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☒ News ☒ News Archive ☒ Publications
☒ Press Room

NYU-Poly receives $500K/3-year NSF grant to promote science and mechatronics research to high school teachers - September 23, 2008
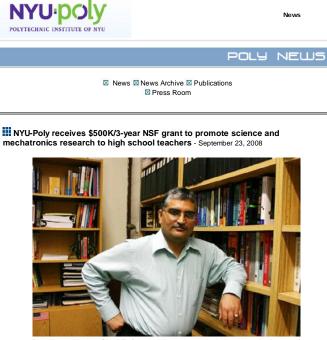

Dr. Vikram Kapila, SMART Principal Investigator and Associate Professor of Mechanical Engineering

Polytechnic Institute of NYU has received a $500K grant from the National Science Foundation (NSF) to recruit, train and mentor teachers from New York City high schools in science and mechatronics research.

The grant, which is part of NSF's Research Experience for Teachers (RET) Site program, will fund three summers of SMART (Science and Mechatronics Aided Research for Teachers), a program that has involved 78 teachers in real-world, active learning projects since its creation in 2003.

Teachers will spend six weeks in the SMART program attending guided training workshops and taking part in other activities to enhance their technical competency and professional development in the areas of science, technology, engineering and mathematics (STEM). They will also engage in collaborative research in mechatronics, a discipline that integrates mechanical engineering, control theory, computer science and electronics to manage complexity, uncertainty and communication in engineered systems.

Dr. Vikram Kapila, SMART project's principal investigator and an associate professor of mechanical engineering, has led the program since its inception. "At its core, SMART aims to give teachers in urban high schools with socially diverse, economically disadvantaged and underrepresented student bodies, the tools to develop lab activities and curricula that promote STEM careers to their students," says Dr. Kapila. "Revving up enthusiasm for and proficiency in STEM is critical as we prepare students to compete in the global, 21st century knowledge-based economy."

Professors Nikhil Gupta, Magued G. Iskander and Maurizio Porfiri serve as senior project personnel. NYU-Poly's David Packard Center for Technology and Educational Alliances facilitates the SMART program. The Center supports high school students and their teachers as they study science and engineering through an extensive array of courses and workshops like SMART.

Back to NYU-Poly News