

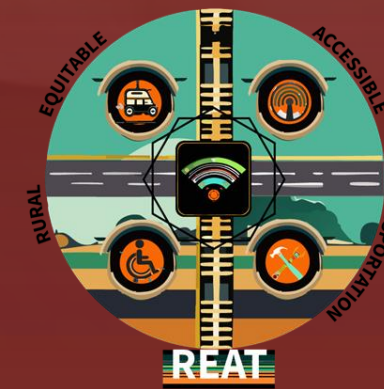
*“Supporting the vision of strong communities”*

# Learning Series for Community Leaders

Quarterly Topic: Rural Health



FAMU-FSU  
College of  
Engineering



**NCRT-CE**

Network for Clinical Research, Training,  
and Community Engagement

# Today's Presentors



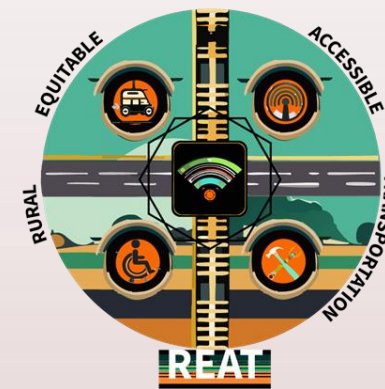
**Dr. Eren Erman Ozguven**

*Associate Professor of Civil &  
Environmental Engineering*  
**FAMU- FSU College of  
Engineering**

# *Creating Multidisciplinary Research Vision and Capacity to Improve Rural Infrastructure and Community*

## *Resilience*

Eren Erman Ozguven  
Associate Professor  
FAMU-FSU College of Engineering





# Resilient Infrastructure and Disaster Response (RIDER) Center



<https://rider.engineer/>

**RIDER's vision is a world in which all communities thrive in the face of hazards.**

Spanning FAMU and FSU, RIDER unites engineers with other disciplines to find solutions that meet the infrastructure and disaster response needs of our communities.

**RIDER's multidisciplinary approach uses living laboratories and combines rigorous data-driven research with community insights.**

**RIDER partners with community leaders, residents, governments, industry, and other researchers.**

## **RIDER by the numbers:**

- 15 in-house faculty + 1 incoming faculty
- More than 50 graduate students
- 8 postdocs & 2 staff
- Over 40 affiliates and members in FAMU & FSU
- More than \$3M in annual research expenditures
- **Connections to City, State and Federal Agencies**
- **Direct Ties with Communities and Non-profits**

## **FSU collaborators:**

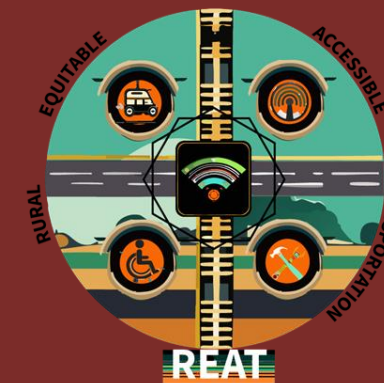
- College of Social Sciences and Public Policy
- College of Social Work
- College of Fine Arts
- College of Communication and Information
- College of Arts and Sciences
- College of Medicine

## **FAMU collaborators:**

- College of Agriculture and Food Sciences
- School of Architecture and Engineering Technology
- School of the Environment
- Center for Water Resources
- Center for Coastal & Marine Ecosystems



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College of  
Engineering

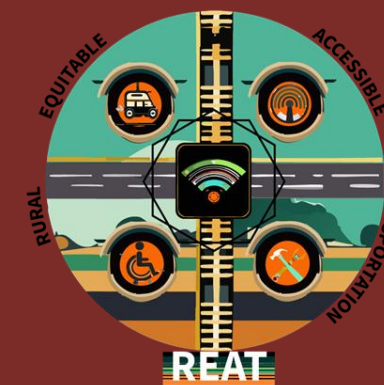




# Resilient Infrastructure and Disaster Response (RIDER) Center

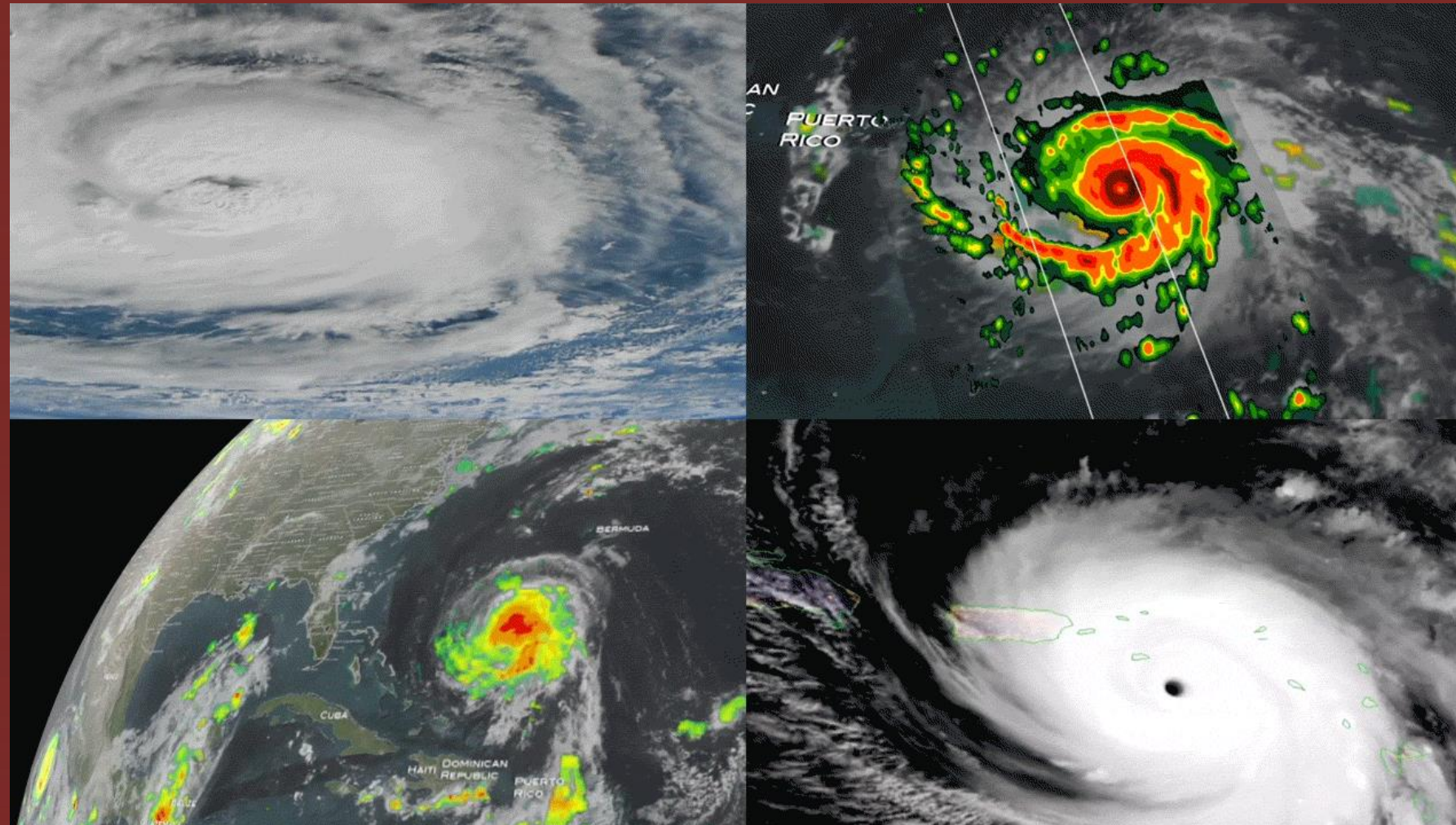


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# Hurricanes

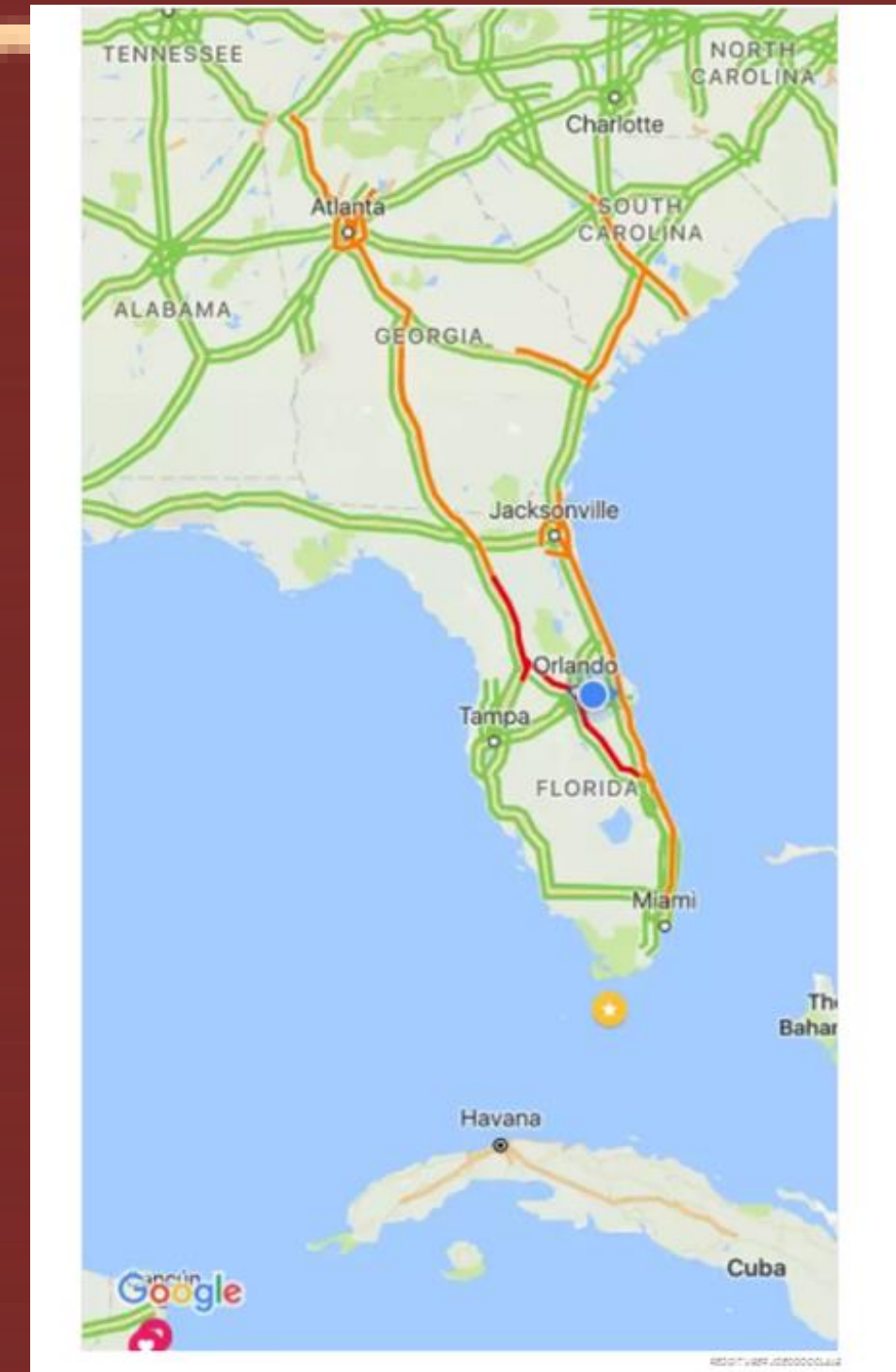


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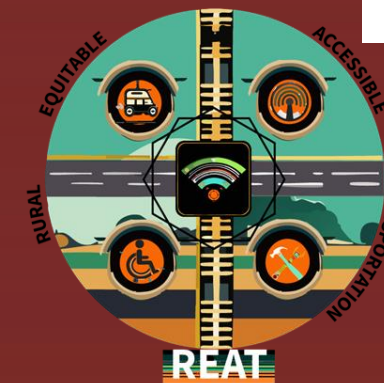




