

## INFORMATION SCIENCES & TECHNOLOGY

**SENSORS — DEVICES THAT RECEIVE AND RESPOND** to signals or stimuli — work behind the scenes in much of the equipment we use every day. In the Information Science & Technology (IST) cluster, research on sensors is a major focus area.

Professor of electrical engineering Dr. Marwan Bikdash is one of several researchers developing expertise in sensors. “They are becoming a big topic,” he says, “the next big wave.” He and his colleagues are looking at the hundreds of sensors in cars, ships, planes, and buildings with the goal of making the sensors more efficient, convenient, and effective. “We want sensors to be low-maintenance, operate more effectively, and even be wireless.”

Their research is taking sensors in exciting new directions. These include conducting research on creating autonomous vehicles, developing robotic support in dangerous situations, and expanding emergency services by detecting damages in anything that contains a sensor. IST has even produced a sensor that can identify vehicles. A&T researchers are working with Wright-Patterson Air Force base in Dayton, Ohio, on sensors that can classify vehicles by sound in order to identify vehicles as they approach troops or to estimate traffic flow at any given moment.

With the world of sensors on the rise, Dr. Bikdash says, “We know we can make them small and cheap, but we are trying to make them interact with the environment.” A promising new research area involves biological sensors that can detect chemicals around them.



Researchers in the Information Science and Technology Cluster are working to make sensors low-maintenance, more effective and even wireless.

project. The HUD program that awarded the grant is designed to help HBCUs expand their role and effectiveness in developing their communities with neighborhood revitalization, housing, and economic development.

“Ninety-eight percent of the minority families in Southeast Greensboro live with poverty income levels,” said Tamara Dix, project manager for the Housing, Economic Empowerment and Job Growth Initiative. “We intend to enhance economic opportunities for the residents of Southeast Greensboro through community and economic development activities.”

One of these activities is the Minority Enterprise Training and Development Program (METAD). METAD was established to promote and enhance minority entrepreneurship. Activities include one-on-one mentoring, a business library, an after-hours computer lab, counseling services, small group studies, networking events and technical assistance.

METAD also offers business development assistance that will aid in starting and sustaining a minority-owned business or in directing the management of an existing minority-owned business. The program also offers business management

assistance that will help business owners with taxes, accounting, hiring staff, contracts, leases, and other matters.

In addition to the classes that are being offered, there is also a business incubator space for business owners who are currently in the program or have completed both classes. This incubator space will help businesses grow and develop by providing them with furnished space to house their business and conference rooms; it will also accommodate



Tamara Dix, project manager and Dr. Musibau Shofoluwe, PI, are administering a HUD grant which allows the University to assist in neighborhood revitalization.

virtual tenants, business owners that only need limited space in the incubator.

“The program will begin with five businesses, and we intend to have eleven by 2009,” said Dix. |E|

## LEADERSHIP & COMMUNITY DEVELOPMENT

**THE LEADERSHIP & COMMUNITY DEVELOPMENT CLUSTER** is using its knowledge to develop economic opportunity for low-income family in southeast Greensboro. Dr. Musibau Shofoluwe, professor in the department of construction management and safety in the School of Technology, received a grant from the U.S. Department of Housing and Urban Development (HUD) for the