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**Temperature-Driven Changes to Mobility Patterns in the San Francisco Bay Area**

**Amina Ly**, Frances V Davenport and Noah S Diffenbaugh, Stanford University, Stanford, CA, United States

**Abstract Text:**

Empirical studies exploring the response of human mobility to varying temperature across the United States are often completed under the assumption of relatively stable social and policy environment. Given the behavioral changes associated with shelter-in-place restrictions and guidelines, has there been an impact on the movement patterns in response to extreme heat across the San Francisco Bay Area? To explore this question, we created a highly resolved mobility metric utilizing Safegraph's Neighborhood Patterns data, and combined the results with gridMET temperature data and demographic data from the US census. We then used a binned fixed effects regression model to characterize the mobility response to temperatures across the region. We find that when compared to the two years prior, 2020 saw an overall reduction in movement. In addition, while extremely hot temperatures historically resulted in an increase in mobility between census block groups, in 2020 there were dramatic declines in movement when compared to lower temperatures in the same year. Given these observations, further research may explore the role public indoor spaces previously had in heat mitigation and adaptation strategies that allow for continued activities in extreme temperatures.

**Session Selection:**
GH008. Extreme Heat: Vulnerability and Risk Assessment, Exposure Assessment, and Policy Implications regarding the adverse effect of Extreme Heat on Health, Economy, and Natural Resources

**Submitter's E-mail Address:**
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**Abstract Title:**
Temperature-Driven Changes to Mobility Patterns in the San Francisco Bay Area

**Requested Presentation Type:**
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**Previously Published?:**
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