MarTREC
Maritime Transportation Research & Education Center

MarTREC UTC Project Information Form
USDOT Tier 1 University Transportation Center
Agency ID or Contract Number 69A3551747130

Project Title: Modeling Dynamic Behavior of Navigable Inland Waterways
Project Abstract (Brief Description): The inland waterway freight system is a tremendous and underutilized asset within the United States (U.S.) transportation system, providing an economical and environmentally sound mode for moving cargo. However, the system is challenged with aging infrastructure and limited operations and maintenance budgets which can cause transportation delays and economic losses. We propose to utilize our previously developed Maritime Transportation Simulator (MarTranS), which integrates agent-based modeling, discrete-event simulation, and system dynamics, to further explore the relationship between inland waterway transportation system components and regional economic impact factors. We will also develop statistical models and decision support tools to provide expanded information about the system and its current and future behavior. This research is needed to provide new data analytics and knowledge that can guide future investment, operations, and maintenance decisions.
Describe Implementation of Research Outcomes (or why not implemented) - Place any photos here *To be determined upon conclusion of the project*:
Impacts/Benefits of Implementation (actual, not anticipated) *To be determined upon conclusion of the project:*
Web Links: martrec.uark.edu
Budget (Funding) Amounts & Source(s) (US DOT +Match(s) =Total Costs): $139,210 from MarTREC, $94,394 from academic salary. Total $233,604
Project Start and End Dates: August 2018-June 2023
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Principal Investigator Institution (University): University of Arkansas