

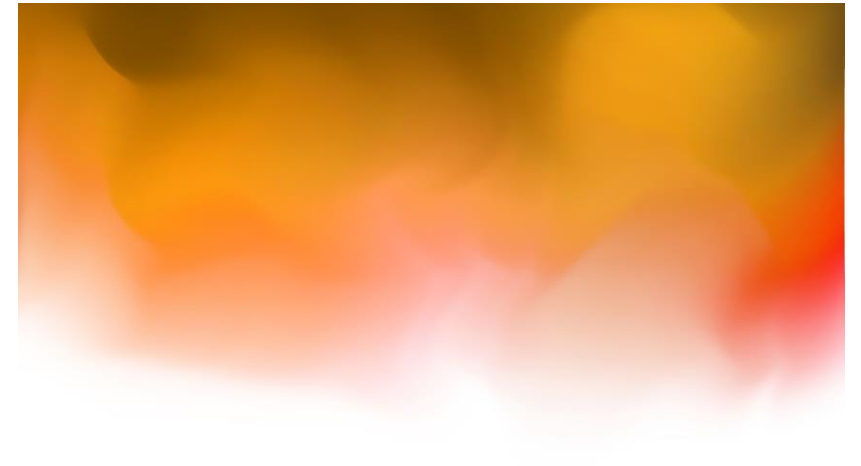
Community Resilience Engaging Advanced Training and Education programs with Technology that Saves Lives


Dr. Jessica L. Murphy ,
Professor of Technology Education and Emergency Management

Mississippi Valley Technology Teacher Education Conference

The 2021 Conference is the 107th Conference

Session 3



A night-time photograph of a residential neighborhood. The sky is filled with a large, intense fire, casting a bright orange and yellow glow over the scene. The houses in the foreground are dark, with some interior lights visible. A water tower is visible in the distance, silhouetted against the fire. The overall atmosphere is one of emergency and crisis.

ALERT! Technology Education must consider current state of our world and redirect efforts and curriculum to develop highly proficient professionals to pragmatically provide guidance/management of effective and rapid response, recovery and resilience.

Technology Ed. & Emergency Management

- An agenda where communities decrease danger and handle catastrophe.
- Facet that emphasizes how risks should be avoided.
- The managerial function charged with creating the framework within which communities reduce vulnerability to hazards and cope with disasters.



FEMA, 2021

Profession of Emergency Management

- Noah the first Emergency Manager
- Profession did not exist 50 years ago
- Since Cold War, It has developed and Grown
- Full fledged profession today
 - Public Sector
 - Private Sector
 - Volunteer Sector
 - International Sector



Types of Jobs: Career Builders.com

- Director of Disaster Recovery and Business Continuity
- IT Security and Disaster Recovery
- Disaster Risk Analyst
- Disaster Risk Information Specialist



JSU's Vision & Mission:

- **Vision:** Equip Mississippi **underserved communities** with current information to better prepare for weather-related disasters to minimize life and property loss, thus building resilient communities.
- **Mission:** Develop a multi-disciplinary team at Jackson State University (JSU) assembled to carry out the charge of preparing its local community.



Answering the call Of Congress Bennie Thompson:



2017 DHS-CCR Flood and Hurricane Meeting



Improve resilience
after weather-related
events



HBCUs assist in efforts
of weather
preparedness



JSU can develop model
for HBCUs

JSU Community Resilience Project Team:



