SAE 2006 World Congress features unprecedented OEM participation

The new OEM/Supplier Park at SAE World Congress co-locates the five exhibiting OEMs and their Tier 1 suppliers in an area just outside the AVL Technology Theater. Suppliers exhibiting in this area will include Behr America, Benteler, Continental, Dassault Systèmes, Henkel, Hydro Aluminiun, Lear, Mollertech, Motorola Automotive, Plastic Omnium, Preh, Webasto Roof Systems, and Yazaki North America. The 2006 World Congress technical program will also feature record contributions from OEMs, with approximately one-third of all technical papers being presented by OEM technical staff.

Further indication of the importance of the SAE World Congress to the OEM community is the confirmation of the event’s host companies through 2008. DaimlerChrysler has agreed to host the 2008 World Congress, joining Toyota (host of the 2007 event), and BMW Group, this year’s host.

Hybrids conference draws sell-out audience

SAE’s World Congress has traditionally brought together OEMs and suppliers, and this year’s event will feature the strongest OEM presence ever. The new “OEM/Supplier Park,” debuting at the 2006 Congress, will conveniently co-locate OEMs and their Tier 1 suppliers in a single area just outside the AVL Technology Theater. Exhibits from a record five OEMs—BMW Group, DaimlerChrysler, General Motors, Motorola, and Toyota—will be featured there.

The park is designed to enable attendees to connect with the management and engineering staff in the upper echelons of the global automotive supply chain, view their most advanced and innovative technology, and learn of their future strategic direction.

Suppliers exhibiting in this area will include Behr America, Benteler, Continental, Dassault Systèmes, Henkel, Hydro Aluminiun, Lear, Mollertech, Motorola Automotive, Plastic Omnium, Preh, Webasto Roof Systems, and Yazaki North America. The 2006 World Congress technical program will also feature record contributions from OEMs, with approximately one-third of all technical papers being presented by OEM technical staff.

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SAE International’s annual Hybrid Vehicle Technologies Symposium continues to be one of the hottest industry events on the calendar. This year’s conference, held February 1-2 in San Diego, CA, was sold out weeks in advance and completely filled the large meeting room at conference headquarters, the Holiday Inn on the Bay.

Attendees credited the quality of presenters and breadth of their topics, along with excellent networking and postcard-perfect weather for the success of the event.

“I was quite engaging, with plenty of interaction between the panelists and the audience,” noted Csaba Csere, Editor-in-Chief of Car and Driver magazine and longtime SAE member. Csere’s presentation, “How Do the Hybrids Stack Up? (The View from the Lunatic Fringe)” was a highlight of the first day’s session.

A total of 20 topics were presented during the two-day event, which brought together leading experts representing OEMs, research firms, academia, government, and regulatory agencies currently involved with hybrid vehicle and technology development.

A media perspective of the world of hybrid vehicles was provided by Csere and Brad Berman, founder of the online publication HybridsDaily.com, who served as a discussion moderator.

The hybrids symposium was first held in 2004 and attendance has jumped steadily each year, keeping pace with the growing importance of the program.

SAE 2006 World Congress features unprecedented OEM participation

Morris speaks at Washington education briefing

Raymond A. Morris, Executive Vice President and Chief Operating Officer of SAE International, was invited to speak at a briefing of the House Science, Technology, Engineering, and Mathematics (STEM) Education Caucus on February 1, 2006, in Washington, D.C.

The meeting, attended by nearly 100 representatives from government, industry, and academia, was intended to receive input from the companies, trade associations, and nongovernmental organizations that support STEM education programs across the U.S. through curriculum development, classroom technology resources, teacher training seminars, and science competitions.

Morris, one of four speakers at the meeting, was the invited guest of House STEM Caucus Members Rep. Vernon Ehlers (R-MI), Rep. