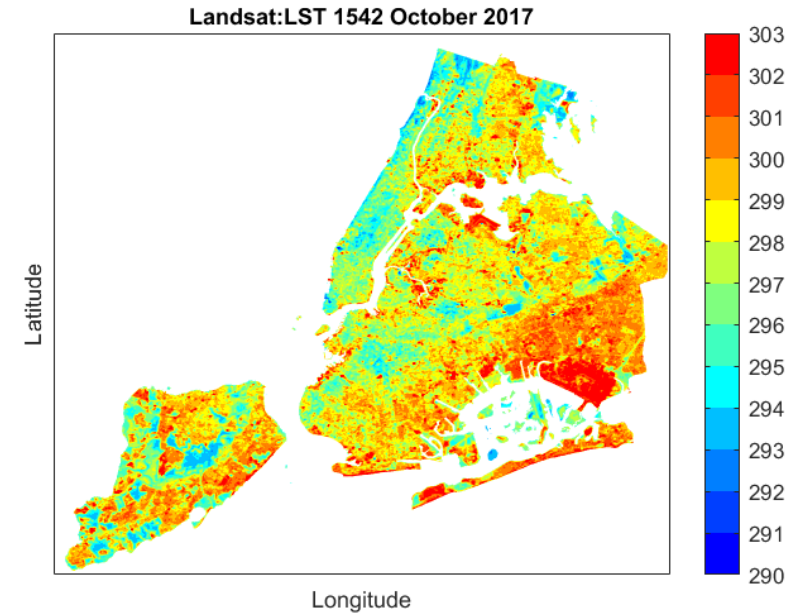Photo courtesy of NASA, depicts temperatures around Providence, RI
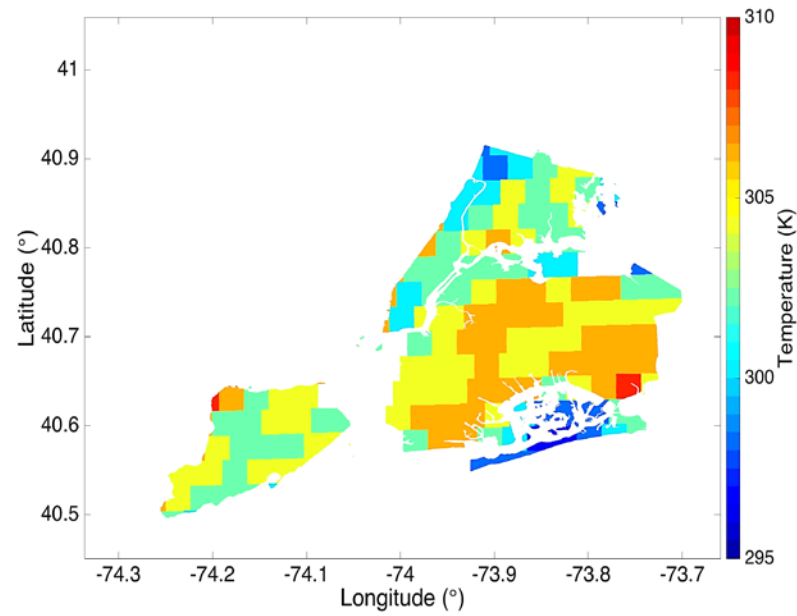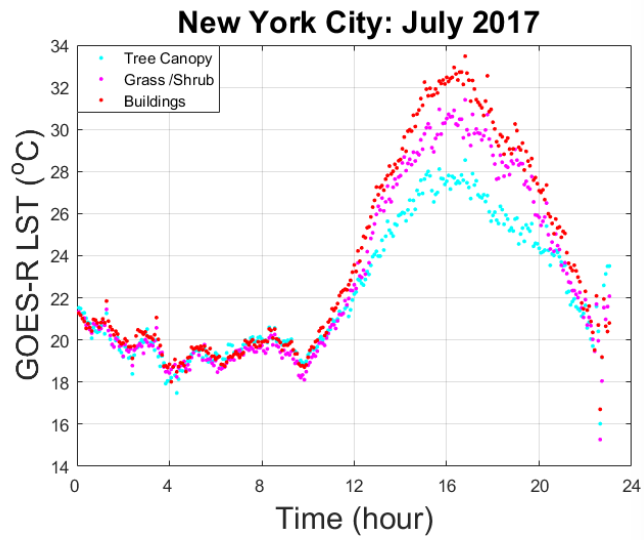
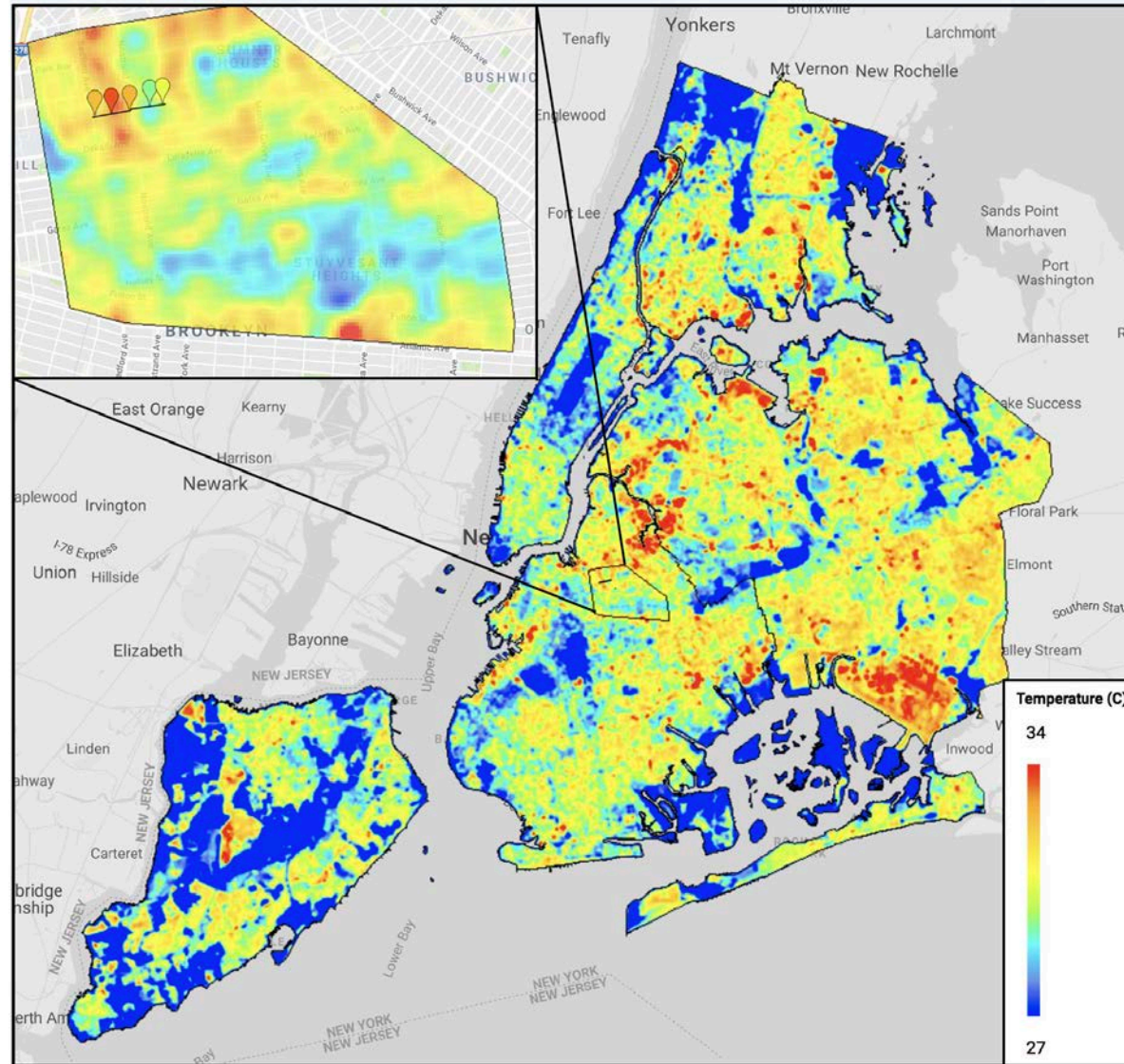# Approximately **4800** satellites are in space!

(Artist's concept showing thousands of satellites and other debris orbiting Earth. Photo Credit: ESA)

Land Surface Temperature Downscaling

CASE STUDY: URBAN HEAT ISLAND, LAND SURFACE TEMPERATURE, AND HEAT IN BEDFORD STUYVESANT, BROOKLYN, NY

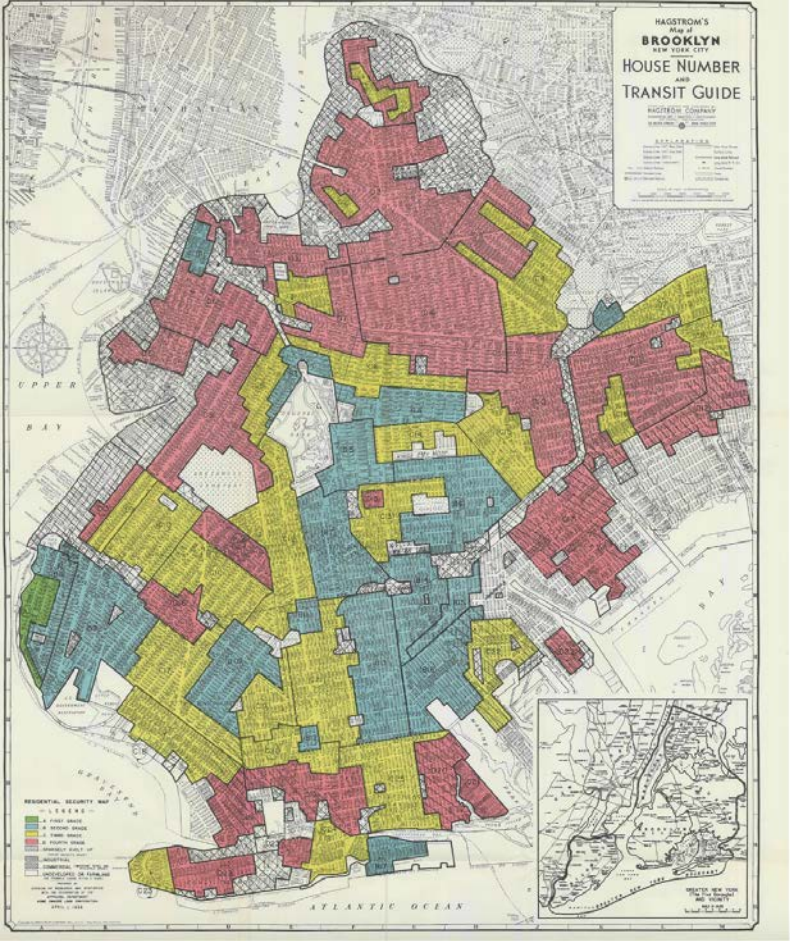# UHI is exacerbated in historically red-lined communities

