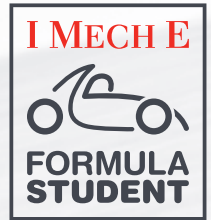


FORMULA STUDENT

Institution of Mechanical Engineers



Congratulations to the University of Bayreuth

FOR PARTICIPATING IN FORMULA STUDENT 2008

Winner
Best Use of
Composites
Award

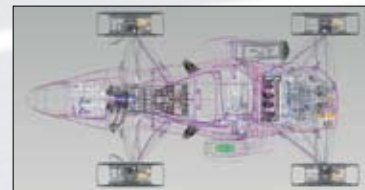
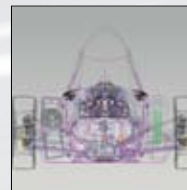
In spring 2004 a group of students from the University of Bayreuth founded Elefant Racing: the 8th German FSAE team. The name is derived from the Faculty of Applied Sciences' abbreviation FAN which shares its letter string with the clever and powerful animal.

The team took part in the three European competitions in 2006 and 2007 where it generally gained places in the upper midfield as well as winning some special awards.

With the 2008 FR8 Chromo, the team has developed a vehicle that firstly implements all successful concepts that were created and discussed last year as well as some evolutionary findings.

All major structural components are made with advanced composites, electronics offer maximum flexibility and freedom of solution design and the drivetrain with many modifications has become light and compact.

The main objectives of development were driveability, ergonomics, weight and maintainability. Although the design involves a high level of technology, the complexity has been kept low. The goal for this season is to present a highly competitive vehicle that has the makings of being a reference design in many aspects and that helps the team achieve a top 10 finish.



Length/width/height/wheelbase
2775mm/1380mm/1040mm/1550mm

Track (front/rear)
1200mm/1200mm

Weight including 68kg driver (front/rear)
129kg/138kg (full wet car weight of 199kg)

Suspension (front/rear)
Double unequal length CFRP/PMI foam composite A-Arm. Pushrod actuated horizontally oriented Oehlings DB shocks

Tyres (front/rear)
Goodyear D2692 20.0x7.0 - 13 R075

Wheels (front/rear)
6x13, single piece CFRP/
Aluminium honeycomb rim

Brakes (front/rear)
Student designed, laser cutted and ground; floating, friction ring out of 1.7225 steel, (3mm) 208mm OD - 108mm ID, floaters made from 7075 Aluminium, directly hub mounted, vented in front

Frame type
One-piece CFRP monocoque with quick-detachable/attachable powertrain platform, Prepreg CFRP, Aluminium honeycomb

Engine
2000, Honda CBR600F PC35,
modified to injection system

Bore/stroke/cylinders/cc
67mm x 45,5mm/4 cylinder/599 cc

Fuel
100 octane petrol

Fuel system
Proprietary design sequential injection using Bosch Motorsport MS3 Sport ECU

Max power/max torque
12,000rpm/9,500rpm

Transmission/differential/final drive
Secondary Gear/Torsion/5