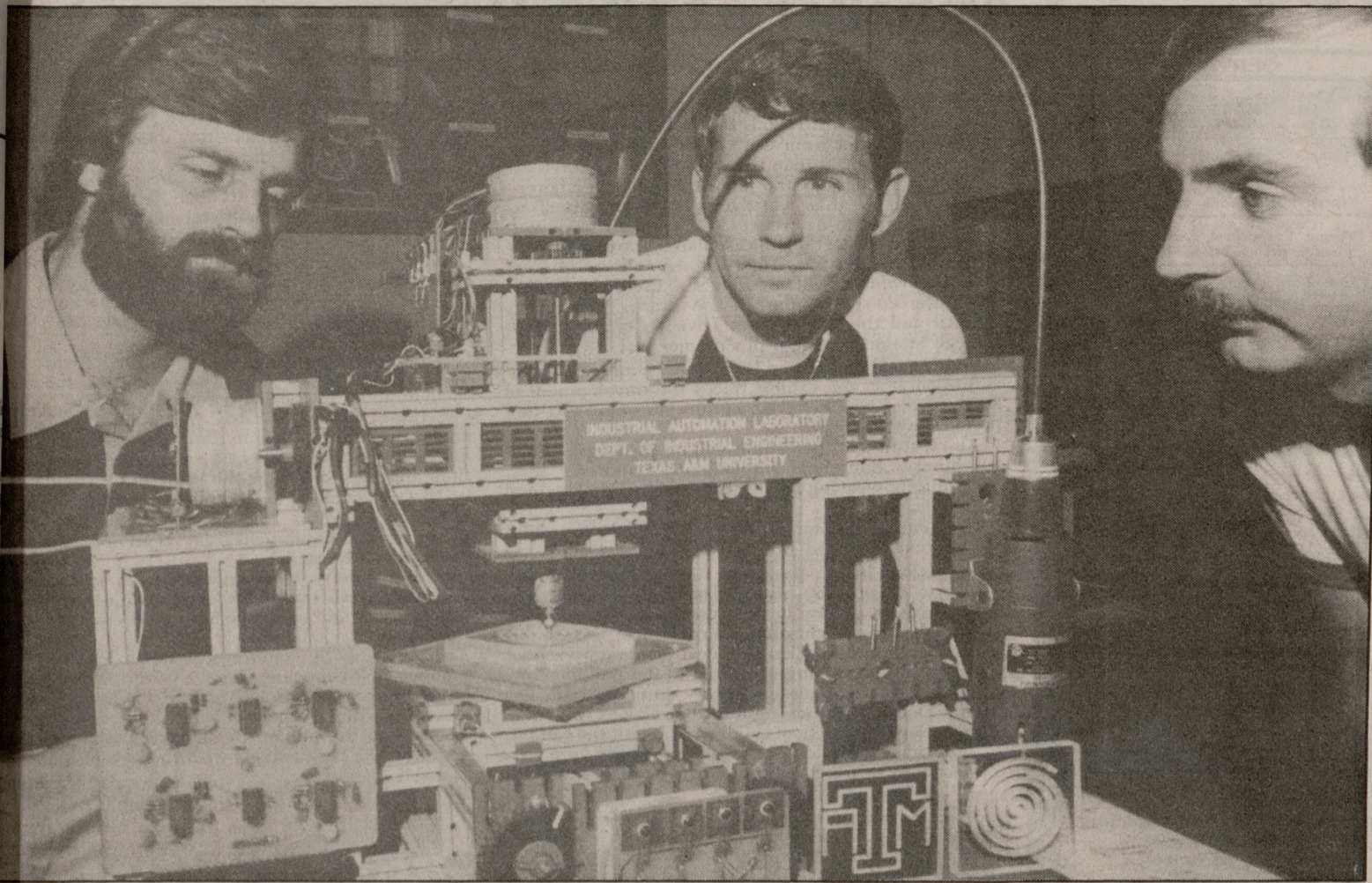


Local



Machine tools built with plastic parts made by a West German toymaker are being used in a Texas A&M engineering lab to simulate factory machines that cost millions of dollars. Dr.

Robert Young and graduate students Joe Morgan and John Campbell examine a plastic mechanical robot.

Tools to find hidden flaws

Industrial robots not toys

By KATHY O'CONNELL
Battalion Reporter

Snapping together plastic toy parts isn't just fun and games as a class of engineering students at Texas A&M University are finding out.

Playing with these toys can lead to understanding new tools used in industry — robots.

Dr. Robert E. Young, assistant professor of industrial engineering at Texas A&M, said there is a common misconception about industrial robots.

Most people see them as R2-D2 of Star Wars, or some other mechanical character of the silver screen.

He also said it's a misconception that robots take the place of humans.

"It's not like the robot takes the man's job, it usually upgrades the skill level," he said. "Everywhere you see a robot, there is someone working with it."

The plastic toy parts, purchased from a West German toymaker, are

being used to build models of factory machines, he said.

In terms of toys, he said, it's expensive, but in terms of building a full-scale model the project is inexpensive.

The cost of the Fischertechnik toys is \$1,000.

"What we're doing here at A&M is starting a manufacturing engineering program," Young said.

He said it's a joint program between engineering technology, industrial engineering and mechanical engineering.

Young said the responsibility of the industrial engineering department is along the computer manufacturing lines.

"Our responsibility," he said, "is to come up with the systems designs and techniques that will allow them to be integrated in automated systems."

"This means computer languages, computer simulation and physical models of actual factory machines."

The department is setting up an automated systems laboratory which will contain a miniature milling machine and multi-axis robot, Young said.

The milling machine was built with the plastic parts by Capt. Joe Morgan and John Campbell, both engineering graduate students.

Young said he's proud these students designed, built and wrote computer languages for the milling machine. The machine is now programmed to etch the Texas A&M logo, and what they jokingly refer to as an "Aggie ruler" on a square of plexiglass.

The "ruler" is actually a spiral design.

The machine, he said, enables students to get an idea of how a real milling machine works.

The multi-axis robot, which will be used to run the machine, is being built by two other students as a senior project.

Young said these "toys" will help

fill a gap in the manufacturing process.

The process to design equipment, he said, is to start with a mathematical model. From there, the models are computer simulated and the best system is chosen.

The final step is to construct the best design from plastic parts.

These procedures, developed from using the toy machines, he said, will allow designers to detect hidden problems.

BISD shows film Tuesday

The Bryan Independent School District Community Education advisory council will meet at 7 p.m. Tuesday in the Bryan Public Library.

The program will include the showing of a film "To Touch a Child." The public is invited to attend.

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Wine-tasting for KAMU Thursday

The Friends of KAMU will host a wine-tasting party from 7 to 9 p.m. Thursday at the Aggeland Inn to benefit Texas A&M University's radio and television stations.

The Friends of KAMU is a service-oriented group which assists the KAMU stations through volunteer services and fund-raising activities.

The party will be presented by the California Wine Institute and will include representative vintages of 16 different California and Texas wine-makers. Assorted cheeses, breads and fruits will be available to clear the palate between sips.

Tickets cost \$5 per person and may be obtained from members of

Friends of KAMU or by calling 845-5611. The following area merchants also have tickets: Hastings Books and Records, Prioriteas, First National Bank, Youngbloods, City National Bank and the Aggeland Inn.

All proceeds will go toward the purchase of programs for public broadcasting in the Brazos Valley.

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