Figure 1. Map of Brooklyn neighborhoods. Redlined neighborhoods, like Bedford-Stuyvesant, Brooklyn are colored red (NY Times 2021)
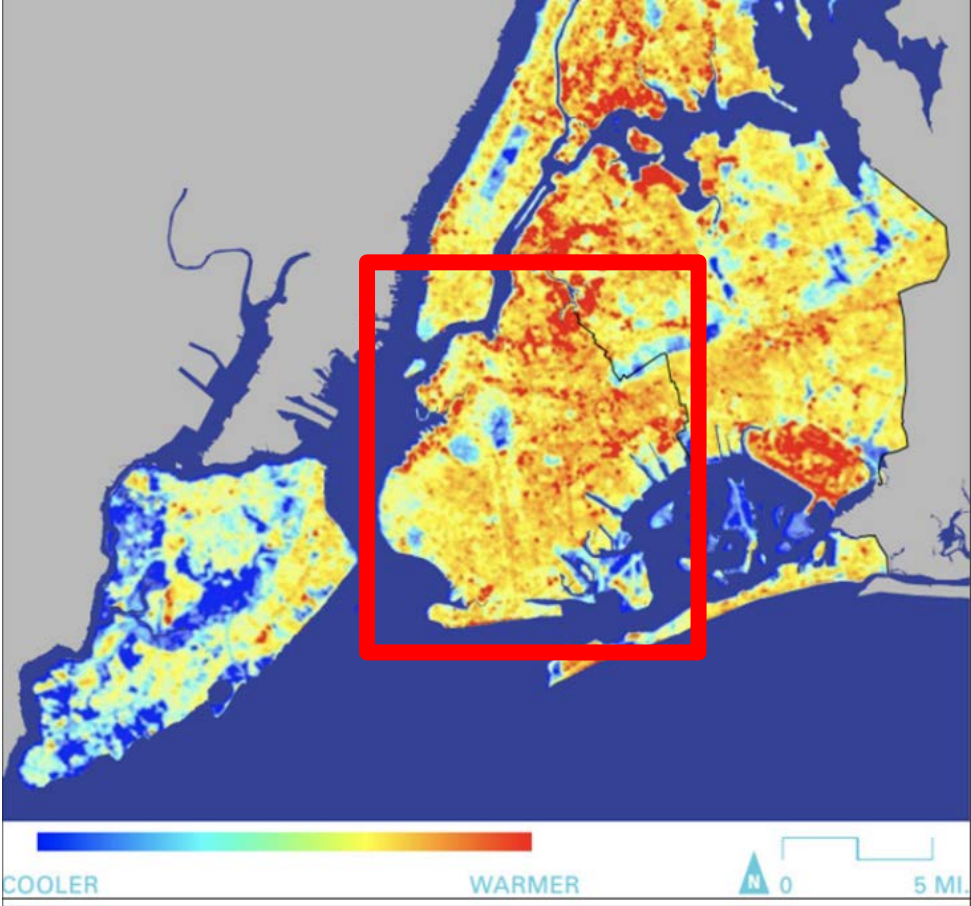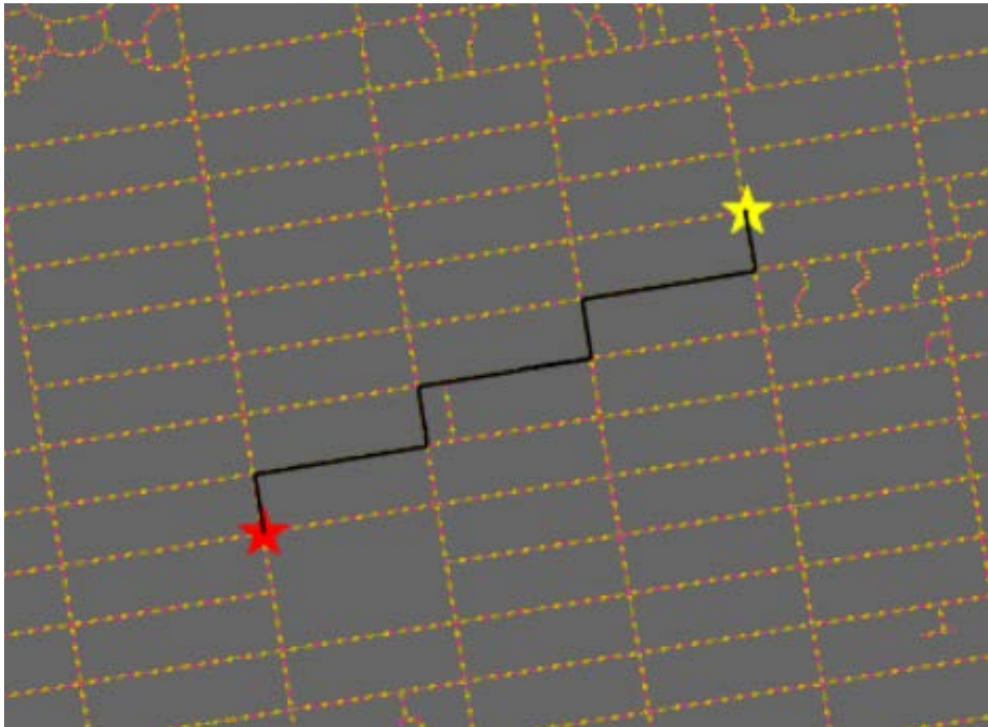