Dr. Jessica Murphy,
Emergency Man. PI
Project CREATE



Dr. Dawn McLin,
Psychology-PI
Project FAST



Dr. Elayne Hayes Anthony,
Journalism & Media Studies-Co-PI/Advisor



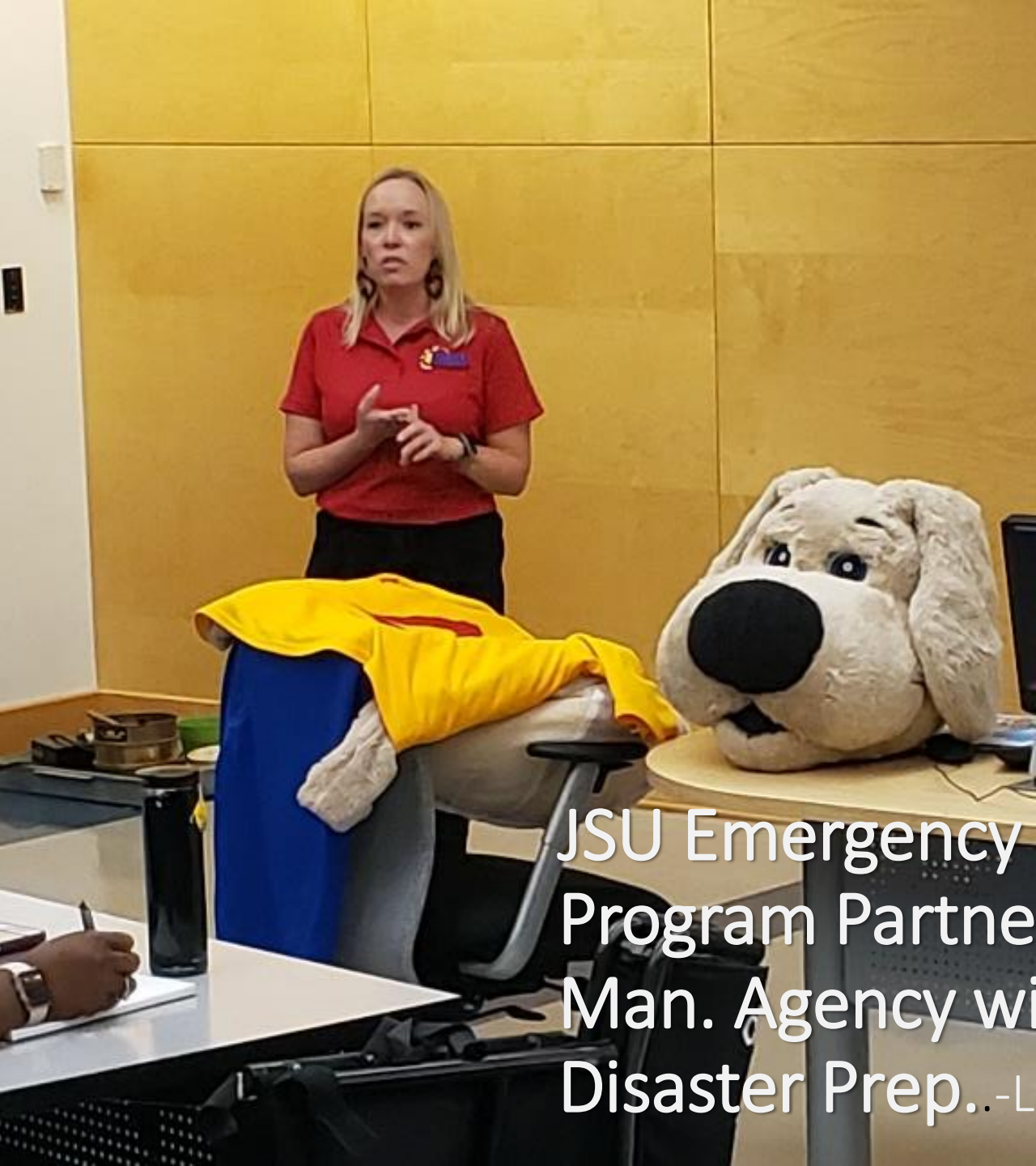
Professor Don Spann,
Media Studies-Senior Personnel



Mr. Bill Parker
National Weather Service-MIC/Partner
& NWS Staff



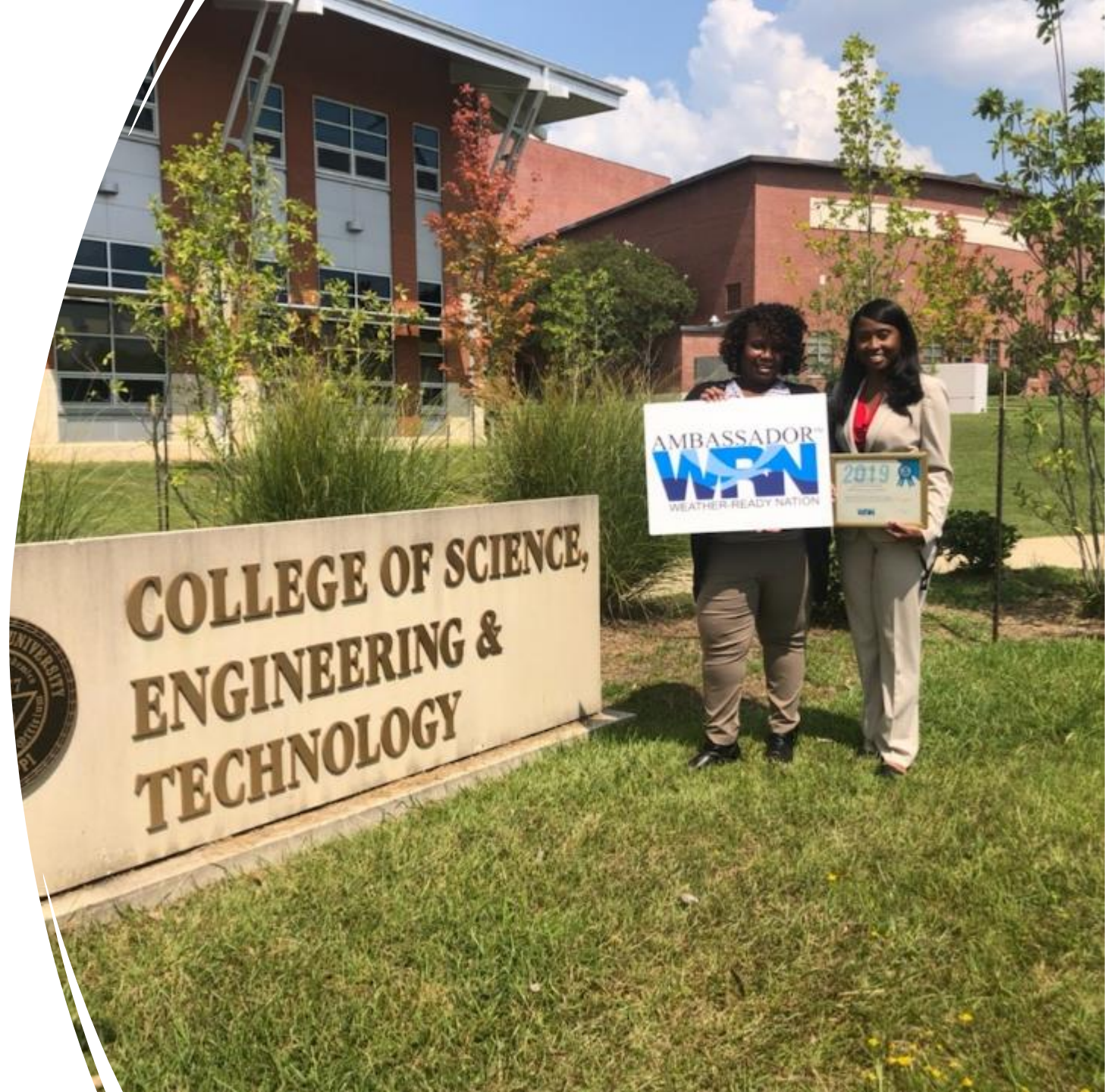
Dr. April Tanner,
Computer Science- Senior Personnel



JSU Emergency Management & Psychology Program Partnered with Mississippi Emergency Man. Agency with MEMA 4 Kid: Natural Disaster Prep...-Lead By Dr. McLin

Partnership with National Weather Service in Jackson, MS

- Dr. Murphy received 2019 Certificate of Recognition
 - “Weather Ready Nation Ambassador of Excellence”
 - Champion of weather safety and preparedness
 - Routinely hold outreach events that promotes the importance of Meteorology & Emergency Management fields to students across the state.
- Award was presented: 09/09/2019



Impactful Partnerships and Collaborators:

