Virtual Boat of Knowledge for Water Resources Education

The boat of knowledge funded by the U. S. National Science Foundation will conduct graduate research and outreach activities to promote the science, technology, engineering, mathematics (STEM) education in the Ohio River Basin. It aims to enhance and broaden science and engineering education of graduate fellows, especially under-represented groups, at Ohio University and improve communication skills through the proposed activities. Each year, nine graduate fellows will work with nine high school teachers to conduct on-boat samplings and experiments related to their research. The concept of the virtual boat of knowledge is to remotely transmit research and educational activities on the physical boat to school classrooms through inquiry-designed activities to an online virtual boat to build a sustainable curriculum. The project will enhance understanding of graduate fellows in their research and improve communication and presentation skills using hands-on activities from the river boat to classrooms. It will also provide professional development for teachers to enrich learning environments of high school students.