



BRUIN: RACING

Information for Partners & Sponsors
2017-2018

A Letter from Our Director

Hello!

Thank you for taking the first step in becoming an official sponsor of Bruin Racing. We're very excited at the prospect of having you onboard.

Sponsors have a deep and personal relationship with Bruin Racing. They are more than just logos on our cars – they represent the future for our teams and members. The critical insight, technical experience, and support they present allow our teams to continue improving and striving to win. Our sponsors offer unique skillsets and knowledge bases, without which we cannot hope to see great success. While old knowledge can be passed down from senior members, new information must come from outside, and often it is our sponsors who bring it. Since they are so critical to our teams, we pride ourselves on showing our sponsors the appreciation they deserve and providing exceptional engineers upon graduation.

Bruin Racing is extremely pleased to have connected our dedicated team members and sponsors through a shared vision of success, learning, and pushing the vehicular envelope. Organizations like you allow us to continue competing and educating students year in and year out, and as such, we invite you to join the Bruin Racing family. From all of us on the team, thank you!

A handwritten signature in white ink that reads "Owen Hemminger". The signature is fluid and cursive, with a large, stylized "O" and "H". It is positioned over a background of faint, overlapping technical drawings of mechanical components, possibly car parts.

- Owen Hemminger | Director

What is Bruin Racing?

Bruin Racing is an undergraduate student organization that designs and builds vehicles for competition while educating, training, and providing hands-on experience for future engineers. We are comprised of three constituent clubs: Baja SAE, Formula SAE, and SuperMileage Vehicle. Each of these teams work to meet specific design goals, devising innovative solutions to the problems that arise when constructing a prototype vehicle, eventually competing on the international level. By taking on these challenges, our members learn how to work as a team and thrive in a fast-paced, demanding engineering environment.

Outside of competitions, Bruin Racing promotes interest and experience in STEM by showcasing our cars and projects at campus events to encourage younger students to pursue careers in engineering. In order to help new members gain practical engineering skills, we host a training program in machining and computer-aided design practices. Additionally, the Bruin Racing Business Team provides students with the opportunity to gain experience in accounting, procurement, and management while learning how to communicate with partners in industry. All teams are open to any UCLA student, and actively recruit students from a broad variety of majors.

Through our constituent clubs, we aim to provide a real-world, team-oriented, and project-based experience to UCLA students, preparing them for workplace and industry challenges. Bruin Racing is the source for responsible, capable, multi-talented engineers, scientists, and business-people ready to face real-world challenges.

Our Formula Team-



Training Program

Here at Bruin Racing, our team places a strong emphasis on education. These programs not only teach students the skills to be effective team members, but also provide accelerated hands-on experience. Our program easily complements the theoretical knowledge learned in the classroom and provides students with a well-rounded education.

Training begins with learning practical tools such as SolidWorks and machining, and continues as new students are guided by experienced members through the design and manufacturing of vehicle subsystems. The training program is tailored to members with no experience and the course itself spans ten weeks, culminating in a final design challenge.



Our Administrative Team



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He Kai Lim
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Baja Model XIV

Suspension

11.5" Ground Clearance

10" Wheel Travel with 4" Static Droop

45:55 Lateral Weight Distribution

33:67 Wheel Rate Distribution

Driver Interface

Custom Floating Rovers

Custom Steering interface

Powertrain

0.68 gear ratio, theoretical top speed of 38mph

Custom linear actuation differential lock

Electronic Continuous Variable Transmission (ECVT)

Electromechanical sheave activation

Basis for Custom CVT (2019)

Launch Control

Chassis

Custom tubular space frame

Carbon fiber body panels

Data Acquisition

ECVT controls system

Custom Dynamometer

Torque and horsepower curve

Brake and throttle sensing



Formula Model IV

Chassis / Suspension

4130 Chromoly Steel Space Frame
Double Wishbone Pushrod Suspension
Ohlins TTX-25 shocks
50/50 Front/Rear Weight Distribution
Total Wet Weight: 380lb

Powertrain

2017 Yamaha YZ450FX Engine
Fuel Injection TBD
Koso 32mm throttle body
Custom 3D printed nylon intake
Supertrapp muffler

Drivetrain

Drexler FSAE Differential
3.23:1 drive ratio
7' Inside Turning Radius
Short-ratio Steering Rack (1.96:1)