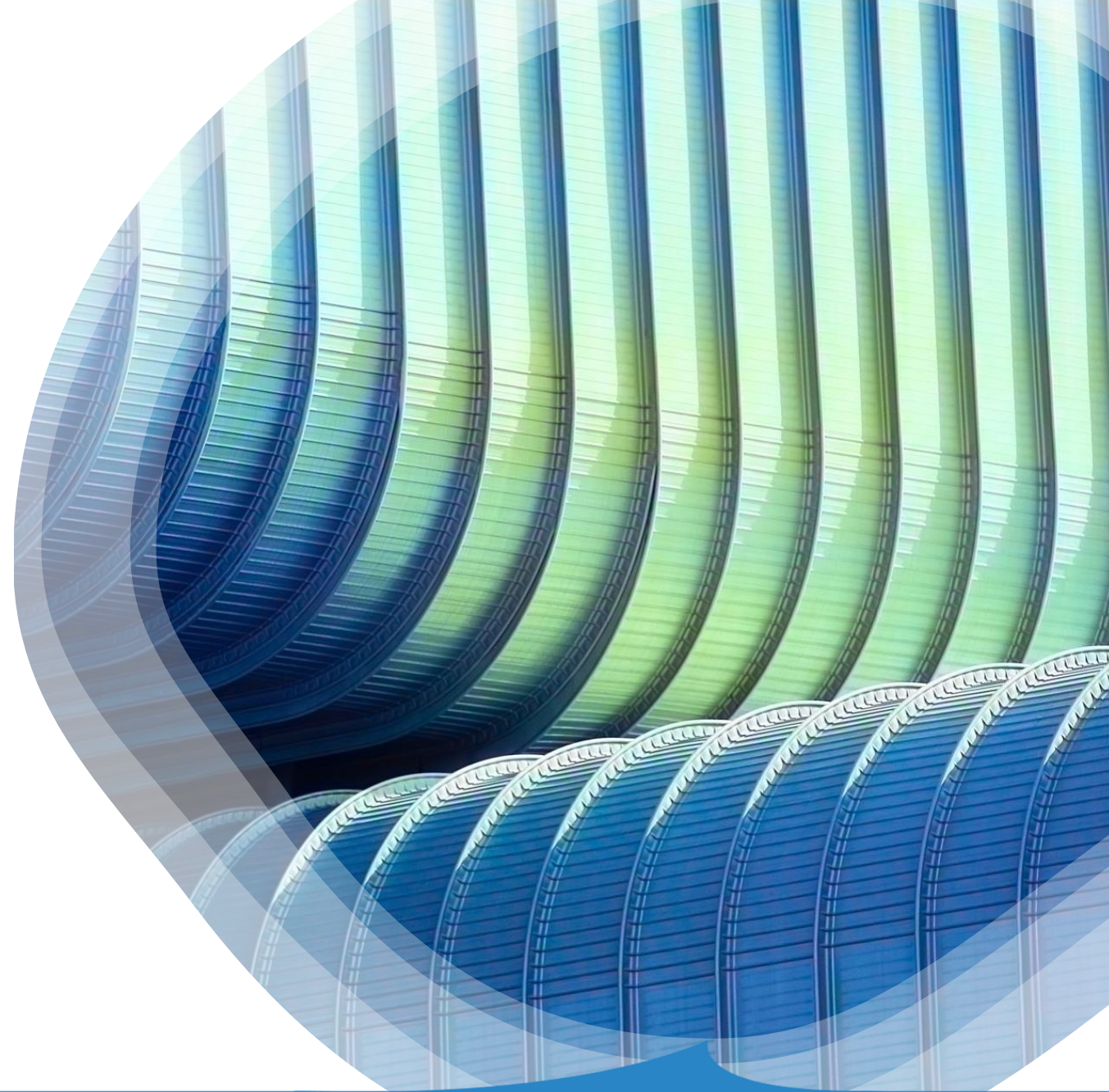
***Center for Coastal Resilience Supplement Award
(2020) of \$43,703***

**MS Insurance
Comm.**

MEMA

**JSU CCR
&
UA CAPS**

Infragard



The Harvest of the DHS-CCR Seed:

