



# Collegiate Design Series News

Volume 4, Issue 7 October 2007

## Issue Highlights

2008 SAE Collegiate Design Competition Schedule ..... 1  
 New Registration Requirements for 2008 ..... 2  
 2008 Formula SAE Registration..... 3  
 Collegiate Design Series Website Revision ..... 3  
 2008 Baja SAE® Event Programs..... 3  
 Important Announcement for AMB Customers..... 4  
 SAE International Book Catalog Highlight ..... 5-7

## 2008 SAE Collegiate Design Competition Schedule

Don't forget registration for all 2008 SAE Collegiate Design Series events opens Monday, October 1, 2007 at 10:00 AM Eastern Daylight Time. Please keep in mind that the majority of the CDS events reach their maximum capacity quickly so be sure to register as soon as possible. Maximum team limits as well as registration fees are listed below.

To access the registration page online; please visit: <http://students.sae.org/>. A complete schedule can be found under the 2008 Competition Date and Registration Information link.



| Event  | Team Limit | 2008 Fee       |
|--|------------|----------------|
| March 10 – 14, 2008<br><b>Clean Snowmobile Challenge</b><br>Location: Keweenaw Research Center - Houghton, Michigan    | 20         | \$500.00 USD   |
| April 4-6, 2008<br><b>SAE Aero Design West</b><br>Location: Fort Worth, Texas  | 65         | \$450.00 USD   |
| April 18 – 20, 2008<br><b>SAE Aero Design East</b><br>Location: Marietta, Georgia                                      | 65         | \$450.00 USD   |
| April 23 – 26, 2008<br><b>Formula – VIR</b><br>Location: Virginia International Raceway - Danville, Virginia           | 50         | \$1,000.00 USD |
| May 1 – 3, 2008<br><b>Baja SAE Tennessee</b><br>Location: Tennessee Tech University - Cookeville, Tennessee            | 100        | \$600.00 USD   |
| May 5 – 7, 2008<br><b>Formula Hybrid</b><br>Location: New Hampshire International Speedway - Loudon, New Hampshire     | Unlimited  | \$750.00 USD   |
| May 13 – 18, 2008<br><b>Formula SAE</b><br>Location: Michigan International Speedway - Brooklyn, Michigan              | 120        | \$1,000.00 USD |
| May 29 – 31, 2008<br><b>Baja SAE Illinois</b><br>Location: Edwards Demonstration Center - Edwards, Illinois            | 115        | \$600.00 USD   |
| June 5 – 6, 2008<br><b>SAE Supermileage</b><br>Location: Eaton Proving Grounds - Marshall, Michigan                    | Unlimited  | \$350.00 USD   |
| June 11 – 14, 2008<br><b>Baja SAE Montreal</b><br>Location: Ecole de Technologie Superieure - Montreal, Quebec, Canada | 120        | \$600.00 USD   |
| June 25 – 28, 2008<br><b>Formula West</b><br>Location: California Speedway - Fontana, California                       | 80         | \$1,000.00 USD |

### Editors:

Kaley Shellhammer  
Samantha Jeswald

Please if you have submissions or ideas for news, contact us at: [collegiatecompetitions@sae.org](mailto:collegiatecompetitions@sae.org)

## New Registration Requirements for 2008

In an effort to expedite onsite registration at all events, the SAE Collegiate Design Series Staff has implemented a new process for 2008 registration. All participating team members are now required to submit their credentials on the SAE website prior to the competitions.

Once a team has registered online for their desired event(s), all participating team members and faculty advisors must affiliate themselves to their respective school / college / university on the SAE website. You can confirm or correct your affiliation by going to [www.sae.org](http://www.sae.org) and logging into "My SAE" with your username and password. If you do not have a current username, you will need to create one by selecting the "Need a User ID and Password to Login?" link. If you are already an SAE member, select the "MyMember Info" button and then select the "Update School Information" link. You will then be prompted to update your education information.

