

▪ Cultivating Innovation ▪

DETROITER

A Publication of the Detroit Regional Chamber

DETROITCHAMBER.COM NOVEMBER 2007



The Art of Support

Business leaders help innovate the DIA

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Lawrence Tech has long been a regional leader in applied research in the fields of materials, structures, energy and automotive engineering, but now the university is garnering national attention with the Center for Innovative Materials Research (CIMR).

With a concentration on applied research, CIMR will be an important resource in developing technologies that have commercial application by Michigan industry.

The \$3.2 million, 7,200 square-foot laboratory features a 30-foot clearance height and a 25,000-pound crane to accommodate the testing of full-scale structural components, such as portable battlefield bridges up to 60 feet long and 15 feet wide.

Researchers will be able to test static and impact loads of up to one million pounds, and a high-temperature fire chamber (up to 2,300°F) will make it possible to investigate how conditions similar to those of 9/11 affect the critical structural components of buildings and other structures. A vertical reaction wall will allow the simulation of structural responses to seismic activity.

For more information, contact Mark Brucki, director of technology partnerships at Lawrence Tech University, at 248-204-2310.

A Civil Engineering Hero

Nabil Grace has made a career out of innovation. As the chair of the Department of Civil Engineering and director of the Center for Innovative Materials Research at Lawrence Tech University, Grace has made groundbreaking strides in civil engineering. His research has centered on combining carbon and glass fibers and resulted in a patented ductile hybrid fabric. The invention can be used to replace steel in the concrete structure of bridges to eliminate the corrosion damage caused by salt and other chemicals prevalent in climates with harsh winter conditions. His invention has the potential to double the lifespan of most bridges and reinforce other existing buildings.



In 2005 the U.S. Army took note of Grace's research, recognizing the potential for military applications. Lawrence Tech, the Army Research Laboratory and the U.S. Army Tank Automotive Research, Development and Engineering Center began a five-year, \$11 million agreement that included funding for the construction of the Center for Innovative Materials Research.



▲ Top Lawrence Tech student Charles Azabir works on a project. Students receive a very hands-on education at Lawrence Tech.

▲ Below Director of the Center for Innovative Materials Research Nabil Grace (right) helps Lawrence Tech students work on the innovative material that will strengthen bridges and other structures.