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K-12 Nanotechnology Education Outreach for Workforce Development: The Georgia Tech Model

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At a time when competition for obtaining research grant money is at a critically high level of complexity, coincidentally, the recruitment of U.S. students to science and engineering courses of study and careers is at an all time low. The NSF estimates that by the year 2015 there will be a need for two million workers worldwide in the fields of nanoscience and nanotechnology. Of these, nearly one million will be needed in the U.S. An additional 5 million workers will be needed in support areas for these fields. To develop this workforce, education outreach should be a major thrust of our universities, industries, and federal labs. This outreach must begin in the elementary grades and expand up to professional adults in need of retraining and skill enhancement.

Fortunately for Georgia Tech, Diana Palma has found a “WIN-WIN” combination for Georgia students and researchers to provide support and encouragement for each other.

For over two years the Microelectronics Research Center at Georgia Tech has been actively building the National Nanotechnology Infrastructure Network’s southeastern site. The mission of expanding access and services on state-of-the-art nano-range equipment to internal and external university and industry users has proceeded relentlessly. In addition to cleanroom user development, the NNIN/Georgia Tech site is the headquarters of national development and dissemination of K-12 nanotechnology knowledge to the general population. As the Assistant Coordinator of the NNIN Education Program, Diana Palma is responsible for expanding the K-12 Nanotechnology Education effort in Georgia Schools, contributing to the www.nnin.org website, assisting with the GT/RET Program and several NanoCamps in the summer months, and reaching undergraduates and graduate students at Georgia Tech with the only nanotechnology education outreach opportunity in Georgia. As the Education and Outreach Program Manager for the Microelectronics Research Center, it has been an excellent opportunity to increase visibility to our already well-established cleanroom facility as well.