Carnegie Mellon Racing

Sponsorship Information Packet

2009 Race Year

WHAT IS CARNEGIE MELLON RACING?

Carnegie Mellon Racing is the student chapter of the Society of Automotive Engineers at Carnegie Mellon University. Student members are given the opportunity to participate in SAE's Collegiate Design Series. SAE has a long and proud history at Carnegie Mellon. A student organization for more than 50 years, it predates almost every society and organization on campus, and even the university's current name. Membership has seen significant growth in the past seven years, spurred by involvement in the Formula SAE competition. Carnegie Mellon Racing's 2008 entry, CMR079, has set new performance benchmarks for the group. Recent entries in Formula SAE have yielded the best results to date, affirming Carnegie Mellon Racing's strong competitive history. (Carnegie Mellon Racing has been a powerhouse team in both Walking Machine and Micro-Truck Baja in years past.) With an annual budget of more than $40,000, Carnegie Mellon Racing relies entirely on corporate sponsorships and in-kind donations to succeed in the Collegiate Design Series. The program offers students a unique opportunity to conceptualize, design, fabricate, test, and competitively race their cars, and to defend their ideas in an educational setting. Many alumni have gone on to successful careers in automotive engineering and related fields. The quality of an engineering education at Carnegie Mellon ranks with best in the world, but there is no substitute for real-world experience. Carnegie Mellon Racing offers a fusion of academic learning with a real-world challenge. Your help will ensure the viability and success of a program that not only affords the opportunity to apply knowledge in a hands-on way, but also promotes creativity, problem solving, and team building. Additional information about Carnegie Mellon Racing can be found at http://www.andrew.cmu.edu/org/sae.

WHAT IS FORMULA SAE?

Formula SAE is a component of the Society of Automotive Engineers Collegiate Design Series. Through local chapters of SAE at universities around the world, students design, analyze, and fabricate small, open-wheel race cars while adhering to a set of specifications and regulations. These regulations mainly serve to promote safety and challenge students to try new and innovative ideas. In total, over 200 schools worldwide compete in competitions held in the United States, Japan, Australia, Brazil, Italy, and Germany. Each competition spans several days and features a variety of static and dynamic events. The static events feature industry experts who judge the competing cars'

design, cost, and marketability. The dynamic events test the cars' abilities in acceleration, cornering, and an autocross. The event culminates in the endurance competition, in which the cars must complete a 22 lap race of a 1km circuit, with a driver change at the halfway point. Carnegie Mellon Racing will be entering its eighth Formula SAE competition in May of 2009, with the intention of exceeding all previous years' results.

CARNEGIE MELLON RACING: 2008 RECAP

CMR's entry in 2008, CMR079, was an iteration of the previous year's design which placed 12th of 89 in the design competition at Formula West in 2007. The previous year's car failed in the last stage of competition due to overheating in 100-degree temperatures. CMR079 shed eleven pounds from the previous year and featured new innovations in suspension, engine, and ergonomics.

With the new machining equipment acquired in the 2006 season thanks to Ford Motor Company, the Chemical Engineering Department, and the Mechanical Engineering Department, CMR outfitted their professional grade machine tools, including a DRO Bridgeport mill and two lathes, with indicators, end mills, and other machine tools. The manufacturing and fabrication quality has improved significantly, allowing the organization to create parts with extreme precision.

CMR's New Garage

The 2008 season started in the fall of 2007 with the testing of new suspension, ergonomic, and power management components. Ultimately, CMR was able to apply their test data to the design and construction CMR079, which members agree to be CMR's best-designed car to date.

Many members of CMR won grants from the Carnegie Mellon Undergraduate Research Office for the design of various systems on the car. These systems were presented at the Meeting of the Minds research symposium at the end of the academic year, along with dozens of other undergraduate research projects.

Due to conflicts with final exams, we arrived at Michigan International Speedway for competition later than we had hoped. After arrival, some minor issues kept CMR079 stuck in the thorough inspection process. As a result, we were unable to run in the acceleration and skidpad events. After resolving the issues in inspection, we were able to

compete in the autocross event. However, a malfunctioning throttle position sensor kept us from posting a competitive time.

CMR079 takes the checkered flag

After replacing the faulty sensor, we were prepared to run in the 22km endurance event. Due to our autocross score, we were placed in the slowest run group. However, drivers Jimmy Chow and Neel Nayak were finally able to show off the potential of CMR079 by passing car after car on the 1km course. The car successfully completed the 22-lap event without any issues, a feat that less than half of the competitors were able to accomplish. In fact, Jimmy and Neel were able to post a highly competitive time, placing 26th out of 104 entrants. Our final score placed us in 53rd.

Although the 2008 competition did not go as smoothly as planned, we were impressed with the performance of CMR079. The car's finish in the endurance event proved that we resolved the reliability issues that have plagued us in the past. And as our valuable veteran members graduate, the newer members of the team had learned valuable lessons from the 2008 FSAE season and are eager for the start of the 2009 season.