# Hurricanes, Infrastructure and Communities

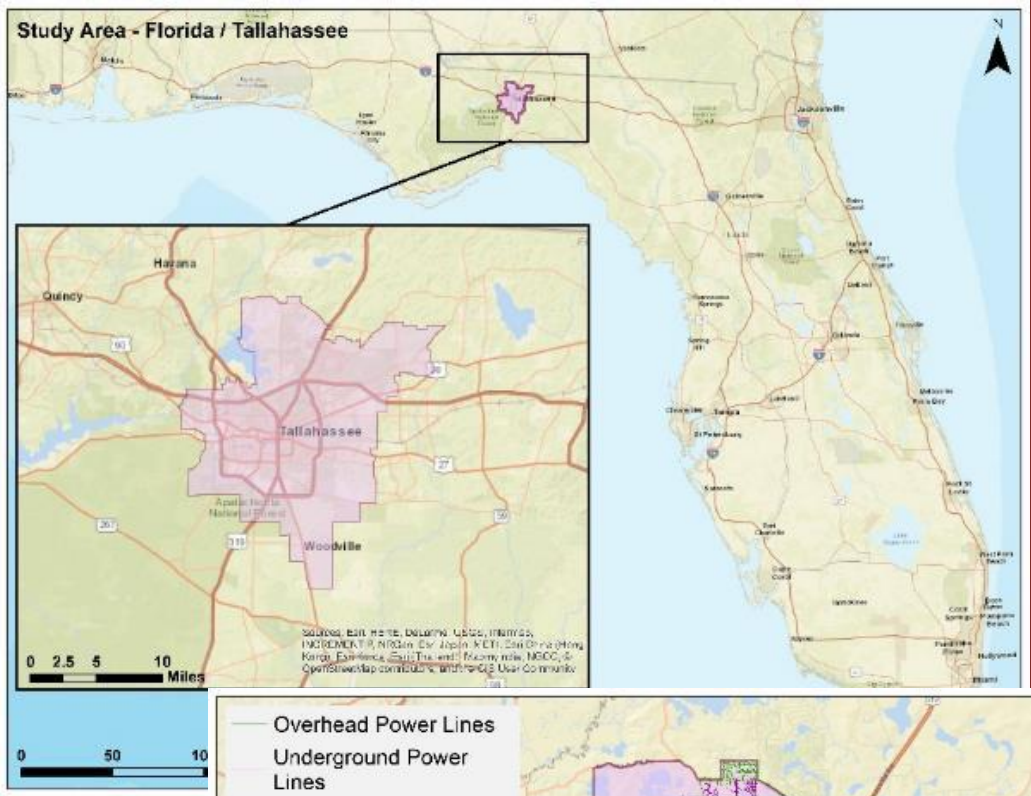


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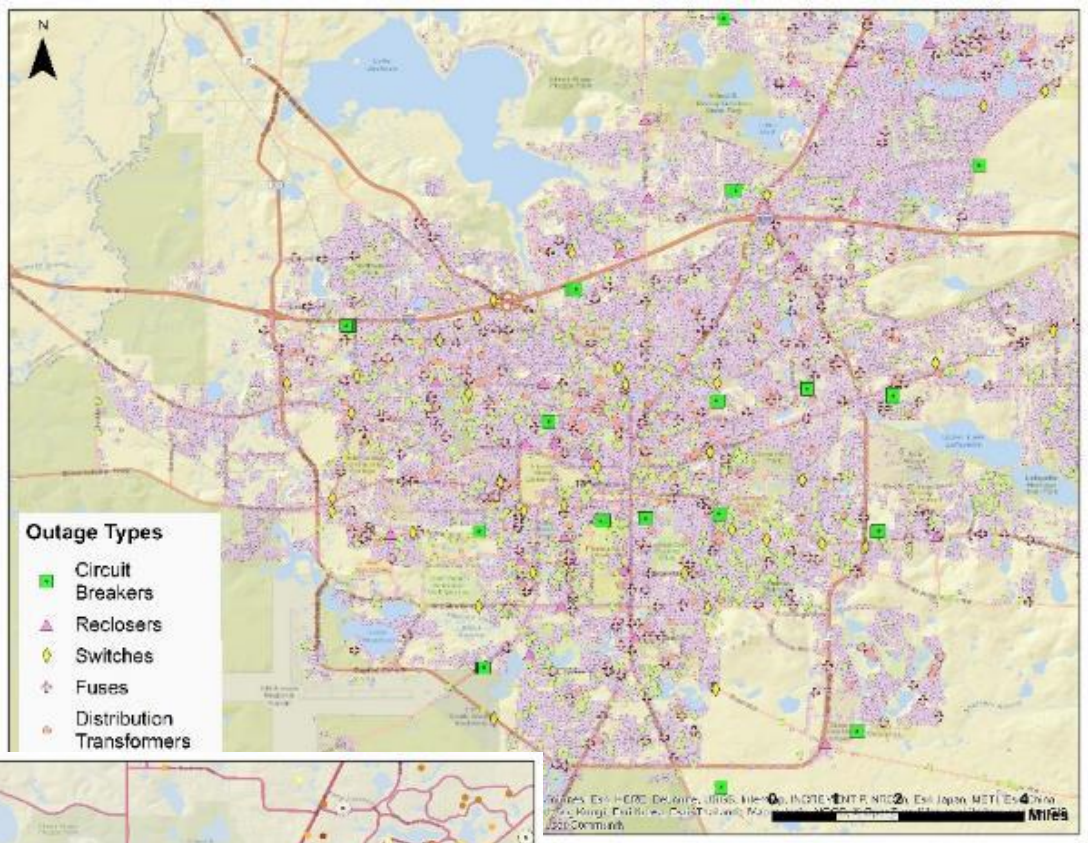




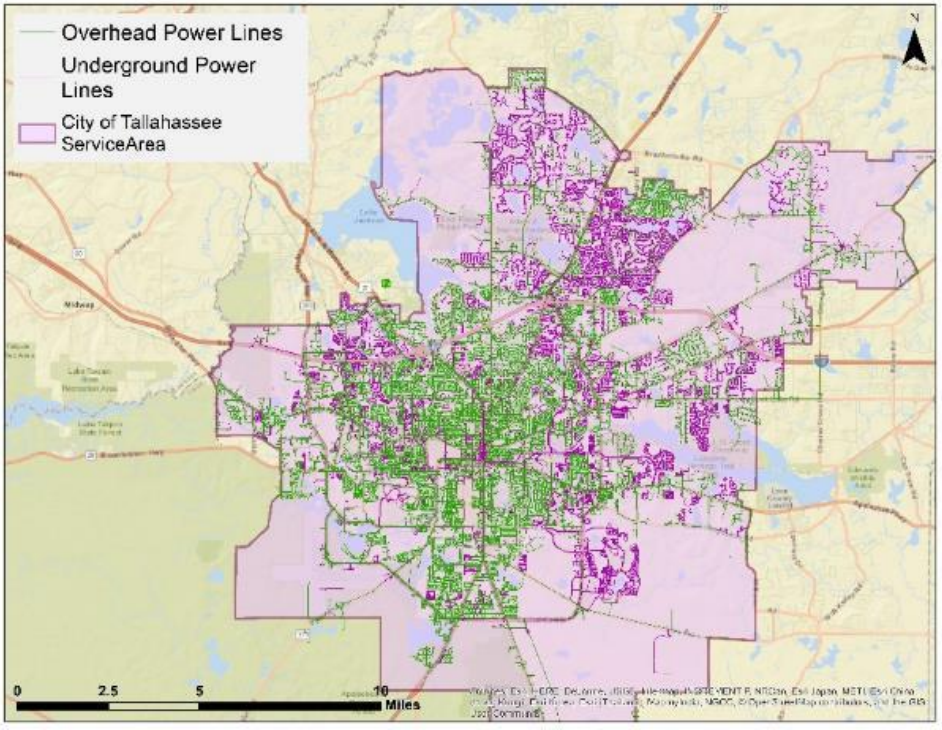
# Looking at the Technical Data: Hurricane Hermine



