



Meet Mahesh Tapas

Mahesh Tapas, Ph.D Student

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Mahesh Tapas is a Ph.D. student in Integrated Coastal Sciences—with an Engineering major and Economics minor— at East Carolina University. He holds a Master of Technology in Water Resources Engineering and a Bachelor of Engineering in Civil Engineering. During his master’s program, he explored many theoretical aspects of stochastic hydrology — the statistical branch of hydrology that deals with the probabilistic modeling of the watershed process —and became interested in hydrological modeling. From this experience, he realized that he wanted to increase his ability to work with scientists from other disciplines to address water resources challenges. That’s why he chose to pursue his Ph.D. in Integrated Coastal Sciences in which he plans to integrate stakeholders’ perspectives in a hydrological model using engineering and economics methods. He is also working as a research assistant in the coastal ecological engineering lab. His research focuses on developing a model for a coastal agricultural watershed in North Carolina that uses novel approaches to incorporate the effects of sea level rise and farmers’ perspectives. He will use this model to determine the effect of different policies on farmers’ land use-land management decisions and the resulting effects on nitrate export to downstream waters. Peers from his Ph.D. program are from various educational backgrounds such as engineering, ecology, anthropology, and economics. He is learning to work in interdisciplinary teams to solve climate change issues through the program. This involves a significant amount of community-engaged research which aligns with the University Council On Water Resources’ (UCOWR’s) mission of developing interdisciplinary collaborations.

"As our first student member of the Board of Directors, how do you plan to bring a student perspective to the organization, including one of our primary missions of planning and convening a national annual water resources conference?"

I think a good communicative and informative platform is key to attracting students, researchers, and professors to work on an interdisciplinary team. To attract students to the National Annual Water Resources Conference, I am skilled in the creation of digital posters, websites, and applications. I have served in various positions on different student organizations which have given me a good perspective on how to increase student participation in the event. These experiences have also given me multiple ideas to increase engagement at the National Annual Water Resources Conference. Having a focus group interaction will help students during the conference to understand and collaborate on the research work in the future. For these focus group interactions, we could develop an application in which students can sign up or create their discussion platforms and set up meeting slots during the conference hours in a hybrid format. To embrace technology during the conference, we could implement a tool that allows for anonymous questions during a presentation which will increase student interaction. Conference-goers may also enjoy having time to tour local water-related museums and educational movies. To attract more undergraduate students, the conference could host dedicated workshops, poster competitions, and a job fair. I wish to serve on the board of directors’ graduate student position which will allow me to make stronger connections and continue to build my leadership and interdisciplinary research work skills that will help me become an even better hydrological modeler.