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Breaking News:

NSF Awards Shodor $900K Grant

"The best kept secret in Durham" is not so secret anymore as more than 60 educators, community leaders, parents and students from the Research Triangle (N.C.) area heard U.S. Rep. David Price (D) announce that the National Science Foundation has awarded Shodor Education Foundation Inc. a $900,000 grant for a new apprenticeship program.

Shodor, a Durham, N.C.-based organization dedicated to the reform and improvement of science and mathematics education, will use the three-year grant to provide opportunities to more than 100 area high school students in computational sciences and related information technologies.

Computational scientists at Shodor as well as the area's technology companies and universities will mentor high school students developing computer models and tools in all aspects of high performance computing, science and mathematics. Apprentices will master technology and workplace skills through Shodor projects, such as the Computational Science Education Reference Desk, a Pathway portal of the National Science Digital Library and the National Computational Science Institute, while supporting information technology- intensive projects such as "Digital Durham" through Duke University.

"Shodor's SUCCEED Apprenticeship program changes the lives of area students by partnering them with leading experts and opening doors to exciting careers in science," said Price. "Our nation desperately needs a new generation of scientists in order to stay competitive in a global economy. I'm proud some of them may get their start right here in Durham, thanks to this critical funding." Price added that Shodor's programs, besides directly serving local students, serve as a national model of excellence, especially in attracting young women and minorities into science and technology careers.

Other speakers at the announcement included Mayor Bill Bell and Robert McMahan, the science advisor to Governor Easley. Bell said Durham was proud to include Shodor as one of its "educational jewels" and a key component of the transformation from the "City of Tobacco" to the "City of Medicine." McMahan, himself a computational physicist, spoke of the importance of programs such as Shodor, which reach students in middle school before they form a negative feeling about a career in math, science or technology. Monte Evans, who as a sixth grader in 1994 became Shodor's first apprentice and now is a full-time computer information specialist at Shodor, gave a moving account of how Shodor's programs have directly affected his education and career choices.

The SUCCEED Apprenticeship Program builds on Shodor's SUCCEED (Stimulating Understanding of Computational science through Collaboration, Exploration, Experiment and Discovery) program, which introduces middle- and high-school students to technologies, techniques and tools of computational science in Durham. Computational science is the newest method of conducting scientific research, taking a place next to experimental and theoretical sciences as ways of doing science. Computational scientists create mathematical models of scientific phenomenon and use those models to perform a variety of mathematical experiments.

In this new program, students who become excited about working in the computational sciences will be provided with an opportunity to develop experience, culminating in the development of expertise in one or more areas of computational science. For example, apprentices may work in the field of computational chemistry, helping support Shodor's statewide computational chemistry computing resources. Apprentices are paid a stipend over the course of their apprenticeships, which could be extended as long as two years.

"The Apprenticeship program represents the next step in the process of ensuring that young science students have access to modern scientific technologies, technologies, and tools, particularly with computational science", said Robert M. Panoff, executive director and president of Shodor. "With support from organizations such as the Burroughs Wellcome Fund, the Rambus Foundation, the National Science Foundation and others, we have been able to expand our efforts

developing materials and methods to introduce computational sciences to students as young as grades three. NSF now gives us the opportunity to help students develop real skills through the computational apprenticeship experiences provided by this program."

"Shodor has done a 'shodorific' job providing students with research opportunities and interaction with scientists," said Queta Bond, president of the Burroughs Wellcome Fund. "Computational science is a great investment to provide these students with the essential skills crucial to the future workforce of North Carolina."

According to Ed Bradford, an IBM computer scientist and member of the program's advisory board, "I am excited about the opportunity that Shodor offers to tomorrow's scientists, mathematicians and engineers, helping them to begin their understanding of the capabilities of today's high performance hardware and software and applying those capabilities to scientific problems of increasing complexity."

Phil Mohr, a SAS scientist, said, "Here at SAS, I don't think that it is any secret that we have a lot of technically-gifted, and technologically-savvy employees. They have excellent analytical skills, often taking a collaborative approach to devising innovative solutions to common business problems. Skills like these don't develop by themselves -- they must be nurtured. Shodor's apprenticeship program in computational sciences provides that opportunity."

"The SUCCEED Apprenticeship Program will become an important part of Durham's efforts to train and motivate the workforce of tomorrow", says Kathy Hoffmeier, vice president for workforce development with the Durham Chamber of Commerce. "Our community is known worldwide for achievements in science, technology and medicine; Shodor adds to that reputation by educating and training our youth in the field of computational science. More importantly, the apprenticeship program gets kids excited about science, which will hopefully motivate them to seek further education and employment in this field."

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