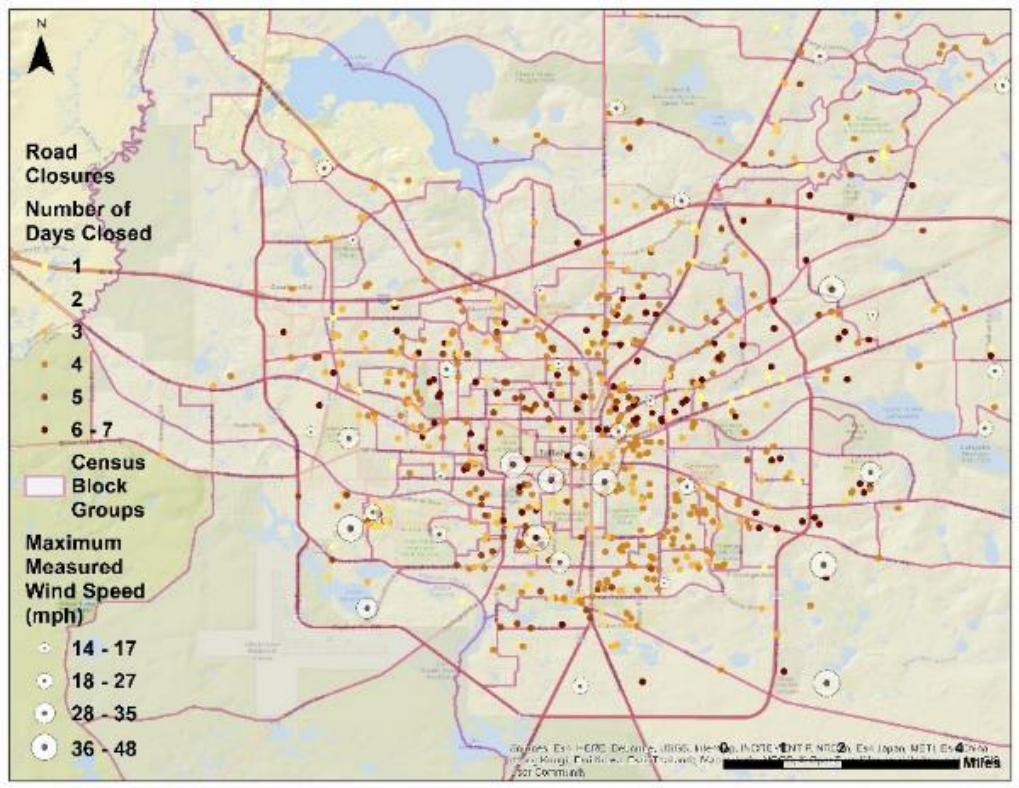
Study Area



Power Outages



Power Infrastructure



Road Closures



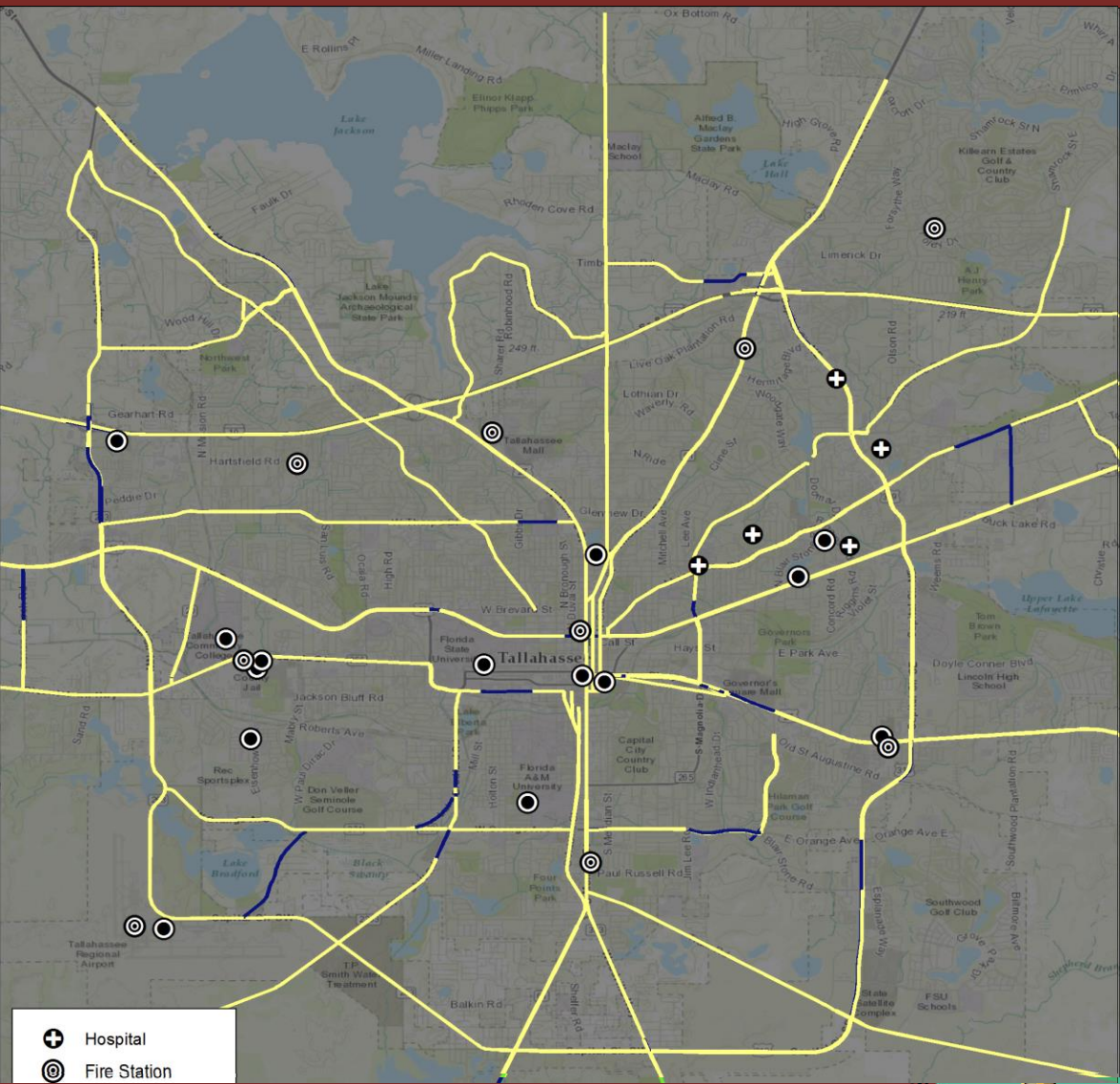
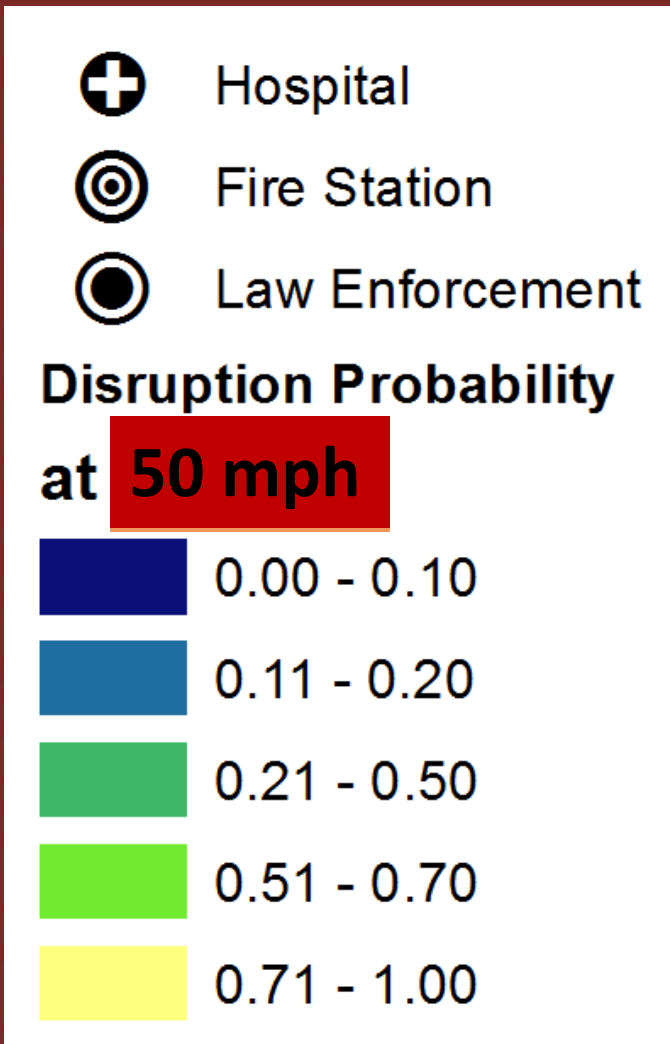
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# Looking at the Technical Data: Hurricane Hermine

## Hurricane Hermine (2016)



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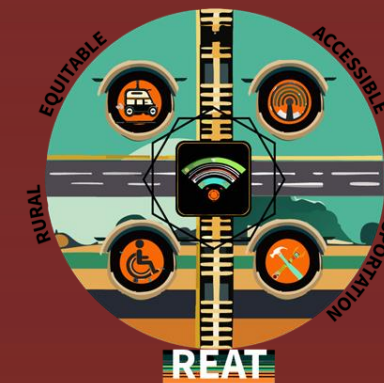