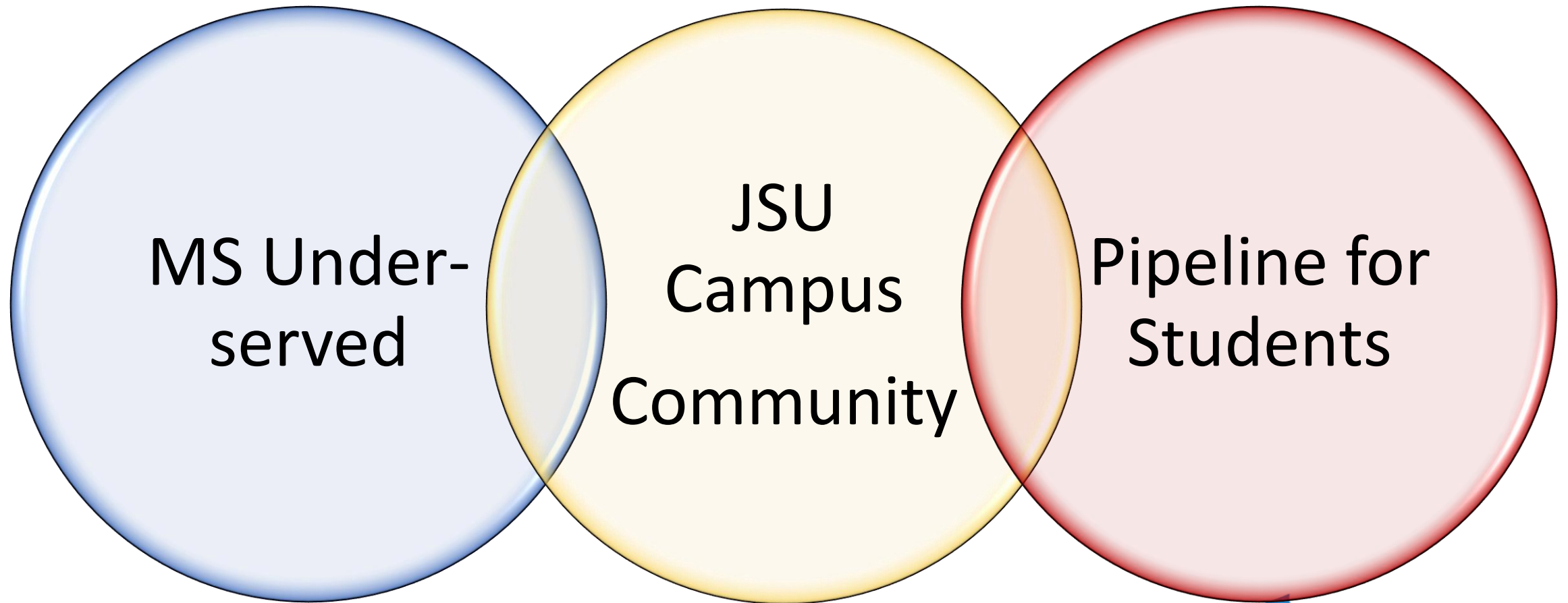


NSF HBCU UP-
TIP Award 20
\$399,808



DHS SLA 21
\$469,925

End Users: Mississippi Community



Proposed CREATE Activities:

Short Videos on Weather Emergency Prep. for JSU Campus

Short Videos on Weather Emergency Prep for Community

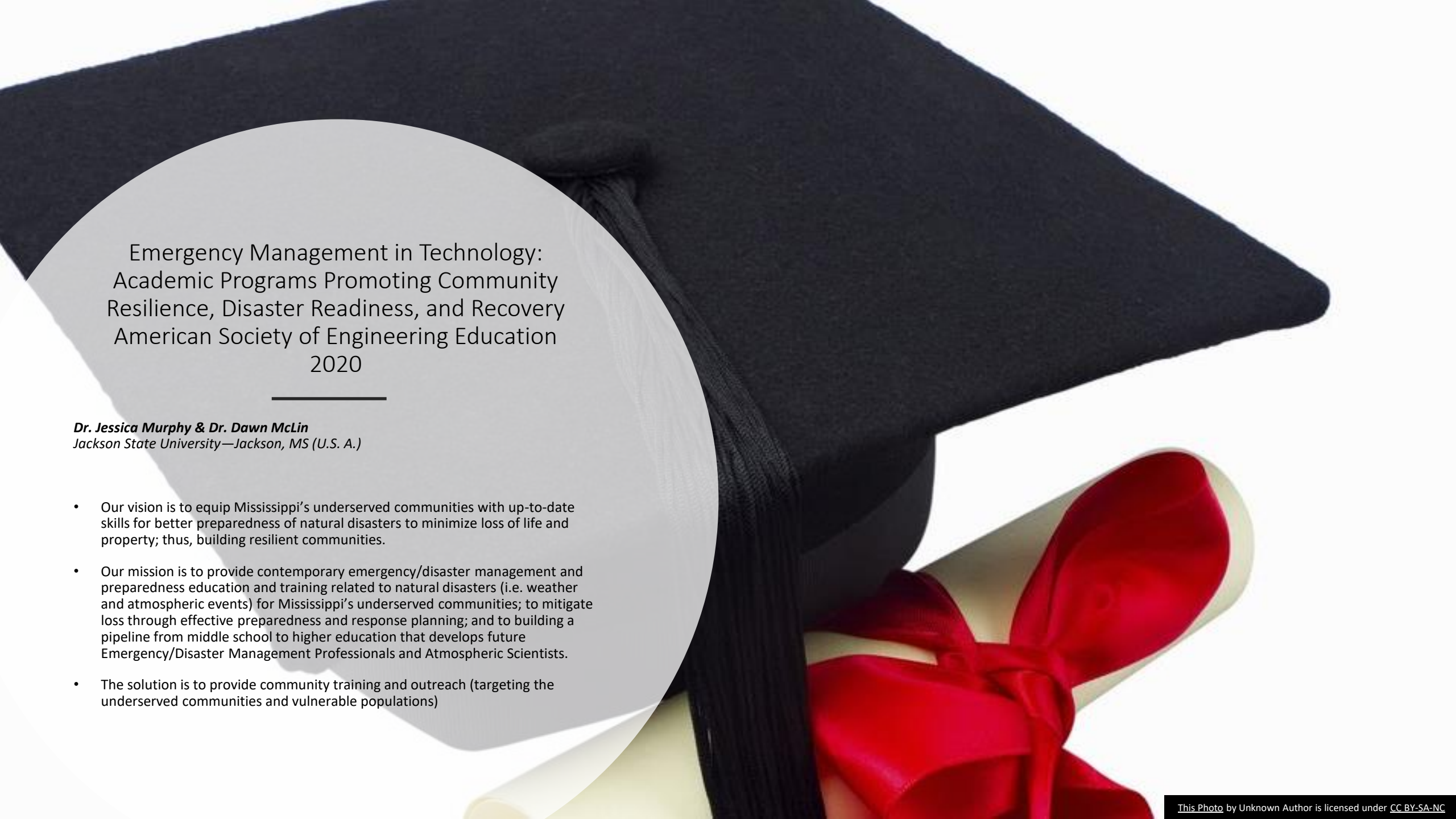
Virtual Town Hall Meetings on Weather Prep and Focus Group

Community Based Research=Five Conference Pres. And Three Conference Papers

State of the art simulation training for students, Emergency Man Specialists, etc.



