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NJ/NY teachers to participate in Stevens' National Science Foundation ITEST program BUILD IT project uses underwater robotic vehicles to build IT and pre-engineering skills 6784

HOBOKEN, NJ- Sixty-six teachers from 33 schools throughout New Jersey and New York have been selected to participate in a prestigious engineering education and research program at Stevens Institute of Technology. The program is part of a National Science Foundation (NSF) initiative to increase the numbers of students pursuing technological degrees and careers, particularly those focused on the development and use of information technology (IT).

The two-and-a-half year collaboration by 33 schools with Stevens' Center for Innovation in Engineering and Science Education (CIESE) is called the "BUILD IT" project. BUILD IT is research project funded under NSF's Information Technology Experiences for Students and Teachers (ITEST) program. ITEST is designed to increase opportunities for students and teachers to learn about, experience, and use information technologies within the context of science, technology, engineering and mathematics (STEM), including IT courses. It is in direct response to the concern about shortages of information technology workers in the US. Supported projects are intended to provide opportunities for both school-age children and for teachers to build the skills and knowledge needed to advance their study, and to function and contribute in a technologically rich society. BUILD IT: Using Underwater Robotic Vehicles to Build IT and Pre-Engineering

Skills, led by CIESE at Stevens, is one of only 20 ITEST awards made for this funding cycle throughout the US.

Pairs of teachers are participating in an intensive, two-week institute on the Stevens campus in Hoboken. During the institutes, which began on July 23, teachers will work in teams with researchers from Stevens to design, build and test underwater robotic vehicles to complete a set of increasingly complex challenges, including navigating a slalom course underwater, and snaring a wiffle ball and inserting it in a net. During the second week of the institute, teachers will test the lessons with two students from their schools, who will participate in a team-based

series of activities that challenge students to use the engineering design process, to apply their scientific learning about topics such as buoyancy, and their problem-solving skills. These activities will be conducted in the research facilities of the Davidson Laboratory, a world-renowned ocean engineering and naval research center. The final lessons resulting from the summer experience will be implemented in the participating teachers' schools in the 2007-08 school year.

"The BUILD IT underwater robotics activities provide an innovative and engaging challenge to support pioneering teachers seeking to introduce engineering and IT into their

classrooms," said Beth McGrath, Director of CIESE at Stevens, which is leading the project. "At the same time, students are able to test out their understanding of science concepts in real time through an intrinsically-motivating set of challenges."

Journalists are invited to attend the summer institutes and observe underwater robotic vehicles and student presentations on Friday, Aug. 3, 2007 and Friday, Aug. 24, 2007. For more information, please contact Stephanie Mannino at (201) 216-5602 or smannino@stevens.edu. To see BUILD IT in action, please visit: <http://www.k12science.org/buildit/movies.html>.