# Looking at the Technical Data

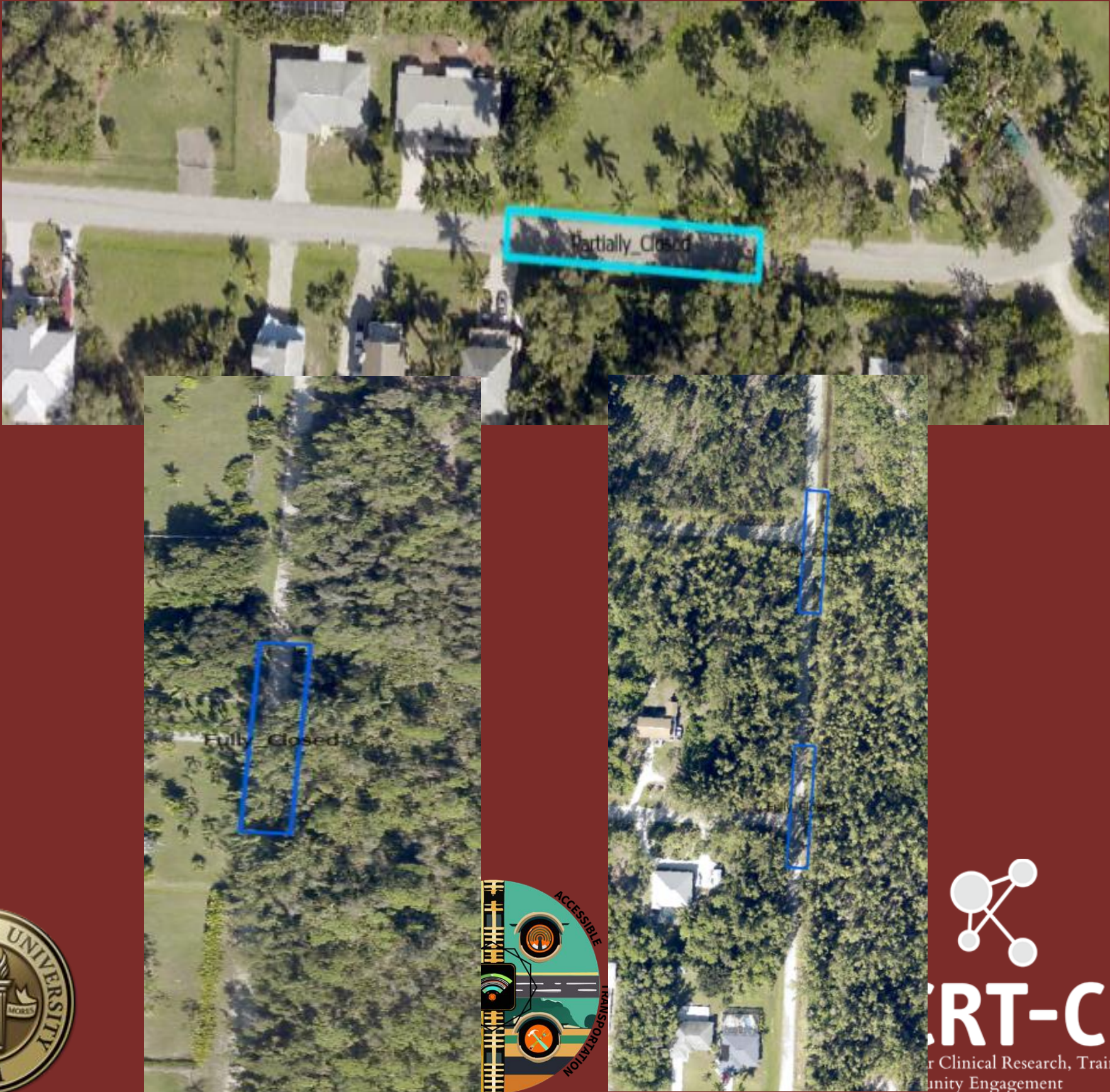
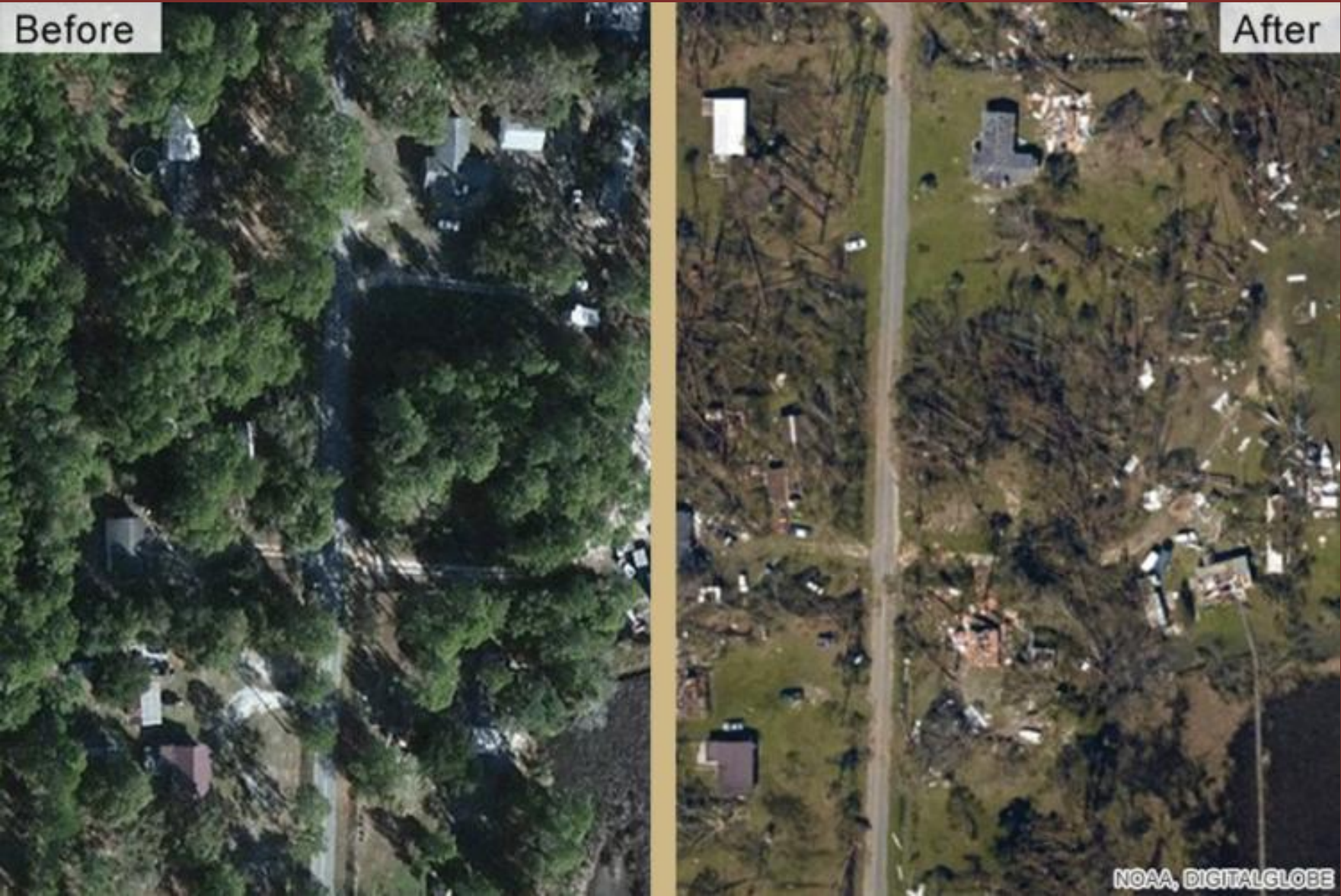


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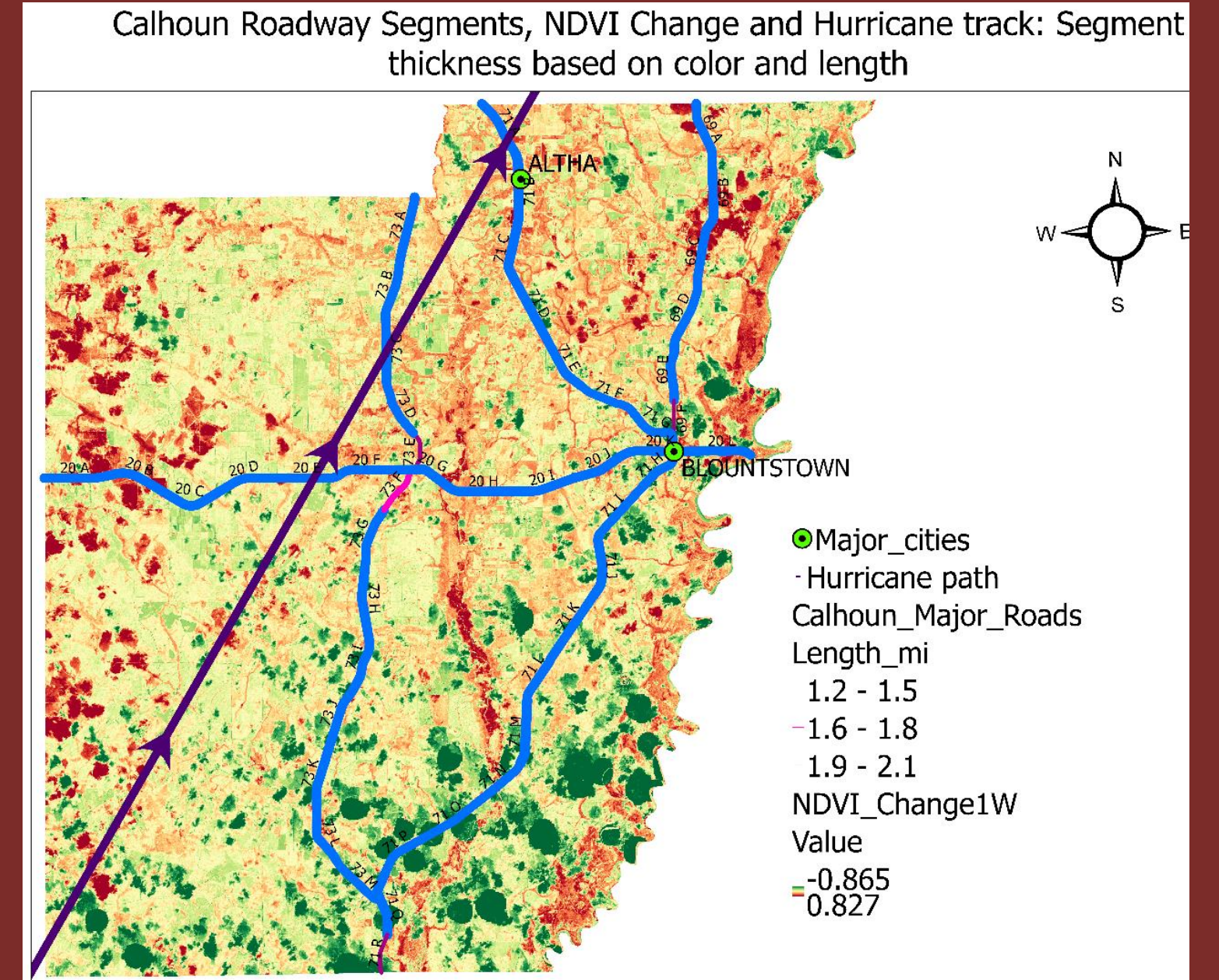
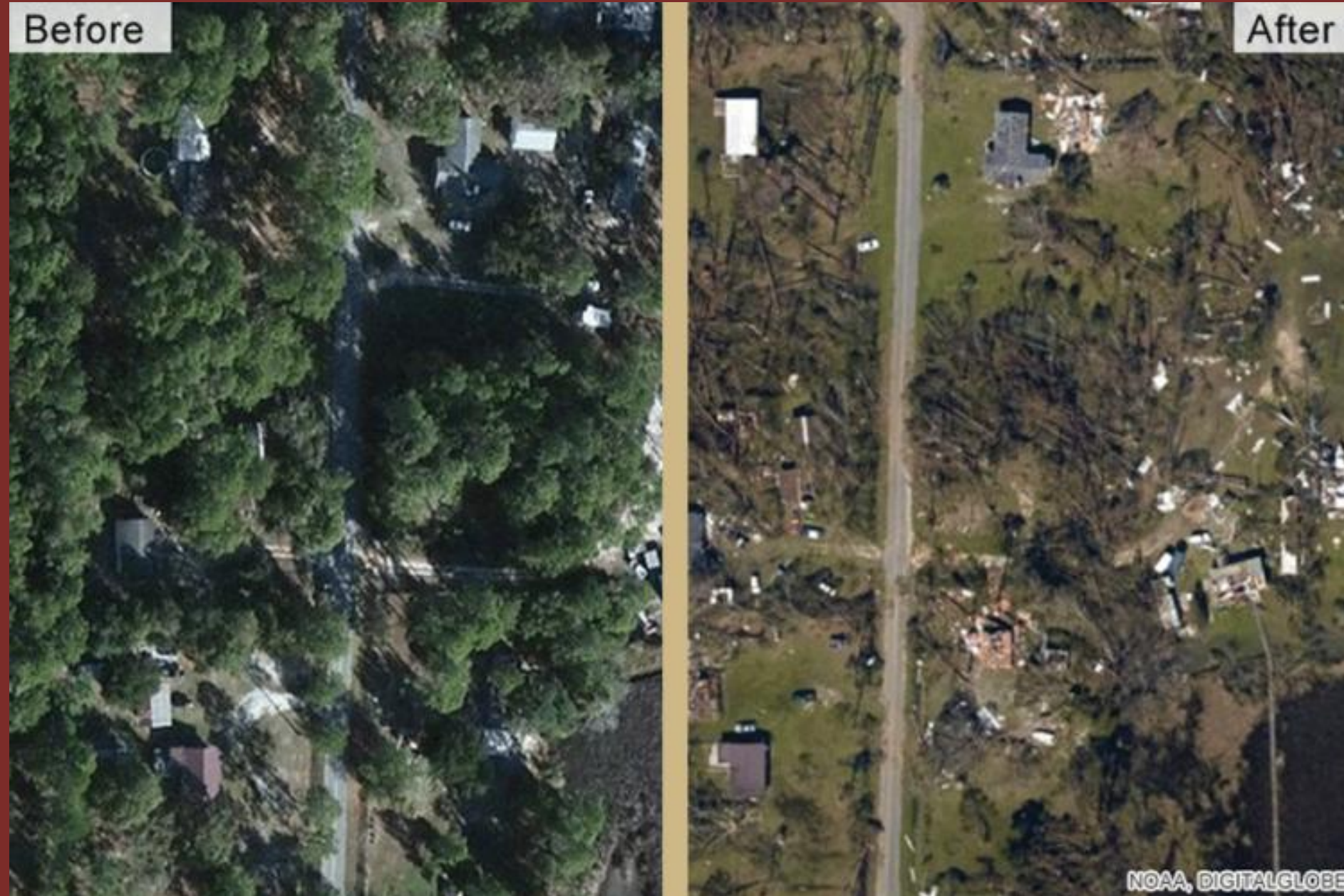