Filming of weather preparedness JSU Campus & Stadium Video



Emergency Management in Technology:
Academic Programs Promoting Community
Resilience, Disaster Readiness, and Recovery
American Society of Engineering Education
2020

Dr. Jessica Murphy & Dr. Dawn McLin
Jackson State University—Jackson, MS (U.S. A.)

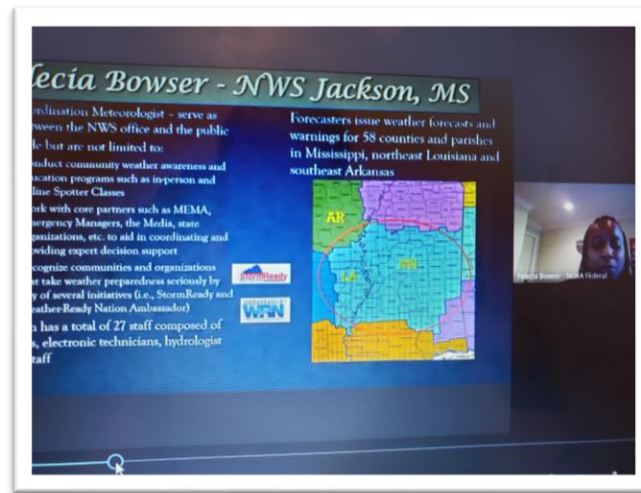
- Our vision is to equip Mississippi's underserved communities with up-to-date skills for better preparedness of natural disasters to minimize loss of life and property; thus, building resilient communities.
- Our mission is to provide contemporary emergency/disaster management and preparedness education and training related to natural disasters (i.e. weather and atmospheric events) for Mississippi's underserved communities; to mitigate loss through effective preparedness and response planning; and to building a pipeline from middle school to higher education that develops future Emergency/Disaster Management Professionals and Atmospheric Scientists.
- The solution is to provide community training and outreach (targeting the underserved communities and vulnerable populations)

CR Project Team: Weather Preparedness Virtual Town Halls

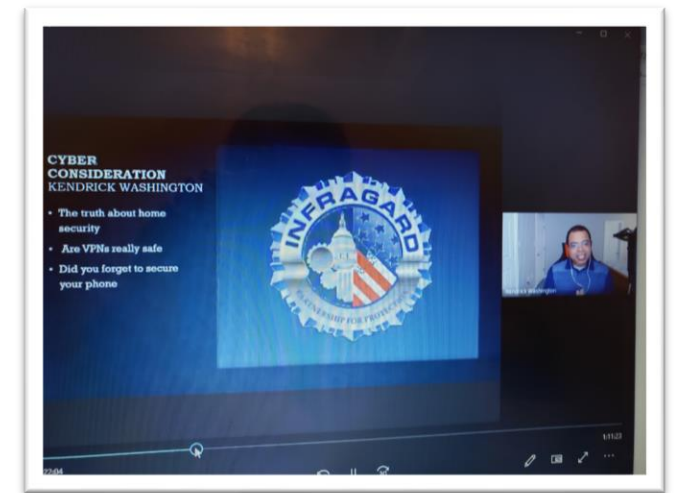
Hosted June 18 and June 29, 2020



Jessica L. Murphy, Project Lead



Felicia Bowser, Nat. Weather Service




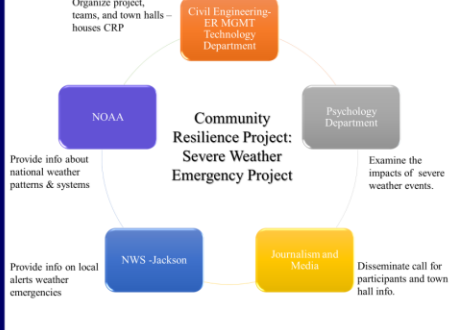

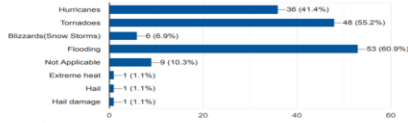

Ken Washington, InfraGard/
Cyber Security

Project Outcome (Doctoral Candidate Poster):

Community Resilience Project: An Exploration of Emergency Weather Preparedness in Mississippi

CeNe Harris, M.S., Dawn Bishop-McLin, Ph.D., Jessica Murphy, Ph.D.



