

Developing Decadal Climate Projection Services Through Stakeholder Guidance and Foundational Science

Climate change is already impacting communities throughout the U.S., and the consequences of these impacts will only become more significant in future decades. Mid-to-long-range (20 years and beyond) outlook information aids infrastructure and resource planning and helps anticipate the effects of climate change. The proposed work will develop the scientific understanding to underpin authoritative climate projection services. The team will conduct the research necessary to support reliable and scientifically robust climate projection services for heat waves, coastal flood risk, wildfire risk, and extreme wind events, ensuring that our approaches are state-of-the art, thoroughly and transparently documented, and developed in close collaboration with stakeholders.

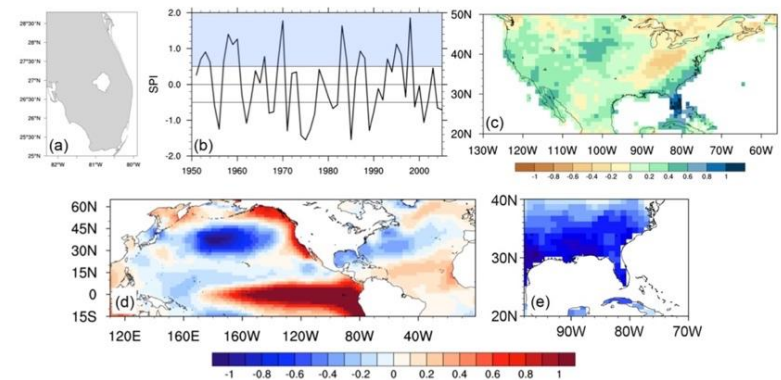


Figure 5: (a) Study area, (b) time series of October–March (ONDJFM) 6-month Standardized Precipitation Index (SPI6) rainfall, where events over SPI 0.5 are highlighted in blue (unitless). (c) Composite of wet precipitation events (i.e., those highlighted in (b); mm/day). (d) Sea surface temperature anomalies regressed onto time series of wet SPI6 rainfall events ($^{\circ}\text{C}/\text{standard deviation}$). (e) As in (d) but 2-m temperature regression.

We have several PhD positions available for this project!