# Looking at the Technical Data: Hurricane Ian

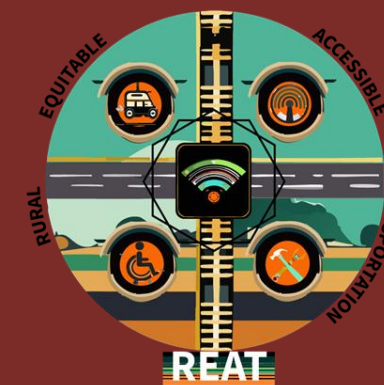




# Looking at the Technical Data: Hurricane Michael



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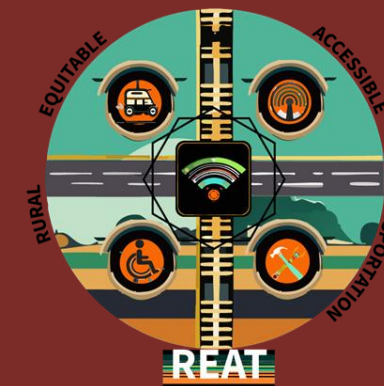




# Looking at the Technical Data

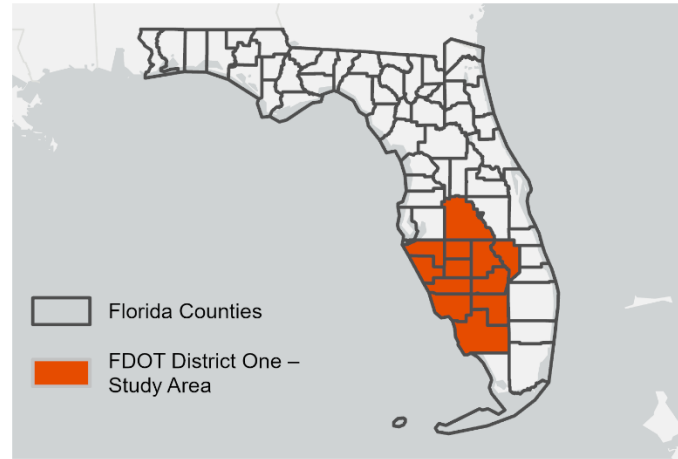


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# Looking at the Technical Data: Hurricane Irma

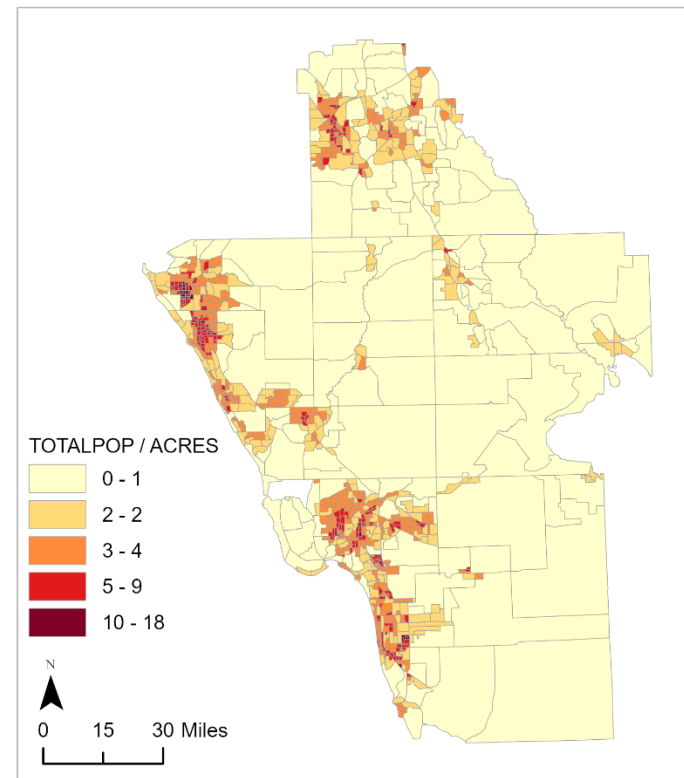


## Research Dataset for the Case Study of Hurricane Irma (2017)

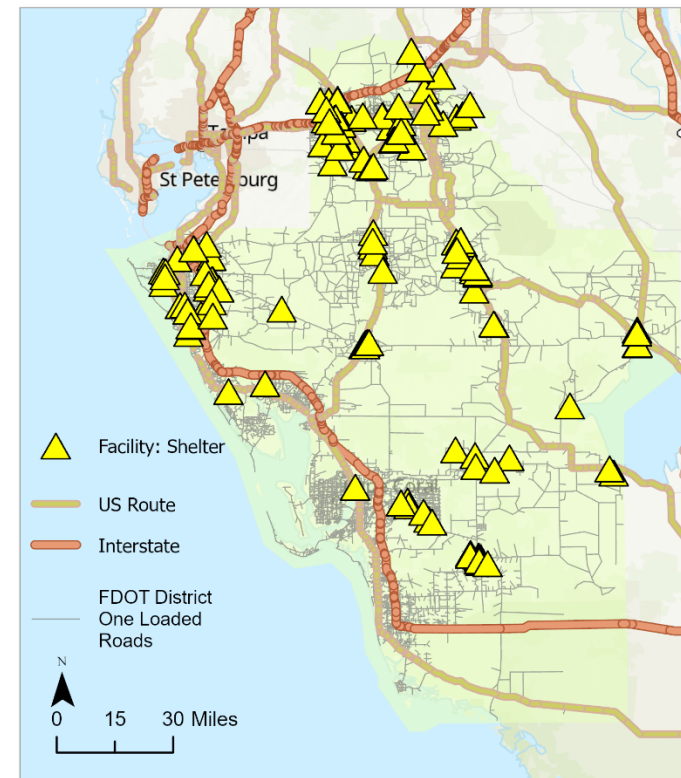
Study Area: Florida District One (FDOT)  
Dataset: 2020 Census Tract (U.S. Census Bureau);  
Florida District One Road Planning Network (FDOT);  
10 Percentile Probabilistic Storm Surge Forecast (NOAA National Hurricane Center)



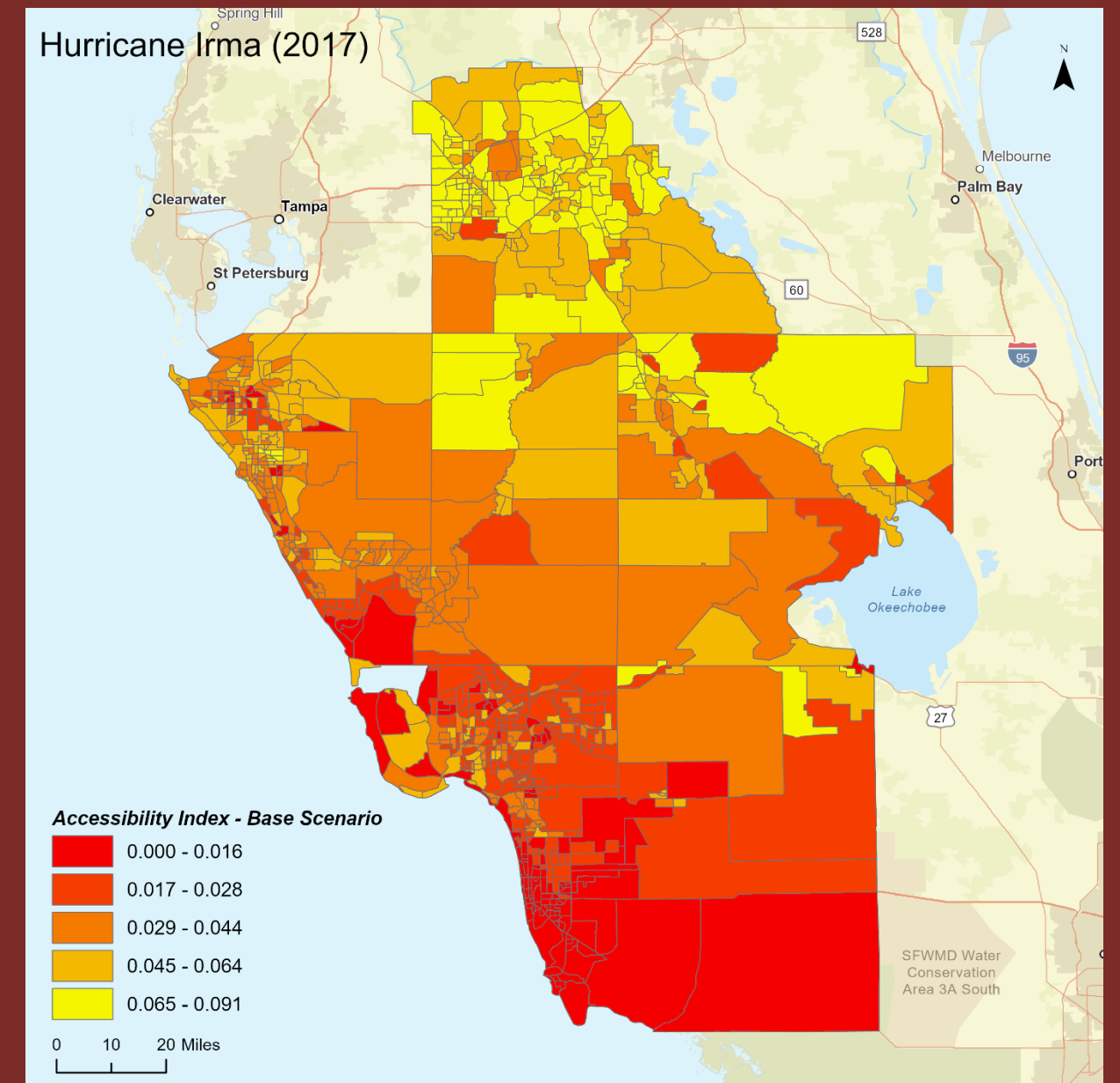
Counties in FDOT District One



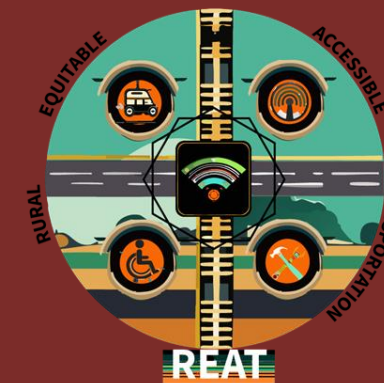
Population Density in FDOT District One



Emergency Facility Location and Transportation Network



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# Hurricanes, Infrastructure and Communities