Introduction	Community Resilience Project	Discussion
<p>Mississippi is historically known for being ranked lowest in measures of healthcare, education, and equality. Also, being situated amongst iconic bodies of waters and the lower Appalachian foothills makes Mississippi vulnerable to several severe weather phenomena: floods, hurricanes, and tornadoes are recurring weather events that routinely cause cataclysmic damage in Mississippi. Throughout the calendar year the state cycles through seasons of river flooding, tornadoes, and hurricanes. Mississippians experience near constant onslaught of weather emergencies.</p> <p>Simultaneously, Historically Black Colleges and Universities, have often been at the forefront of emerging movements and social changes. Continuing this tradition, Jackson State University has developed the Community Resilience Project to address community issues relevant to both the city and state. The first undertaking of the Community Resilience Project was partnering with the NWS, NOAA, and several departments Jackson State University to examine awareness and preparedness about weather emergencies.</p> <p>The purpose of the current study is to examine the creation of the Community Resilience Project at Jackson State University, intending to address community issues relevant to both the city and the state.</p> 	<p>Organize project, teams, and town halls – houses CRP</p>  <p>Provide info about national weather patterns & systems</p> <p>Provide info on local alerts weather emergencies</p> <p>Examine the impacts of severe weather events.</p> <p>Disseminate call for participants and town hall info.</p> <p>❖ Through funding from the U. S. Department of Homeland Security: Center for Coastal Resilience, the Community Resilience Project was developed to address the disaster needs of Mississippi residents.</p>	<p>This study examined the inaugural undertaking of Jackson State University's Community Resilience Project. Through town hall meetings and a demographic questionnaire, the study gathered Mississippi residents' attitudes and levels of preparedness regarding severe weather emergencies. From the Easter Tornadoes to an active hurricane season, the need for discussions about community preparedness is ever-present.</p> <div style="display: flex; justify-content: space-around;"> <div style="background-color: #f4a460; padding: 5px; writing-mode: vertical-rl; transform: rotate(180deg);"> Demographics African-Americans Central Mississippi Bachelors Degree Two – four person households </div> <div style="background-color: #c85135; padding: 5px; writing-mode: vertical-rl; transform: rotate(180deg);"> Preparedness Feel prepared Have emergency supplies • Non-perishables \$500 Emergency Fund </div> <div style="background-color: #808080; padding: 5px; writing-mode: vertical-rl; transform: rotate(180deg);"> Experiences Hurricanes Floods Tornadoes </div> </div>
Methods	Data Collection	References
<p>Descriptive Research Design</p> <p>This study employed a descriptive methods research design. This design was chosen to examine Community Resilience Project and its initial undertaking. Only descriptive analyses were conducted.</p> <p>❖ Participants</p> <ul style="list-style-type: none"> Requirements: 18 years or older & resident of Mississippi 87 Community members across Mississippi. Recruited via TV and radio advertisements and social media posts. <p>❖ Measure</p> <ul style="list-style-type: none"> Demographic questionnaire 20 items; ranging from race, age, and education to weather emergency preparedness and impact of past weather events. <p>❖ Procedures</p> <ul style="list-style-type: none"> Due to COVID-19 pandemic, virtual town halls were conducted Townhall meetings were conducted between June 1 and June 30, 2020. Participants were given the demographic questionnaire prior to the town hall. Town halls provided platform to provide critical preparedness weather info to residents 	<p>❖ Demographic Data (age, race, income, etc.)</p> <ul style="list-style-type: none"> Location: 80.5% from Capital Region Education: 64.4% held bachelors degrees Race: 92.0% African American/Black Household: 79.3% reported two/ four people in the household  <p>❖ Severe weather experiences participants' have experienced</p> <p>❖ Demographic Data (Severe Weather)</p> <ul style="list-style-type: none"> Preparation: 59.8% reported feeling prepared. Emergency Plan: 51.7% denied having an emergency plan. Medical Supply: 64.4% reported have an emergency medical kit & 58.6% emergency supply of medications \$500 Fund Level of Preparedness (Change)  <p>❖ Percentages of participants reported impacts from severe weather events</p>	<p>Most respondents reported feeling prepared for a severe weather emergence, yet over half of respondents also denied having a specific emergency plan. participants reported having emergency medical supply kits, a supply of essential prescription medications, at least \$500 in an emergency fund, and reliable transportation. They reported experiencing at least one severe weather emergency. Results showcase the importance of not only the Community Resilience Project, but also the need for community collaborations.</p> <p>References</p> <ul style="list-style-type: none"> ❖ Cole, E. R. (2009). African American women at historically Black colleges during the Civil Rights Movement. <i>Journal of the Student Personnel Association at Indiana University</i>, 20-28. ❖ Conway, J. (2020). Hurricane season in Mississippi: A historical perspective. <i>WJTV</i>. Retrieved from https://www.wjtv.com/news/hurricane-season-in-mississippi-an-historical-perspective/ ❖ Dixon, P. G., Mercer, A. E., Choi, J., & Allen, J. S. (2011). Tornado risk analysis: Is Dixie alley an extension of tornado alley? <i>Bulletin of the American Meteorological Society</i>, 92(4), 433-441. ❖ Mustain, A. (2011). What is to blame for Mississippi Floods. <i>Live Science</i>. Retrieved from https://www.livescience.com/14109-mississippi-floods-reason-flooding.html <p>Acknowledgements</p> <ul style="list-style-type: none"> • Thank you to the National Weather Service – Jackson and the National Oceanic and Atmospheric Administration. • Thank you to the Jackson State University participating departments. <p>Contact Information: cene.harris@gmail.com</p>