If you are not an SAE member, go to [www.sae.org](http://www.sae.org) and select the "Join SAE / Membership Renewal" link under "Quicklinks", then select the "Join SAE" link under "Join SAE International". Students will need to select the "Student Membership" link and then follow the series of questions that are asked. Faculty members that wish to become an SAE member should choose the "Professional Membership" link and proceed to the series of questions. Please note all student participants must be an SAE member to participate in the event.

Once an SAE member number has been obtained and participants have linked themselves to their respective school, all affiliated students and faculty must complete the following information on the SAE website:

- Medical insurance (provider, policy/ID number, telephone number)
- Driver's license (state/country, ID number)
- Emergency contact data (point of contact – parent/guardian or spouse – relationship, phone number)

To do this you will need to go to Student Central on the SAE homepage, then click on the "2008 Competition Date and Registration Information" link under "Student Competitions". Proceed by selecting the "Competition Schedule/Registration" link and then the event(s) you wish to register for. Choose the "Register" link (or "UpdateTeam Info" link if after December 27, 2007) next to your desired competition(s) and then select your team link to add yourself to the team profile. The "Add New Member" button will allow individuals to include themselves with the rest of the team. Please be sure to bring hard copies of your driver's license or passport as well as your medical insurance card to onsite registration for verification purposes.

All international student participants, or unaffiliated faculty advisors, who are not SAE members are required to complete the International Student Participation form per team found under "General Information" on the event specific webpage. Upon completion, email the form to [CollegiateCompetitions@sae.org](mailto:CollegiateCompetitions@sae.org).

All students, both domestic and international, must affiliate themselves online or submit the International Student Registration form by February 28, 2008. For additional assistance, please contact [CollegiateCompetitions@sae.org](mailto:CollegiateCompetitions@sae.org).

**PLEASE NOTE** when a team is registering for an event on or after October 1, 2007, only the student or faculty advisor completing the registration needs to be linked to the school. All other students and faculty can affiliate themselves after registration has been completed, however this must be done on or before February 28, 2008.

Also please note if credit card does not process, SAE will be contacting you for other payment within 30 days. If the team fails to pay within 30 days, the result will be cancellation of team's registration.

## 2008 Formula SAE Registration

This is a reminder about registration for the 2008 Formula SAE competitions

**Dates and Registration Limits** – Next year's Formula SAE competition schedule is:

**2008 Formula SAE at VIR**, Virginia International Raceway, Alton, VA – Wednesday, April 23 through Saturday, April, 26, 2008 – Limited to 50 teams

**2008 Formula SAE**, Michigan International Speedway, Brooklyn, MI – Wednesday, May 14 through Saturday, May, 17, 2008 – Limited to 120 teams

**2008 Formula SAE West**, California Speedway, Fontana, CA – Wednesday, June 18 through Saturday, June 21, 2008 – Limited to 80 teams

**Multiple Event Registration** – During the first month of the registration period teams may register for either Formula SAE or Formula SAE West – but not both. Additionally teams may simultaneously register for FSAE at VIR. Specifically, registering your team for both FSAE at VIR and either FSAE or FSAE West will be permitted during the first month of registration. After the first month of registration teams may register for any competition at which space is available.

**Registration Fee** - The registration fee for each competition will be \$1,000. Registration must be completed on-line and the fee paid by credit card.

**Registration Opens** - Registration opens at 10:00 am EDT, Monday, October 1, 2007.

**Affiliation for Registration** - The student or faculty advisor who registers the team must be affiliated with the registering school in SAE's records. Students registering their teams must be members of SAE International.

More details on the registration procedures and policies are contained in the FSAE Rules.

## 2008 Baja SAE® Event Programs

The SAE Collegiate Design Series Staff is eager to announce that a 2008 Baja SAE® event program is currently being developed and will be distributed at all Baja events starting in Tennessee. Each program will contain information on every team that will be participating in any one of the three 2008 Baja competitions.

Please watch for future CDS newsletters as well as the Baja SAE Forum on what specific information will be requested to include in these books. Also, we will be asking for a photo of either the vehicle or the team. We realize your new design for 2008 may not be complete before the photo submission deadline however if you wish to submit a picture of last year's vehicle that would be acceptable. Again, further instructions will be released in regards to what exactly SAE needs from the teams. Stay tuned!!

