

Rochester Institute of Technology Hurricane Harvey Research Outreach

Background: Researchers from the Rochester Institute of Technology (RIT) are interested in conducting field research in Houston related to the response and recovery from Hurricane Harvey. Our research is funded by the US National Science Foundation (US NSF).

Who we are: We are an interdisciplinary group of Geographers, Game Developers, Software Engineers, Risk and Critical Infrastructure Engineers, and Architects. Our project seeks to guide undergraduate researchers via a NSF Research Experience for Undergraduates (REU) Site through the development serious games and simulations that can inform the use of Geographic Information Systems (GIS) technology for disaster resilience. We see the opportunity to work in Houston as a key aspect of our research that can inform development of realistic, empirically-validated GIS-based serious games and scenarios and ultimately give back to people who respond to, recovery from and survive disasters.

What we want do: We would like to conduct field work in Houston that centers on two activities, summarized as follows:

1. Mapping Adaptive Capacities: Adaptive capacity is the idea of assets used to adapt to system changes. In disaster response and recovery, adaptive capacities might include physical assets such as shelters used for refuge or social assets such as family members that can provide financial and/or social support to disaster survivors. We would like to conduct interviews with Harvey survivors that investigate questions such as (a) how are survivors in affected Houston neighborhoods coping with displacement?; (b) what are the assets available to survivors for recovery and are any spatial patterns related to recovery apparent?; (c) how have people with disabilities such as the deaf and hard-of-hearing been able to adapt to the impacts from Harvey?



How have the Deaf adapted to Harvey?

2. Mapping Geographic Information Capacity: Geographic Information Capacity (GIC) is the overall ability for a country, region, or community to utilize GIS technology, geographic information, and develop knowledge of geographic information, in all phases of a disaster, and appropriately use that information to make informed decisions. During field visits to Houston, we would like to interview local disaster responders and community members as to how were maps/spatial data being used (or not) before, during, after the disaster and by whom?



How has mapping been used for Harvey?

Why work with us: It is very important that we give back to people who give their valuable time to support our research. We have our own funding for field work in Houston and are only looking for people willing to give us their time to work with us. We can offer the following to people interested in working with us:

Academics: co-publication authorship, collaborative NSF and other proposal development, priority review of undergraduate students interested in applying for our summer NSF REU Site in Rochester, NY.

Government Officials: technical training workshops on GIS technology, non-academic technical reports of our findings.

Community Members: paid responses for taking surveys, technical training workshops on GIS technology and community mapping (including certificates of participation).

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REU Site Website: <https://www.rit.edu/gccis/geoinfosciencecenter/research/nsf-reu>



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