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# Multi-Disciplinary Grants: NSF Research Coordination Network



Dr. Eren  
Ozguven



Dr. Tian  
Tang



Dr. Tarek  
Abichou



Ellen  
Piekalkiewicz

## RESEARCH IN REAL TIME: NATURAL DISASTERS

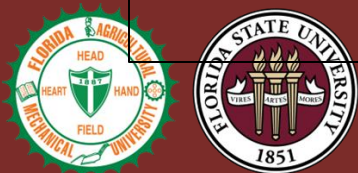


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**FAMU-FSU College of Engineering: Resilient Infrastructure & Disaster Response Center, College of Social Sciences & Public Policy: Askew School of Public Administration & Policy, & College of Social Work: Center for the Study and Promotion of Communities, Families, & Children**

**Funded by National Science Foundation, our “Resilient Rural Infrastructure” Research Coordination Network (NSF) grant provided us the opportunity to conduct workshops and webinars specifically focusing on communities and stakeholders. Includes FAMU-FSU College of Engineering, College of Social Work, and College of Social Sciences and Public Policy.**



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# Multi-Disciplinary Grants: NSF Research Coordination Network

## NATURAL DISASTERS: BRIDGING THE RESILIENCE DIVIDE RESEARCH STUDY



College of Engineering: Resilient Infrastructure & Disaster Response Center, College of Social Sciences & Public Policy: Askew School of Public Administration & Policy, & College of Social Work: Center for the Study & Promotion of Communities, Families & Children



### WHAT IS THE PURPOSE?

To understand the challenges & needs Panhandle communities face within different populations to remove barriers for individuals, systems, & infrastructure to be resilient to damage & changes from natural disasters



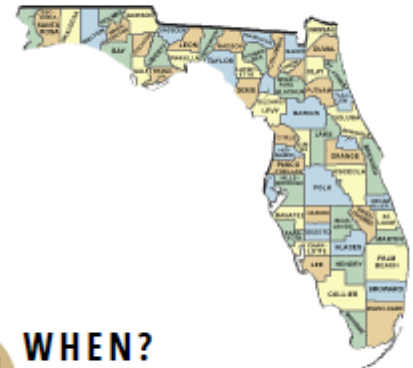
### WHY?

- To work towards solutions impacting people, their communities, & future of their lives
- To develop strategies & policies that can help planning, capacity building, & decisions for community leaders & local officials in preparing for & responding to the impact of disasters



### WHERE?

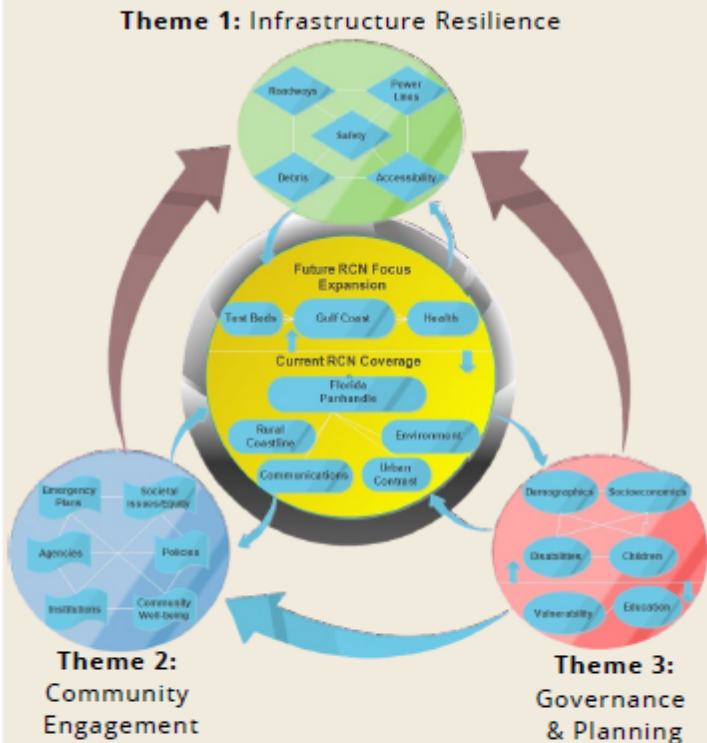
- Florida Panhandle
- Gulf of Mexico Coast



### WHEN?

- Next three years (2020 - 2023)

### THEMATIC MAP OF ACTIVITIES



JOIN US IN BUILDING A STRONGER, RESILIENT COMMUNITY  
FOR MORE INFORMATION, PLEASE CONTACT: Eren Ozguven at [eozen@eng.famu.fsu.edu](mailto:eozen@eng.famu.fsu.edu)

## SAVE THE DATE

### Bridging Resilience Divides: Technology, Transportation, and Communications

April 14-16, 2022

Turnbull Conference Center  
(or via Hybrid Option)

Visit the following website  
for more information:  
<https://rider.eng.famu.fsu.edu/bridging-divide-workshop>

### Keynote Speaker:



Kevin Guthrie  
Director, Florida  
Emergency  
Management

Featuring various  
speakers in breakout  
sessions.



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College of  
Engineering





# Multi-Disciplinary Grants: NSF Research Coordination Network

## RESEARCH IN REAL TIME: COVID-19 PANDEMIC & NATURAL DISASTERS



College of Engineering: Resilient Infrastructure & Disaster Response Center, College of Social Sciences & Public Policy: Askew School of Public Administration & Policy, & College of Social Work: Center for the Study & Promotion of Communities, Families & Children

NOVEMBER 9, 2020 | 9:30AM-12PM

A VIRTUAL WORKSHOP: [HTTPS://FSU-HIPAA.ZOOM.US/J/96849384597](https://fsu-hipaa.zoom.us/j/96849384597)



**About:** This workshop is a part of the National Science Foundation (NSF) Research Coordination Network (RCN) awarded project (NSF CoPe RCN: Resilient Rural Infrastructure (ICER-1940319)). This RCN explores how to achieve adaptive resilience for Gulf coastal communities, which has the potential to extend to infrastructure resilience of other rural communities and aims to foster a new understanding of the complex interactions among the key elements of community resilience in rural coastline areas. The RCN aims to bring together researchers from different fields, who otherwise would not be able to network together, to form working groups.

**Title:** NSF RCN Grant: Natural Disasters: Bridging the Resilience Divide Research Study



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FLORIDA STATE UNIVERSITY  
CENTER FOR THE STUDY AND PROMOTION  
OF COMMUNITIES, FAMILIES AND CHILDREN

## Children's Mental Health in the Aftermath of Disasters

### Webinar and Q&A

February 18th, 2022  
10:00 AM - 11:30 am EST

Register at: <https://fla.st/csw-register-webinar>



This webinar highlights potential short- and long-term disaster effects on a child's functioning, development and health. The webinar provides information on adjustment difficulties, how to promote effective coping strategies and any associated bereavement & secondary stresses. It also highlights the need for government to include the mental health needs of children & their caregivers in disaster planning. After the webinar, there will be a Q&A with the presenters featured below.



**Ellen Piekalkiewicz**  
Director, CFC Center



**Jim Clark**  
Provost & Executive  
Vice President for  
Academic Affairs,  
Florida State  
University



**Tisha Holmes**  
Assistant Professor,  
Department of Urban &  
Regional Planning



**Savannah Collier**  
Program Manager, CFC Center



**Tai Cole**  
Program Manager, CFC Center

Contact: Savannah Collier ([ssmith24@fsu.edu](mailto:ssmith24@fsu.edu))



FLORIDA STATE UNIVERSITY  
COLLEGE OF SOCIAL SCIENCES & PUBLIC POLICY



## SAVING THE PLANET WITH INDIGENOUS KNOWLEDGE



FAMU-FSU College of Engineering: Resilient Infrastructure & Disaster Response Center, College of Social Work: Stoops Center for the Study and Promotion of Communities, Families, & Children, and the Native American & Indigenous Studies Center

**WHEN:** APRIL 12TH, 2024 | 9:30AM-1:30PM

**WHERE:** RESILIENT INFRASTRUCTURE AND DISASTER  
RESPONSE (RIDER) CENTER CONFERENCE ROOM  
1753 WEST PAUL DIRAC DR,  
TALLAHASSEE, FL 32310

**REGISTER:** [bit.ly/NSFWorkshopRegistration](https://bit.ly/NSFWorkshopRegistration)

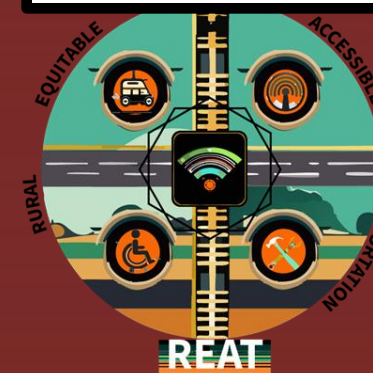
Visit the link above or scan the QR  
code to reserve your spot →



This workshop is **FREE**. Registration required. Attendees will receive lunch and a copy of Dr. Daniel Wildcat's book *Red Alert!*



Dr. Wildcat is the Principle Investigator of the largest National Science Foundation award ever granted to a tribal college or university, a \$20 million, five-year award to fund an Indigenous science hub project. The project will create a hub called "Rising Voices, Changing Coasts: The National Indigenous and Earth Sciences Convergence Hub."