## Collegiate Design Series Website Revision

Currently under construction is a revision for the existing Collegiate Design Series website. Over several years it has been noted that our website is not user-friendly and too often items get buried within the website. Along with the IT staff, the CDS staff has been working on revamping the website with better navigation, information and design. The roll out of this website has been pushed to January 2008 to allow teams to keep the familiarity of current website until registration is closed.



## **Important Announcement for AMB Customers**

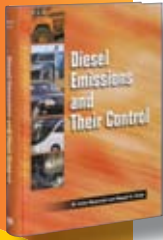
Dear Valued AMB Customer:

It has come to our attention that some customers are using abrasive detergents, high-pressure hoses, or even submersion in an effort to clean their transponders after use. Doing so can result in degradation of the transponder's circuitry and overall performance, and damage resulting from these practices will not be covered under warranty.

AMB transponders are designed to perform at an extremely high level in typical motor sports environments. However, they are still susceptible to damage when handled improperly. AMB recommends gently washing your transponders with clean tap water and allowing them to fully dry before attempting to charge them.

If you have any questions or would like further clarification on the proper cleaning and treatment of your AMB transponders, please feel free to contact us by phone or via email, or visit AMB's support site for more information.

AMB i.t.  
3200 Highlands Pkwy, #104  
Smyrna, GA 30082  
[www.amb-it.com](http://www.amb-it.com)  
877-426-2488 or 1-678-816-4000



**\$149.95**

### Diesel Emissions and Their Control

By Magdi K. Khair and W. Addy Majewski

This book will assist readers in meeting today's tough challenges of improving diesel engine emissions, diesel efficiency, and public perception of the diesel engine. It can be used as an introductory text, while at the same time providing practical information that will be useful for experienced readers. This comprehensive book contains more than 600 pages and is well illustrated with more than 560 figures and 80 tables.

584 pp., Hardbound 2006.  
ISBN: 978-0-7680-0674-2

**SAE Member Price \$119.96**

**Product Code: R-303**



**\$99.95**

### Automotive Engineering Fundamentals

By Richard Stone and Jeffrey K. Ball

The first and only book with extensive coverage of both active and passive safety systems, this second edition of the *Automotive Safety Handbook* describes basic relationships and new developments related to accident avoidance (including the man/machine interface) and mitigation of injuries. Examining the state-of-the-art in passenger car vehicle safety, the book features thorough discussion of the interrelationships among the occupant, the vehicle, and the restraint system (in frontal, lateral, and rear impacts and rollover).

612 pp., Hardbound 2004.  
ISBN: 0-7680-0987-1

**SAE Member Price \$79.96**

**Product Code: R-199**



**\$99.95**

### Automotive Safety Handbook,

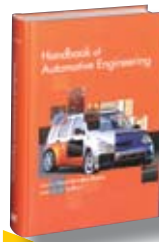
By Ulrich W. Seiffert and Lothar

The first and only book with extensive coverage of both active and passive safety systems, this second edition of the *Automotive Safety Handbook* describes basic relationships and new developments related to accident avoidance (including the man/machine interface) and mitigation of injuries. Examining the state-of-the-art in passenger car vehicle safety, the book features thorough discussion of the interrelationships among the occupant, the vehicle, and the restraint system (in frontal, lateral, and rear impacts and rollover).

306 pp., Hardbound 2007.  
ISBN: 978-0-7680-1798-4

**SAE Member Price \$79.96**

**Product Code: R-377**



**\$139.95**

### Handbook of Automotive Engineering

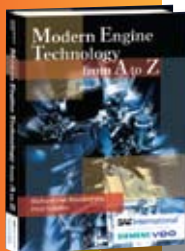
Edited by Ulrich W. Seiffert and Hans Hermann Braess

This latest edition and successor to the well-known German-language handbook last published by Professors Heinrich Buschmann and Paul Koessler comprehensively describes the fascinating world of the automobile and its development. Serving concurrently as a "time capsule" and a timely resource, this technical reference book covers all areas of automotive research and thoroughly examines the recent state-of-the-art and rapidly changing developments of the automobile. From powertrains and electronics to vehicle safety and future materials, this handbook provides the reader with wide-ranging insight into all assemblies, components, and systems of modern motor vehicles and the complete life cycle of the automobile.