Controls

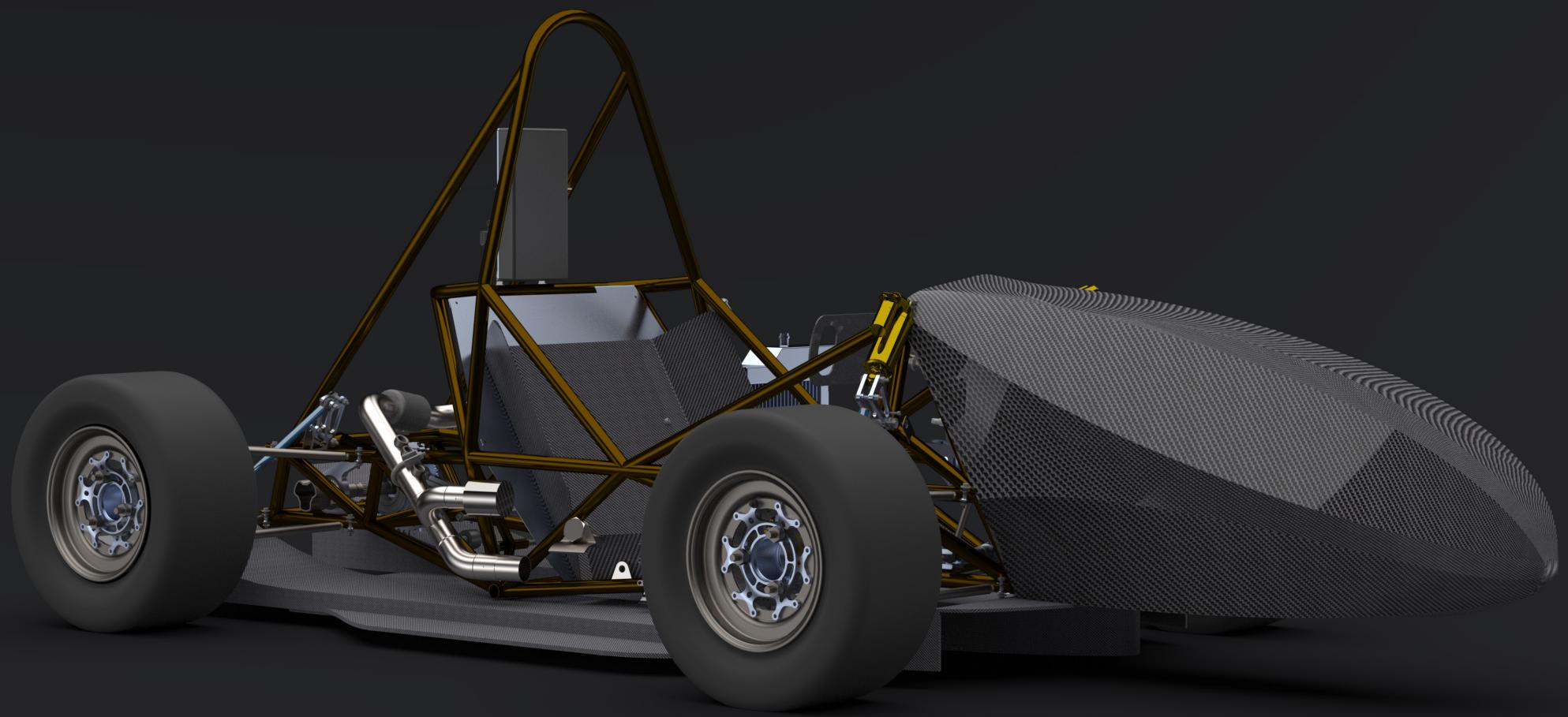
Custom Pedal Box Assembly
Rekluse Core EXP 3.0 Clutch Kit
Trailtech Vapor Dash
Custom Poured Foam Seat Insert
On-Board DAQ

Steering & Brakes

Full Floating Steel Rotors
Wilwood GP200 and PSI Calipers
7' Inside Turning Radius
Short-ratio Steering Rack (1.96:1)

Aerodynamics

Carbon Fiber Nosecone, Undertray
25 lbf downforce at 40MPH
0.78 Drag Coefficient



SuperMileage 2016

Structure

21 lb gross weight carbon fiber monocoque

Teardrop aerodynamic shape

Drag coefficient: 0.11

Total length: 8.5 feet

Total weight: 95 lbs

Steering and wheels

20" BMX wheels

Michelin prototype tires

Ceramic bearings

Ackermann steering system

Drivetrain

Dual engine compatibility: (1) & (2)

(1) 35.8cc, 1.3 HP Honda GX35 Engine

(2) Custom 53cc Briggs & Stratton Junior 206

Gear ratio: 1:10.7

In-house built EFI system

Electric Vehicle

500W rear geared hub motor

48V Li-Ion battery

Custom BLDC motor controller

Integrated BMS



Our Sponsorship Plans

Platinum | \$10,000 and up

Decal on team trailer, appreciation pack, and all other benefits

Gold | \$7,500 to \$9,999

Logo on team banner and sponsorship packet, photo opportunity with race vehicle(s), all benefits below

Silver | \$5,000 to \$7,499

Info Session with Bruin Racing, resume book upon request, all benefits below

Bronze | \$2,500 to \$4,999

Decal on race vehicle(s), team photograph, all benefits below

Carbon | \$1,000 to \$2,499

Recognition on website, all benefits below

Friends & Family | up to \$999

Invitation to annual Bruin Racing Dinner, personal networking with members, t-shirt.

We also accept sponsorship through manufacturing, tooling, composites, complex components, etc.

Goals & Growth

Bruin Racing is always looking towards the future. We aim not only to improve our competition results and the performance of our cars, but to also relentlessly advance our members' experiences, technical ability and post-graduate networking possibilities.

With 99% of our alumni working in their respective field or continuing their studies through post graduate education, our members' success is of utmost importance to our organization. To ensure our members' continued post-Bruin Racing success, close relationships with our sponsors is key. After becoming an official Bruin Racing sponsor, expect regular contact from our team as we update you and your organization with our progress, successes and opportunities!

Besides improving our competitive performance and members' experience, Bruin Racing also aims to expand our club's financial means to enable our team's to overcome engineering challenges without financial limitations. While financially one of the largest clubs on UCLA's campus, we still run into budgeting constraints. Our cars and associated expenditures are only increasing as our club increases in size and grows in ability.

We hope that our sponsors can help Bruin Racing achieve and exceed our financial goals.

Contact Us!

Visit Us in Person!

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Thanks to our Sponsors!