CARNEGIE MELLON RACING: 2009

It is the target objective for the upcoming season to complete construction of the 2009 car by late winter. This will allow us to comprehensively test our car for optimal performance and to develop our drivers. In the past, CMR has tested at local racetrack BeaveRun as well as the Ford, Chrysler, and GM Proving Grounds. The 2009 season has started earlier than ever before with the design phase beginning only weeks after the completion of the 2008 season.

Another objective for the 2009 season is the active recruitment of new members. In previous years, the recruitment phase lasted only a month in the fall semester. We plan to expand our recruiting regimen with advertised testing days on campus, a higher-profile Unveiling in the spring, and advertising to students outside of the Mechanical Engineering Department. It is our goal to double the membership of our organization within the next four years and to create a "fanbase" for our team around campus.

With a strong plan for improving our points and standing, we are extremely motivated and confident that the 2009 FSAE season will be our best.


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SPONSORSHIP OPPORTUNITIES AND RECOGNITION

Carnegie Mellon Racing receives all of its annual funding from corporate sponsors outside the University. Thus we've developed a set of sponsorship levels from which donors may choose. For the 2009 Formula SAE competition, Carnegie Mellon Racing is implementing the following levels of sponsorship:

Title Sponsor: Reserved for only one sponsoring organization that donates at least $15,000 in one academic year. The Title Sponsor will be identified as such wherever Carnegie Mellon Racing appears in print publications. Title Sponsors will receive all the benefits of Gold level sponsors below as well as prominent logo placement on the car.

Tartan Sponsor: Sponsor donations totaling over $7,500 per academic year. Benefits include prominent recognition on all Carnegie Mellon Racing publications throughout the year (which the sponsor will also receive), invitations to participate in design reviews, the annual Unveiling, other on-campus events, and the Formula SAE competition, as well as placement of the sponsor's logo in large font in at least two locations on the car and in medium font in at least two locations. Team memorabilia is also available on a limited basis and will include the donor's company logo.

Gold Sponsor: Sponsor donations totaling more than $2500 per academic year. Benefits include logo recognition on all Carnegie Mellon Racing publications, invitations to the annual Unveiling and the Formula SAE competition, and placement of the sponsor's logo in medium font in at least two locations on the car and in small font in at least two locations. Team memorabilia is also available on a limited basis and will include the donor's company logo.

Silver Sponsor: Sponsor donations totaling more than $400 per school year. Benefits include text recognition on all Carnegie Mellon Racing publications, which the sponsor will also receive, an invitation to the annual Unveiling and at least two small sponsor logos on the car. Team memorabilia is also available for purchase at team prices and will include the donor's company logo.

Friends of Carnegie Mellon Racing: Sponsor donations of less than $400 per school year. Benefits include recognition on Carnegie Mellon Racing's website, a subscription to all Carnegie Mellon Racing publications, and an invitation to the annual Unveiling. Team memorabilia is also available for purchase at team prices.

Carnegie Mellon Racing

Carnegie Mellon Racing - 2009 Sponsorship Packages					
	Friends of CMR	Silver	Gold	Tartan	Title
Donation Level	<$400	$400-2499	$2500-$7499	$7500-$14999	>$15000
Logos on Car	-	**2x Small**	**2x Medium 2x Small**	**2x Large 2x Medium**	**2x Ex. Large 2x Large**
Newsletter & Email Updates					
Logo Placed on Website					
Invitation to Unvieling Ceremony					
Logo on Team Shirts					
Free Team Memorabilia					
Invitation to Design Reviews					
Logo Included with all CMR Publications					

Without the continued support of our sponsors, Carnegie Mellon Racing would be unable to continue building a tradition of excellence in Formula SAE. We thank you for your consideration.

Please send all sponsorship inquiries to:
carnegie-mellon-racing@andrew.cmu.edu

Scaife Hall 302 | 5000 Forbes Avenue | Pittsburgh, PA 15213
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Carnegie Mellon Racing

Carnegie Mellon Racing Predicted Operating Budget – 2009

	2008 Budget	2009 Budget
Operating expenses		
Car Components		
Chassis/Suspension Group		
Chassis	$600	$900
Suspension	$2,400	$2,400
Steering	$550	$550
Brake System	$1,800	$1,800
Drivetrain	$2,500	$2,500
Wheels and Tires	$800	$500
Engine Group		
Intake and Fuel	$1,000	$1,000
Exhaust	$500	$500
Cooling	$700	$700
Electronics	$2,500	$1,600
Engine	$2,000	$4,000
Ergonomic/Body Group		
Pedals & Shifter	$250	$250
Body & Seat	$2,800	$3,400
Miscellaneous and Safety	$150	$150
Total	**$18,550.00**	**$20,250.00**
Competition Expenses		
Competition Entry	$1,000	$1,000
Truck Rental	$900	$900
Gas Reimbursment	$300	$500
Hotel Rooms	$2,000	$2,000
Team Dinner	$0	$0
Design Posters	$100	$100
Driving day/trip	$500	$500
Emergency Fund	$900	$900
Total	**$5,700.00**	**$5,900.00**
Continuous Improvement		
Garage Tools	$500	$500
Gasoline	$250	$400
Garage Supplies	$300	$300
Shop Tooling	$1,000	$1,000
Computer Supplies	$100	$100
VD Instruments	$0	$500
Total	**$2,150.00**	**$2,800.00**
Group Development		
Events	$0	$500
Sponsorship	$500	$500
Custom Outerwear	$500	$750
Custom Posters	$0	$250
Total	**$1,000.00**	**$2,000.00**
Total operating expenses	***$27,400***	***$30,950***
Total Revenue		
Donations	$30,000	$40,000
Membership Dues	$700	$1,000
Total	***$30,700***	***$41,000***
Debt Carried	***-$4,700***	***-$1,400***
End of Fiscal Year	***-$1,400***	***$8,650***

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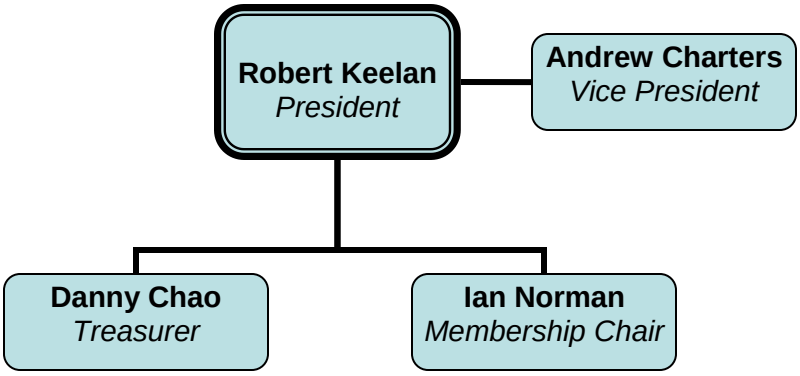
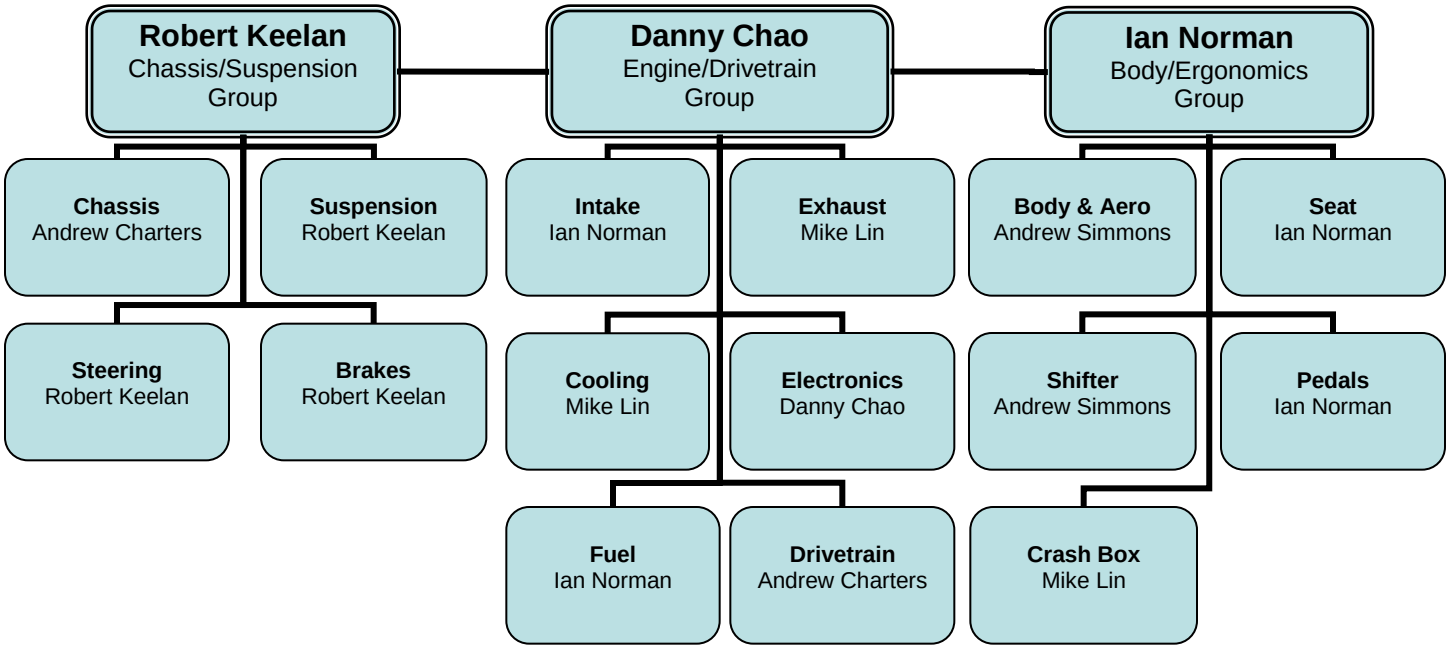
Society of Automotive Engineers

Carnegie Mellon University
Executives Organization Chart



Formula SAE

Carnegie Mellon Racing
Formula Development Chart



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2009 Group Leaders

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