1,641 pp., Hardbound 2005.  
ISBN: 0-7680-0783-6

**SAE Member Price \$111.96**

**Product Code: R-312**



**\$129.95**

### Modern Engine Technology from A-Z

By Richard Van Basshuysen and Fred Schaefer

Part dictionary, part encyclopedia, *Modern Engine Technology from A-Z* will serve as your comprehensive reference guide for many years to come. Keywords throughout the text are in alphabetical order and highlighted in blue to make them easier to find, followed, where relevant, by subentries extending to as many as four sublevels. Full-color illustrations provide additional visual explanation to the reader.

1,072 pp., Hardbound 2007  
ISBN: 978-0-7680-1705-2

**SAE Member Price \$103.96** **Product Code:**

**R-373**



**\$59.95**

### The Racing & High-Performance Tire: Using the Tires to Tune for Grip and Balance

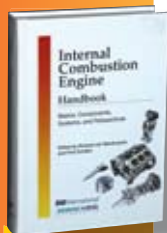
By Paul W. Haney

Based on 15 years of research on tires, Paul Haney's *The Racing and High-Performance Tire* presents clear, non-academic explanations of how and why tires really work. Writing that "the pneumatic tire is arguably the most complicated and useful device man makes," Haney (*Inside Racing*) provides new insight into topics such as the complexity of rubber, how a pneumatic tire generates grip, and how to tune grip and balance using the load sensitivity of tires.

286 pp., Hardbound 2003.  
ISBN: 0-7680-1241-4

**SAE Member Price \$47.96**

**Product Code: R-351**



**\$149.95**

## Internal Combustion Engine Handbook - Basics, Components, Systems, and Perspectives

*Edited by Richard Van Basshuysen and Fred Schäfer*

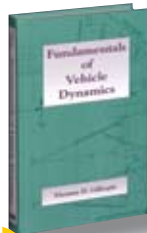
Thorough in its presentation, this essential resource illustrates the latest level of knowledge in engine development, paying particular attention to the presentation of theory and practice in a balanced ratio. Almost 950 pages in length - with 1,250 illustrations and nearly 700 bibliographical references - the *Internal Combustion Engine Handbook* covers all of this component's complexities, including an insightful look into the internal combustion engine's future viability.

An ideal publication for specialists in the automotive, engine, mineral oil, and accessories industries, this book will also prove to be useful for students, patent lawyers, the motor vehicle trade, government offices, journalists, and interested members of the public.

868 pp., Hardbound 2004.  
ISBN: 0-7680-1139-6

**SAE Member Price \$119.96**

**Product Code: R-345**



**\$79.95**

## Fundamentals of Vehicle Dynamics

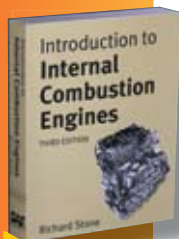
*Thomas D. Gillespie*

This book attempts to find a middle ground by balancing engineering principles and equations of use to every automotive engineer with practical explanations of the mechanics involved, so that those without a formal engineering degree can still comprehend and use most of the principles discussed. Either as an introductory text or a practical professional overview, this book is an ideal reference on the forces and factors affecting the movements of a vehicle accelerating, braking, ride, and turning.

519 pp., Hardbound 1992.  
ISBN: 1-56091-199-9

**SAE Member Price \$63.96**

**Product Code: R-114**



**\$59.95**

## Introduction to Internal Combustion Engines

**3rd Edition**

*By Richard Stone*

The most comprehensive, truly introductory text on internal combustion engines. A valuable reference for students studying the internal combustion engine and for engineers needing a practical overview of the subject, this third edition includes new material covering fuel chemistry, additive performance and variable geometry turbocharging.

