

The "Berserker"  
trike on a test spin

INDUSTRIAL TECHNOLOGY  
STUDENTS TRAVEL

# Off-Road



A Cal Poly Industrial Technology instructor and graduate students of the Orfalea College of Business began testing the

RIDING COMFORT OF A newly developed off-road tricycle around campus on Feb. 15-16. Cal Poly Industrial Technology (IT) graduate and adjunct faculty member **Adam Stephens** designed a new long-travel, full suspension off-road tricycle as part of his graduate work while at Cal Poly.

IT Professor **Jay Singh** and his students from the Advanced Packaging Dynamics for Distribution course will apply distribution environment mapping technology, with the help of field data recorders donated by Lansmont Corporation, to test the trike for vibration and shock ruggedness. Singh has performed many studies mapping the shipping environments of packages in Asia, North America, South America and Western Europe, monitoring the temperature, humidity, pressure, vibration and shocks that packages often withstand.

Lansmont President **David Huntley** (Industrial Technology '96), is working closely with Singh and the students, providing SAVER™ field data recorders that will capture information on drop height, impacts, vehicle motion, vibration, temperature and humidity.

IT Area Chair and Professor **Lou Tornatzky** is excited about the trike and the team's use of an adaptive technology for alternative purposes.

"The SAVER™ sensors are normally used to monitor the distribution hazards packages often get exposed to," says Tornatzky. "By using packaging testing technology to test a human-powered vehicle, we're essentially 'packaging' a human being in an off-road bike."

Such observations, as on the effect of a rider's weight, surface conditions and "peddle-induced bobbing," will be made in relation to the performance of the bike.

Stephens fabricated the trike to absorb shock rather than the rider. For the frame, he used a standard aluminum alloy to keep the trike light, provide rigidity in an off-road environment and allow it to track well. The wheel spindles are made of high chromium stainless steel – traditionally used for machines.

"The stainless steel is a harder alloy and will take more abuse than typical steel, and it minimizes weight while being strong enough to support a single-sided axle," says Stephens. "The idea was to design a vehicle that would allow people with back problems the ability to navigate off-road terrain in comfort."

**Dave Huntley** (IT '96) was recently elected president of the Lansmont Corporation. He is the company's fifth president in 37 years, and the youngest.

Huntley is joined on the senior management team by **Peter Brown** (IT '91), vice president of operations, **Eric Joneson**, vice president of technology, and **Patti Monahan**, chief executive officer.

Huntley and his wife, **Teresa (Haberman) Huntley** (Recreation Administration '97), have a daughter, Caden.

The 26-year-old instructor says he suffers from chronic back pain from a disc he injured after jumping off of a sand cliff and missing a landing.

The "Berserker" trike sports two front wheels and one rear, all with their own shock absorbers. It also has a larger front wheel than most traditional tricycles. The handle bars are positioned under the seat, and riders pedal with their feet.