State of the Art Simulation Training for Emergency Preparedness and Response with ADMS

- Grant awards have provided opportunity for the development of new state-of-the-art technological simulations laboratory.
- This lab will be available to students, CR partners, and community first responders and emergency specialists and decision maker for hands on training.
- This will enhance response efforts.

AVAILABLE SPRING 2022 AT JSU!!!!!!

What is ADMS:

- Bridge the gap between classroom training and live exercises.
- Train for a higher level of preparedness, a more effective response, a safer environment for responders.
- Yields a greater probability of mitigating damage to property, and ultimately a better chance of saving lives.



Career Projection for Emergency management

- Emergency Management careers are projected to have annual increase by 8% between the years of 2020-2030 (faster than average).
- Emergency Management Directors are needed to prepare plans and procedures for disaster response.
- These leaders provide guidance of emergency mitigation, preparedness and recovery efforts.



Emergency Management Careers

- According to Bureau of Labor Statistics the mean annual wage for Emergency Management specialists in 2020 was \$76,250 (base).
 - Bachelor's
 - Bonuses
 - Additional compensation
- Work in disaster management can be found in the All sectors.



Union of Technology Education & emergency Management

- Emergency Management programs with a technology emphasis will aid in continuous **improvement of proper planning with Technology, forecasting, detecting/securing, and information sharing.** Information Technology serves as a suitable examples of technology integration in Emergency Management.
- Information Technology (IT) is a vital tool in Emergency Management that **supports planning and time reduction.** The internet and social media serve as more specific examples of IT that performs many capabilities that impact Emergency Management's proficiency.
- The internet and social media **heightens awareness through informatinon websites prepare communities.** The internet and social media are **modern platforms** providing opportunity for **community discussion groups, making disaster plans available online, providing educational disaster management material** to specific entities and the general public.

Conclusion

“As man-kind continues to greatly depend on technology, there remains a need to encourage persistent advancement of post-secondary academic programs promoting the understanding of essential technological perceptions, proficiency, progression and problem-solving to acclimatize into the workplace. With technology being a pivotal point in our society and economy, the job market continues to grow with the constantly shifting technology trends. In emphasizing the current state of Technology Education and the relevancy of discipline, this research explored examples of progressive undergraduate and graduate Technology Education degrees, the **career preparation** for program students, and an overview of relevancy for the 21st Century students. Regarding the 21Century learner and workforce, new pathways such as Emergency Management will help Technology Education maintain significance and promote constant advancement.”

Stop or Minimize impact of pending Incidents and Be Ready! Get more Emergency Managers with technology skills out there!!!! Be resilient





Broader Impact (A Model for other HBCUs):

- Opportunities to engage the community and provide them with the tools they need to remain safe before, during and after a natural disaster.
- More people have the knowledge and skills to survive a natural disaster, especially those in underserved communities.
- For vulnerable groups, more efforts can be made to funnel the proper resources into those communities.



Again, Thank you from Dr. Jessica L. Murphy



- Professor of Technology & Emergency Management Tech.
- Co-Director of the Community Resilience project at JSU
- M. S. Degree Program Director for Technology Education
- Certified Lean Six-Sigma Green belt
- Email: Jessica.l.Murphy@jsums.edu
- Community Resilience website:
 - <https://www.jsums.edu/communityresilience/>
 - <https://www.jsums.edu/sjms/student-work/weather-readiness/>