660 pp., Hardbound 1999.  
ISBN: 0-7680-0495-0

**SAE Member Price \$47.96**

**Product Code: R-278**



**\$149.95**

## Automotive Lubricants Reference Book, 2nd Edition

*By Roger Frederick Haycock, Arthur J. Caines, and John Hillier*

This second edition also considers the recent phenomenon of increased consolidation within the oil and petroleum additive arenas, which has resulted in fewer people for research, development, and implementation, along with fewer competing companies. Of significant importance is the consideration that a more consolidated oil industry -- in need of greater and longer-term returns on investments -- may be less apt to respond to automobile manufacturers' requirements for rapid specification changes.

760 pp., Hardbound 2004.  
ISBN: 0-7680-1251-1

**SAE Member Price \$119.96**

**Product Code: R-354**



**\$175.95**

## The Standard Handbook for Aeronautical and Astronautical Engineers

*Mark Davies, Editor-In-Chief*

Containing contributions from more than 60 aerospace specialists - and edited by an internationally renowned aeronautical engineering expert and educator - this handbook frames the technological applications in a perspective that specifically addresses aircraft and engineering science. From basic engineering science and mathematics to astrodynamics, this book is the one-stop reference that all starting and experienced aerospace engineers need to take their work to new heights.

1,360 pp., Hardbound 2002  
ISBN: 0-7680-0915-4

**SAE Member Price \$140.76**

**Product Code: R-328**



**\$79.95**

## Race Car Vehicle Dynamics

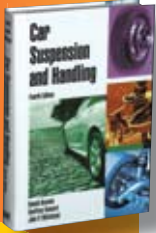
*By William F. Milliken and Douglas L. Milliken*

Chapters cover: The Problem Imposed by Racing; Tire Behavior; Aerodynamic Fundamentals; Vehicle Axis Systems; Simplified Steady-State Stability and Control; Simplified Transient Stability and Control; Steady-State Pair Analysis; Force-Moment Analysis; "g-g" Diagram; Race Car Design; Testing and Development; Chassis Set-Up; Historical Note on Vehicle Dynamics Development; Tire Data Treatment; Applied Aerodynamics; Ride and Roll Rates; Suspension Geometry; Wheel Loads; Steering Systems; Driving and Braking; Suspension Springs; Dampers (Shock Absorbers); and Compliances.

918 pp., Hardbound 1995.  
ISBN: 1-56091-526-9

**SAE Member Price \$63.96**

**Product Code: R-146**



**\$79.95**

## **Car Suspension and Handling, 4th Edition**

*By Geoffrey Howard, John Peter Whitehead, and Donald Bastow*

Originally published in 1980, this classic book has now been updated and expanded to make it invaluable for today's engineers.

Car Suspension and Handling, 4th Edition focuses on the suspension and handling of cars, or automobiles, as opposed to those characteristics of other types of road vehicles, while always recognizing that there are differences in suspension requirements for different classes of vehicles, and in various markets of the world for a given vehicle.

Through appendices and diagrams, Car Suspension and Handling, 4th Edition outlines the purpose and history of vehicle suspension systems, while defining the basic parameters of suspension geometry. In addition, the book delves into human sensitivity to vibration, and offers data on durability, tire background information, steering calculations and suspension calculations.

474 pp., Hardbound 2004.  
ISBN: 0-7680-0872-7

**SAE Member Price \$63.96**

**Product Code: R-318**



**\$79.95**

## **Chassis Design - Principles and Analysis**

*By William F. Milliken and Douglas L. Milliken*

*Chassis Design: Principles and Analysis* is based on Olley's technical writings, and is the first complete presentation of his life and work. This book provides insight into the development of chassis technology and its practical application by a master. Many examples are worked out in the text and the analytical developments are grounded by Olley's years of design experience.

676 pp., Hardbound 2002.  
ISBN: 0-7680-0826-3

**SAE Member Price \$63.96**

**Product Code: R-206**