# Multi-Disciplinary Grants: NSF Rural Resiliency Hubs

December 6, 2021

BY: KELSEY KLOPFENSTEIN | PUBLISHED: DECEMBER 2, 2021

## FSU researchers earn NSF grant to transform libraries into 'Rural Resiliency Hubs'

Originally Published at **Florida State University News**

The increasing frequency of natural catastrophes and their uneven impact on vulnerable populations calls for the development of disaster Resiliency Hubs. Now, through a grant from the National Science Foundation, a multidisciplinary team of Florida State University researchers is looking to utilize a commonly underrecognized space in disaster response: public libraries.

Focusing on Calhoun County, Florida, a region that remains devastated by 2018's Hurricane Michael, the researchers will collaborate with public librarians and community members to establish a transferable design and assessment process that will enable rural public libraries to be Resiliency Hubs.

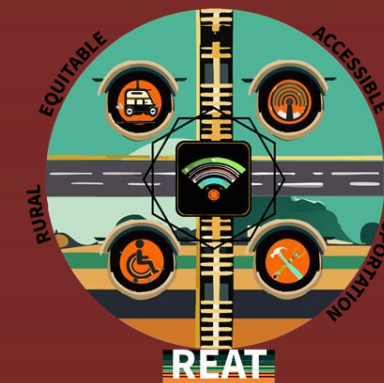


Clockwise from top left: Marcia A. Mardis, Eren Erman Ozguven, Scott M. Pickett, Jessica De Leon, Faye R. Jones, Ellen Piekalkiewicz, John Mathias and Mark Horner.

**Working directly with a rural county hit hard by Hurricane Michael in 2018, namely Calhoun County, towards building resilience hubs. Includes College of Engineering, College of Communications and Information, College of Social Sciences and Public Policy, College of Social Work, and College of Medicine.**



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College of  
Engineering



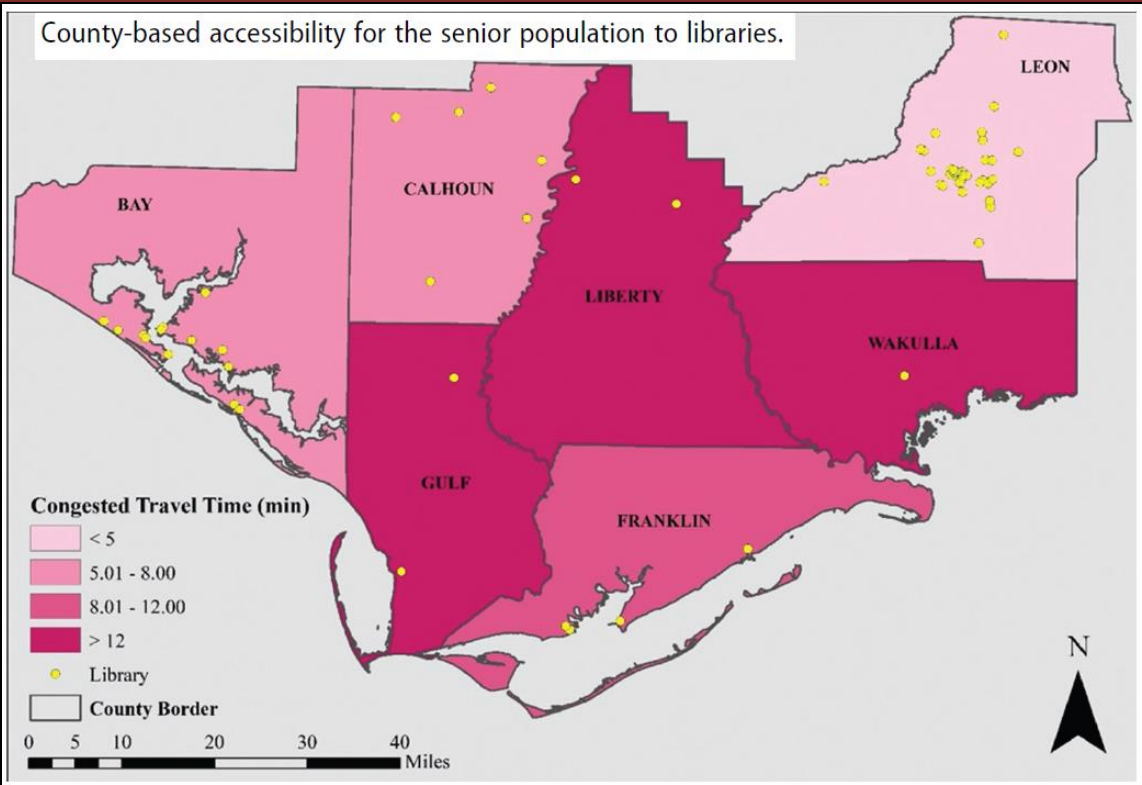


# Multi-Disciplinary Grants: NSF Rural Resiliency Hubs

Many Florida public librarians are classified as essential workers, obligated to serve their communities in a variety of roles during disasters. However, this important work is often an unrecognized, but critical, element of connecting services and resources to citizens.



Mossy Pond, a Calhoun County (Florida) Public Libraries Branch built as a hurricane shelter



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# Multi-Disciplinary Grants: NSF Hurricane-Pandemics

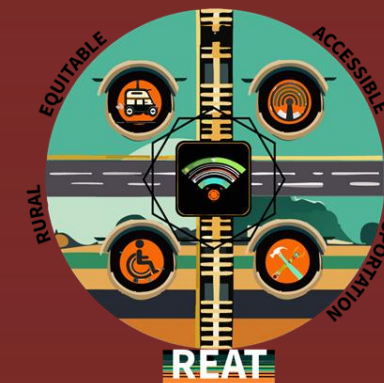
## Multidisciplinary researchers get National Science Foundation grant for concurring pandemic and hurricane shelter study



Our focus in this National Science Foundation-funded project is to look into co-occurring disasters (i.e., pandemics and hurricanes) and how they impact the infrastructure and community resilience. Includes College of Engineering, and College of Social Work.



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College of  
Engineering





# Multi-Disciplinary Grants: NSF Hurricane-Pandemics

Surveys for Emergency Managers and Social Workers and Stakeholder Focus

## Workgroups

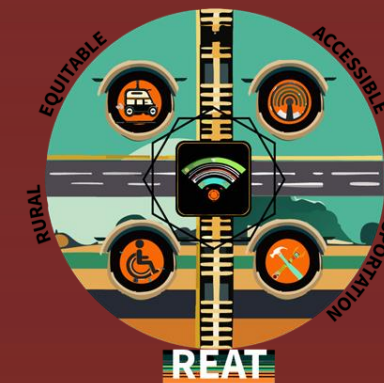
- 15-20 governmental and nongovernmental community stakeholders in the Big Bend region
  - FDOT, Leon County, Second Harvest of Big Bend, NOAA, Capital Area Community Action Agency , Elder Care Services, DISC Village
- 4 stakeholder meetings and 2 pilot surveys (7 EM, 7 SW)



What do you feel causes these population(s) to be underserved?



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College of  
Engineering





# Multi-Disciplinary Grants: UF-FSU CTSA Pilot Project

College of Engineering	<ul style="list-style-type: none"><li>Eren Erman Ozguven</li></ul>
College of Social Work	<ul style="list-style-type: none"><li>Ellen Piekalkiewicz</li><li>John Mathias</li><li>Savannah Smith</li></ul>
College of Social Sciences	<ul style="list-style-type: none"><li>Mark Horner</li><li>Tisha Holmes</li><li>Dennis Smith</li><li>Billie Ventimiglia</li></ul>
College of Medicine	<ul style="list-style-type: none"><li>Jessica DeLeon</li><li>Scott Pickett</li></ul>
College of Communication & Information	<ul style="list-style-type: none"><li>Marcia Mardis</li><li>Faye R. Jones</li></ul>
College of Arts & Sciences	<ul style="list-style-type: none"><li>Choeeta Chakrabarti</li></ul>
College of Fine Arts	<ul style="list-style-type: none"><li>Holly Hannessian</li></ul>

## RESEARCH TEAM

*Each participating partner brings a unique perspective for disaster resilience and has actively involved relevant networks that they will bring to this project including a network of federal, state and local relief agencies, city governments, and non-profit organizations.*



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College of  
Engineering





# Multi-Disciplinary Grants: UF-FSU CTSA Pilot Project

## Study Aim

The aim of this study was to understand the multilevel factors that foster disaster resiliency for older adults in rural communities, with a focus on communication needs and challenges.

## Methods

**Design:** Two phases—1. community-based participatory research with community stakeholders and community members to design phase 2, i.e., community-engaged exploration of the communication needs, challenges and recommendations of older adults in rural communities

**Data Collection:** Semi-structured focus groups and individual interviews and demographic surveys.

**Theoretical Model:** Socioecological Model

**Analysis:** Qualitative analysis of semi-structured focus groups and individual interviews and descriptive statistical analysis of demographic surveys.

## Participants

African American/Black women over age 65 residing in Gadsden County, Florida (N = 32)

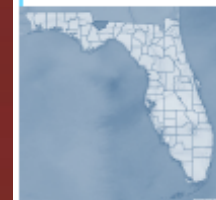
Age: Mean age 73.78 yrs.; SD=7.62 yrs.

Employment: 90.6% retired

Education: 56.3% high school graduates or some college

Marital status: 75.1% unmarried (single, divorced, separated or widowed)

## Site: Gadsden County



- Gadsden County is the only majority African American county in Florida (54.9%)
- The majority of county's population, 65.4%, lives in a low population density area
- In 2022, 26.0% of residents were living in poverty (Florida = 12.7%)
- 20.1% of the County's population are over age 65 (Florida = 21.6%)
- Gadsden County is ranked among the least healthy counties in Florida
- 34.8% of those over 65 describe their health as "fair" or "poor"



Participants provided insights to improve disaster-related communication for older rural adults.

## Conclusions

Continued community engagement was identified as a strategy to address gaps, leverage existing community knowledge and strengths, and improve disaster-related communication across the lifespan.

Community-engaged research can guide multilevel interventions that address the unique communication needs of older rural adults, thereby reducing their vulnerability to disasters.



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# Multi-Disciplinary Grants: USDOT REAT Center



<https://reat-famu-fsu.webflow.io/>

## FAMU Secures \$10 million from the USDOT for Transportation Research

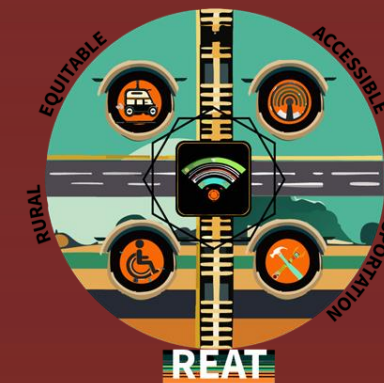
April 13, 2023 | *Andrew Skerritt*



Our focus in this recently funded Tier 1 USDOT University Transportation Center, namely Rural Equitable and Accessible Transportation (REAT) Center, is providing equitable and accessible transportation in rural areas in the entire U.S. Including universities from Florida, Washington, Ohio, and New York, we are dedicated to community outreach, workforce development, and technology transfer while conducting our research.



