“Supporting the vision of strong communities”

Learning Series for Community Leaders

Quarterly Topic: Rural Health
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

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

https://rider.engineer/
Hurricanes
Hurricanes, Infrastructure and Communities
Looking at the Technical Data: Hurricane Hermine
Looking at the Technical Data: Hurricane Hermine

Hurricane Hermine
(2016)

Disruption Probability
at 50 mph

- 0.00 - 0.10
- 0.11 - 0.20
- 0.21 - 0.50
- 0.51 - 0.70
- 0.71 - 1.00
Looking at the Technical Data
Looking at the Technical Data: Hurricane Ian
Looking at the Technical Data: Hurricane Michael

Before

After

Calhoun Roadway Segments, NDVI Change and Hurricane track: Segment thickness based on color and length

- Major Cities
  - Hurricane path
  - Calhoun Major Roads
  - Length mi
    - 1.2 - 1.5
    - 1.6 - 1.8
    - 1.9 - 2.1
  - NDVI_Change1W
    - Value
      - 0.865
      - 0.827
Looking at the Technical Data
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)
Hurricanes, Infrastructure and Communities

For Vulnerable Older Adults, a Harrowing Sense of Being Trapped

By JULI TURKHERSTE and JENNIFER RIZZANO  SEP. 2, 2017

See Harvey's Path From a Helicopter

Storm With 'No Boundaries' Took Aim at Rich and Poor Alike  AUG. 30, 2017

Stuck Over Gulf, Harvey Deepens Texans' Sugg Misery  AUG. 28, 2017

Texas: Tell Stories of Heartbreak Caused by Harvey  AUG. 30, 2017
Multi-Disciplinary Grants: NSF Research Coordination Network

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.
Multi-Disciplinary Grants: NSF Research Coordination Network

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.
Multi-Disciplinary Grants: NSF Research Coordination Network

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://fsu.hosted.zoom.us/j/96849384597

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 Piskulikewicz
Director, CPRC Center
Jim Clark
President & Foundation Vice President for Academic Affairs, Florida State University
Tisha Holmes
Assistant Professor, Department of Urban & Regional Planning
Savannah Collier
Program Manager, CPRC Center
Tal Cole
Program Manager, CPRC Center

Contact: Savannah Collier (ssmith24@fsu.edu)

SAVING THE PLANET WITH INDIGENOUS KNOWLEDGE

FAMU-FSU College of Engineering: Resilient Infrastructure & Disaster Response Center, College of Social Work: Stegma Center for the Study & 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
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

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.
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

County-based accessibility for the senior population to libraries.
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.
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?

- Lack of information
- Hesitant to request services
- Lack of access to communication technology
- Lack of adequate services
- Lack of staffing
- Eligibility requirements for services
- Fear of discrimination
- Other

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Multi-Disciplinary Grants: UF-FSU CTSA Pilot Project

<table>
<thead>
<tr>
<th>College of Engineering</th>
<th>• Eren Erman Ozguven</th>
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| College of Social Work | • Ellen Piekalkiewicz  
                          • John Mathias  
                          • Savannah Smith |
| College of Social Sciences | • Mark Horner  
                             • Tisha Holmes  
                             • Dennis Smith  
                             • Billie Ventimiglia |
| College of Medicine    | • Jessica DeLeon  
                          • Scott Pickett |
| College of Communication & Information | • Marcia Mardis  
                                             • Faye R. Jones |
| College of Arts & Sciences | • Choeta Chakrabarti |
| College of Fine Arts   | • Holly Hannessian |

**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.
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

**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**

- 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)

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.
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.

https://reat-famu-fsu.webflow.io/
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 these 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

"We are determined to be the solution regarding creating and implementing transformative transportation solutions for rural communities through planning and research."
Get in touch...
Eren Erman Ozguven
eozguven@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:
Until next time...

Connect with us!
FOLLOW US, LIKE US, AND TAG US

Scan here to join our mailing list: