## Georgia Tech

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## **Research News**

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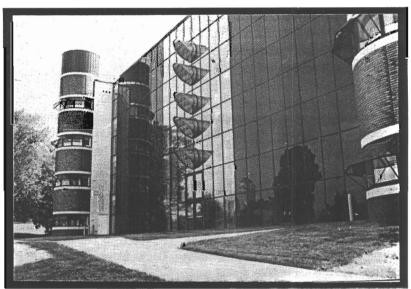
## U.S. ARMY'S MISSILE COMMAND (MICOM) BECOMES MEMBER OF MANUFACTURING RESEARCH CENTER CONSORTIUM AT GEORGIA TECH

The Manufacturing Technology Division of the U.S. Army Missile Command's Research, Development and Engineering Center has become the newest member of the Manufacturing Research Center (MARC) at the Georgia Institute of Technology. Other MARC members are Motorola, IBM, the Digital Equipment Corporation and the Ford Motor Company Electronics Division.

The Manufacturing Research Center is a consortium which pools member funds to conduct research that will advance state-of-the-art manufacturing technology in areas of shared interest. This leveraging of

## FOR MORE INFORMATION:

ASSISTANCE/PHOTO: John Toon/Lea McLees, (404) 894-3444 RESEARCHERS: Dr. Michael J. Kelly, (404) 894-9090; John Davis, (205) 876-4161 (MICOM PI Offc) WRITER: John Toon



Georgia Tech's new Manufacturing Research Center building was officially opened November 8. The four-story, 120,000 square foot building will house labs and offices. (Color/B&W Avail.)

funds from the five consortium members makes available to the Army Missile Command (MICOM) a resource of \$1 million per year -- five times its own investment -- and expands access to related Georgia Tech programs.

"With money so tight now in the Department of Defense, we have to take advantage of every opportunity we have to get more for our money," said John Davis, chief of the MICOM Manufacturing Technology Division.

Manufacturing research and development efforts with the MARC consortium will directly benefit MICOM's programs, Davis noted.

Through flexible manufacturing research and development projects at Georgia Tech, MICOM will

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benefit from private sector businesses which learn how to make both military and commercial items on the same production line, he explained. This will broaden and sustain the defense production base, ultimately reducing the cost of military systems.

By allowing a new technology to be demonstrated in MARC's manufacturing environment prior to production, vendor-level companies associated with the consortium -- and graduate-level students who will work on such research projects -- will gain new knowledge they can take into the workplace, Davis pointed out. That knowledge also will ultimately benefit Department of Defense production needs.

MICOM's Manufacturing Technology Program currently focuses on flexible manufacturing systems for missile electronics and seeker/sensor components fabrication and assembly.

"What they are doing at the MARC is directly related to our interests," Davis said. "They're involved not just in basic research, but also in efforts which develop new manufacturing processes and equipment. Being a member of the consortium will greatly enhance our work in microelectronics and photonics here and will help reduce future Army weapon systems production costs. It will also provide another opportunity for the rapid insertion of new technology into military systems."

MICOM's Manufacturing Technology Division is responsible for planning, developing and implementing projects that advance the state of the art in manufacturing processes, equipment, procedures and methodologies to ensure that missile system end items and components can be affordably produced.

Dr. Michael J. Kelly, director of the Manufacturing Research Center, said the Center encourages cooperation and interaction across a wide range of disciplines at Georgia Tech. It also provides an environment for expanding interaction between scientists and engineers from both the university and industrial sectors.

"The Manufacturing Research Center has as one of its major objectives to create an environment for cooperation among people who have technology interests that satisfy both the industrial and the military interests of the country," he noted.

With its broad range of education and

research programs, Georgia Tech can provide the resources needed to advance electronics manufacturing in the United States, Kelly said. By providing a neutral environment open to all the applicable disciplines, the Center can facilitate the cooperation necessary to tackle tough issues, he suggested.

While research is one of the Center's primary goals, Kelly believes the program offers tremendous benefits to industry by educating a new generation of broadly-based engineers and scientists who can take a "systems approach" to manufacturing issues.

"One of the major successes of the Manufacturing Research Center will be to produce people who have a broad view of technology, and, as a consequence of working together, can transfer that technology to areas that can benefit from early exploitation," he added. "I think that Georgia Tech has the potential, more than a lot of other universities, to produce a shift that results in a greater focus on the needs of industry, and in the process, provides improved educational opportunities."

The Fuller E. Callaway, Jr. Manufacturing Research Center was established in 1987 to concentrate interdisciplinary expertise on advanced manufacturing processes for the electronics industry. With a \$15 million grant from the State of Georgia and support from its member companies, the Center has recently completed a 120,000 square foot laboratory and office building to house the effort. A ribboncutting was held November 8 to open the building.

MARC research projects have already begun in packaging and interconnection technology, materials and processes, and factory systems.

The Center's research program will build on other manufacturing-related research and education programs at Georgia Tech. These programs include the Material Handling Research Center, the Computer-Integrated Manufacturing System (CIMS) program, and the Microelectronics Research Center.

NOTE: A news release is also available on Dr. Michael J. Kelly, the new director of the Manufacturing Research Center.