$411,000 grant to fund robot-replacing technology

August 25 2004

Florida Institute of Technology and Univeristy of Dayton collaborate on grant

The tables are being turned on robots. Once feared to be stealing jobs from people, now robots will have jobs taken from them. A project of Florida Tech and the University of Dayton, funded by a $411,000 National Science Foundation grant, will create a new technology to replace robots in many automated assembly operations.

Dr. Pierre Larochelle, Florida Tech associate professor of mechanical engineering, and University of Dayton professors will create the ability to design these novel machines.

"To reduce costs, assembly line designers try to keep robotic manipulations on the assembly line as simple as possible," said Larochelle. "Typically, the robots have six or more motors that allow them to perform an infinitely wide variety of motions; these motors make robots expensive and challenging to program."

In this new project, researchers will create mechanical systems to accomplish the same tasks, but with only one or two motors. This creates better reliability and "a cheaper, lower maintenance alternative to robots," said Larochelle.

"Our objective is to create the capability to design new and innovative devices for the spatial assembly tasks that robots are doing thousands of

times a day," he said.

When completed, the project will result in significant contributions to the nation's automated manufacturing industries, providing a brand new tool to assembly line designers.

Source: Florida Institute of Technology