



## Tilt Table Complete

**T**hanks to funding from the Joseph Beggs Foundation, FSAE's new tilt table is finally complete. The design was finalized last spring after a MecE 460 Capstone Design Project completed the design.

The tilt table will be used to learn more about vehicle dynamics. By installing a scale under each wheel of the car and tilting the car to various angles, the height of the center of gravity can be determined. From this information, important design decisions regarding suspension

characteristics, anti-roll bar setup, driver positioning and component placement can be made. With a lower center of gravity, a car will be able to hold more speed in corners and will become more roll resistant.

The tilt table has the capability to tilt the car in both lateral and longitudinal directions and can tilt the car over 65° degrees in each direction. Tilting to this degree simulates a turn of approximately 1.5 lateral G's.



ABR '08 at a 45° tilt.

## Capstone Design Projects Wrap Up

Saturday, November 29 was a day every fourth year mechanical engineering student looked forward to. On this day, they were to give presentations on their Capstone Design Projects.

Three Formula SAE projects were designed by these groups. For 2010, the team will be using new Kevlar composite drive shafts with flex plates instead of CV joints. There will also be a new front suspension system with an adjustable anti-roll bar. The third project involved redesigning the segment of the chassis rearwards of the engine. The 2010 "stressed engine" chassis will use the engine as an integral part of the frame significantly reducing the weight and complexity of the car.

Congratulations to all the design teams!

## Marl Technologies Provides FSAE With Another Chassis

Marl Technologies has once again provided Formula SAE with profiled chassis tubes to aid in the fabrication process of the most vital part of the car. The support is much appreciated and saves team members upwards of 200 hours of fabri-

cation time.

Marl Technologies has been designing and manufacturing custom mobile geotechnical drill rigs since 1977. Marl Technologies has also supported Formula SAE since 2006. Thanks for the continued support!



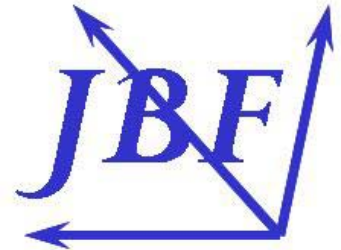
Profiled chassis tubes.



Thanks to our 2009  
Sponsors for their  
continued support!



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