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Engineering



**NCRT-CE**  
Network for Clinical Research, Training,  
and Community Engagement



# Multi-Disciplinary Grants: USDOT REAT Center

## FIRST ANNUAL UTC CONFERENCE

RURAL EQUITABLE AND ACCESSIBLE TRANSPORTATION CENTER  
RESILIENT INFRASTRUCTURE AND DISASTER RESPONSE CENTER

IMPROVING MOBILITY OF PEOPLE AND GOODS



April 18, 2024 | 8 AM-2 PM

FAMU Grand Ballroom

April 19, 2024 | 8 AM-2 PM

FSU Research Foundation Building A



### ABOUT US

#### WHO WE ARE

The REAT Center is motivated by strategic thinking and planning of rural transportation in the United States.

The REAT Center is a Tier-1 University Transportation Center consortium. The lead institution is Florida A&M University with Florida State University, Tallahassee Community College, Cleveland State University, Stony Brook University and University of Washington Tacoma.

### OUR

#### PURPOSE

The purpose of the REAT Center is to be the go-to resource for researchers and practitioners seeking implementable solutions related to transportation equity and accessibility, particularly in rural areas.

### OUR

#### VISION AND MISSION

Our mission is to establish a record of accomplishment with transformative projects that advance research, inform policymaking, and develop education and outreach programs. It is our hope that these efforts will align with the U.S. DOT Strategic Plan goals of Equity, Safety, Economic Strength, Global Competitiveness, and Transformation.

### THRUSTS

#### ACCESS & EQUITY

We are committed to improving transportation access to rural communities through research and project initiatives.

#### WORKFORCE DEVELOPMENT

We are dedicated to educating and equipping future transportation professionals with knowledge how to tackle transportation challenges.

#### RESILIENT TRANSPORTATION

We are determined to answering the resilience transportation gap for rural communities through planning and research.

SCAN TO  
REGISTER OR  
CLICK HERE



LEAD UTC CONTACT:  
REN MOSES, PH.D., PE

(850) 410-6191

moses@eng.famu.fsu.edu

<https://reat-famu-fsu.webflow.io>

@reat\_utc

@reatcenter

THE RURAL EQUITABLE AND ACCESSIBLE TRANSPORTATION (REAT) CENTER  
IMPROVING MOBILITY OF PEOPLE AND GOODS



## 2024 ANNUAL U.T.C. CONFERENCE

EQUITY, SAFETY, ECONOMIC STRENGTH AND GLOBAL COMPETITIVENESS, AND TRANSFORMATION

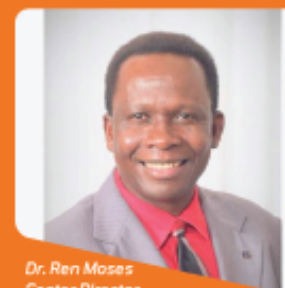
THE RESILIENT INFRASTRUCTURE AND DISASTER RESPONSE (RIDER) CENTER



## Conference Overview

While the transportation system goes through a transformation with new technologies like connected and autonomous vehicles, a concerted and focused approach is needed to investigate the efficacy of those solutions with respect to the transportation needs of diverse rural populations comprising the elderly, people of color, and economically disadvantaged persons. This conference will gather academicians, stakeholders, and community leaders to gain a better understanding of the needs of rural populations and the community-specific factors affecting this efficacy. The key insight of this workshop is the transformative discoveries through the co-production of solutions and deep convergence of research, data and practice experiences across disciplines and sectors.

## Message from the Center Director



Dr. Ren Moses  
Center Director  
Professor,  
FAMU-FSU College of Engineering

"We are determined to be the solution regarding creating and implementing transformative transportation solutions for rural communities through planning and research."



# NCRT-CE

Network for Clinical Research, Training,  
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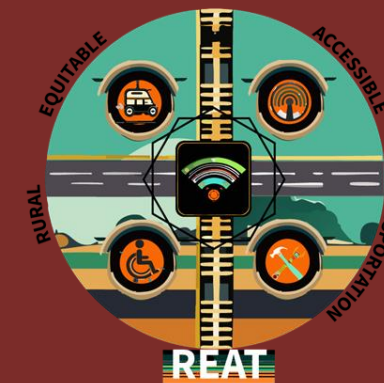
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*Get in touch...*

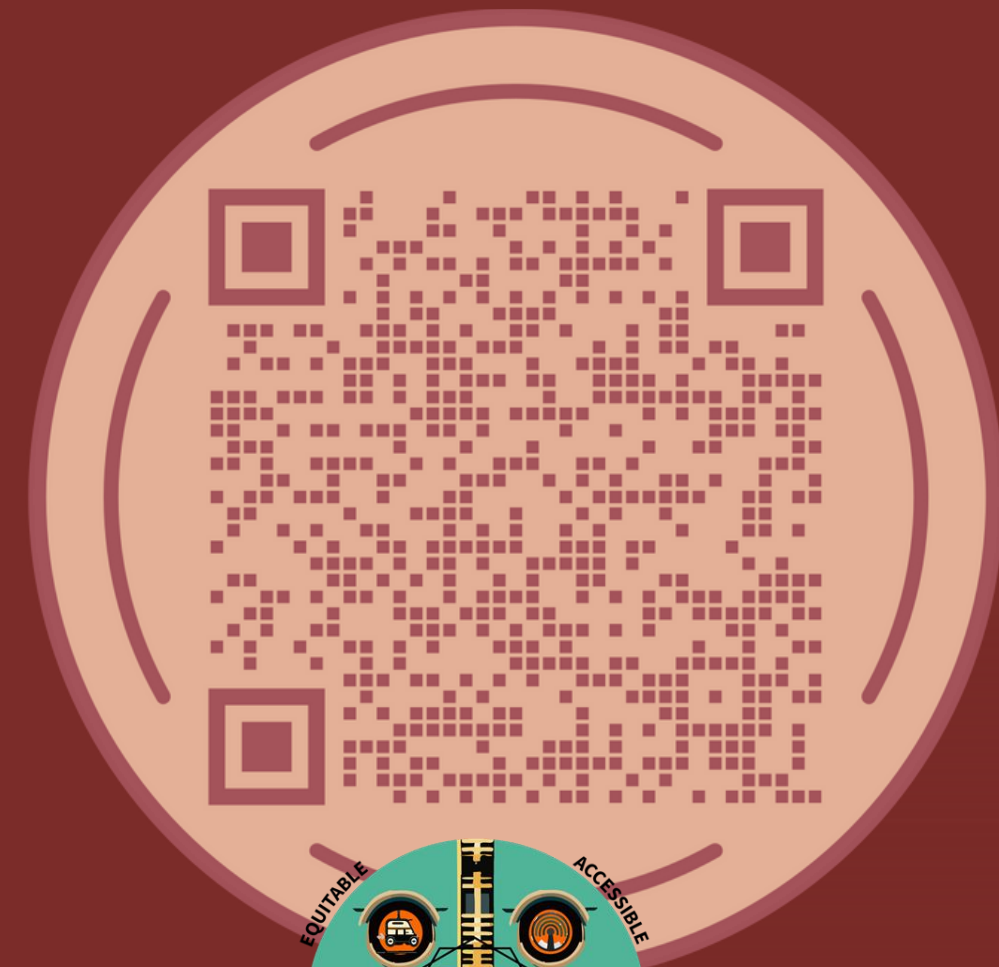
Eren Erman Ozguven  
[eozen@eng.famu.fsu.edu](mailto:eozen@eng.famu.fsu.edu)



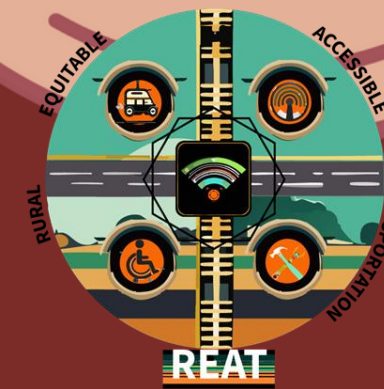
# FSU Network for Clinical Research, Training, and Community Engagement

Thanks for joining us!

Please take a moment to take  
our post-assessment survey:



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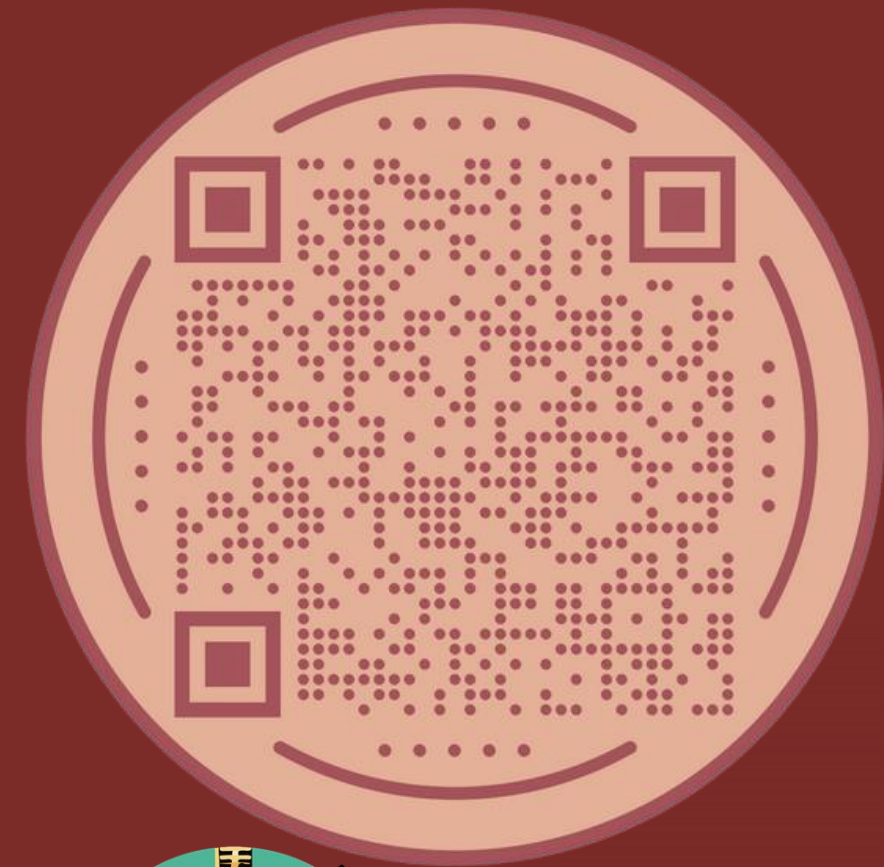


# Until next time...

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