Rapid Assessment of Bridge Scouring and Recovery Following Extreme Flood Events
Bridge scouring is a long standing problem nationwide and failures can have devastating socio-economic impacts. The recent SC Flood event produced bridge scours under conditions never experienced before. This provides a unique opportunity to obtain field data on scour and sediment transport dynamics under extreme conditions. We will be using an unmanned autonomous surface vehicle (ASV) to carry out scouring measurements using robotic techniques and acoustic instrumentation initially developed and used for sediment transport processes in the oceanic environment. This will be augmented with measurements of structural integrity and numerical modeling of scour around bridges.

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