Figure 2. Heat map of New York City from Landsat in 2009 (NYC Cool Neighborhoods Report, 2017)
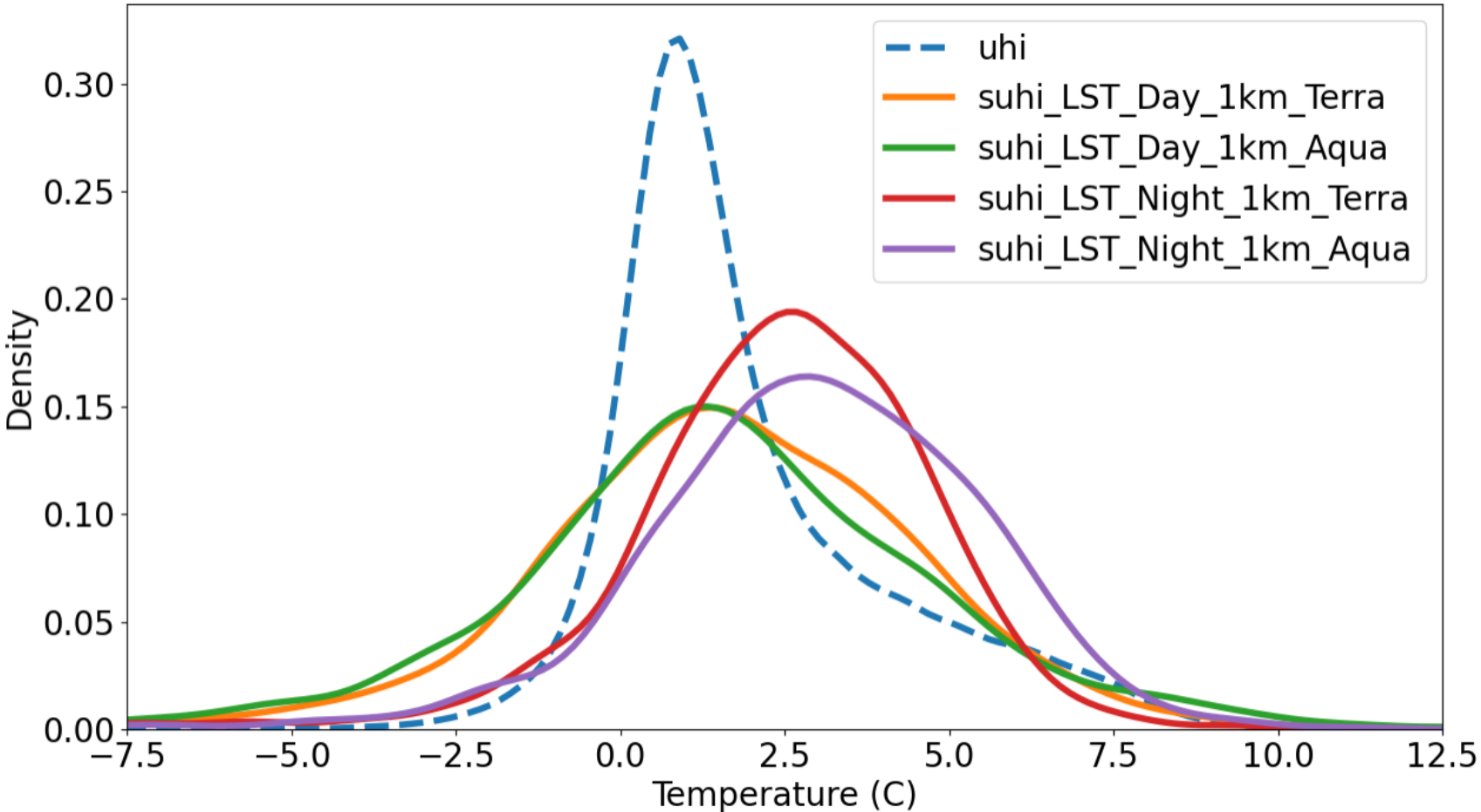
Cool Corridor Routing

Visual Cool Corridor Candidate Estimation

Heuristic Cool Corridor Candidate Estimation

Review of Spring 2023 Research

- ❏ UHI is less variable and most commonly between 0°C and 2°C
- ❏ SUHI is often greater than UHI, especially during the night
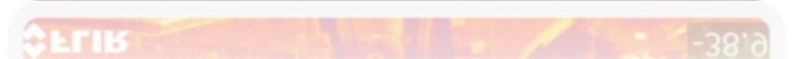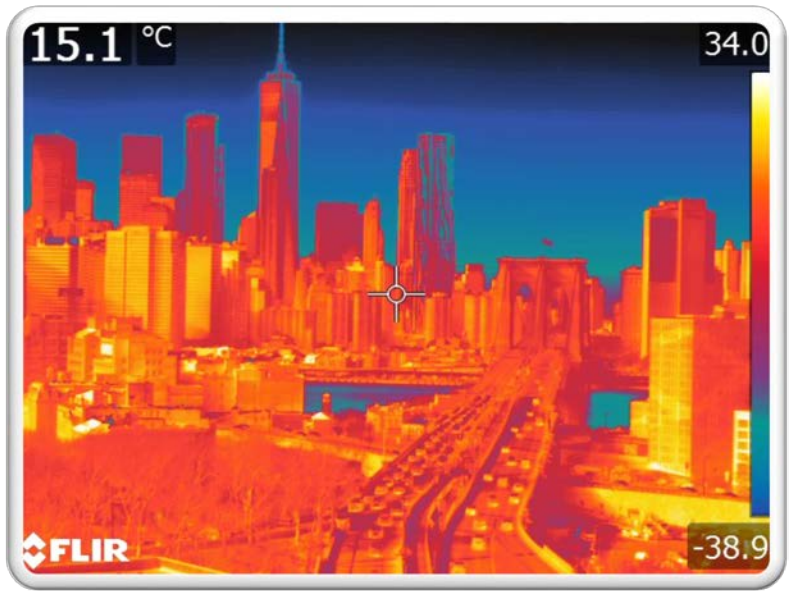- ❏ SUHI shows an urban cooling effect more often than UHI

Link to Final Spring roundtable

Link to Project Plan Google Spreadsheet

Ground Observations

Community Engagement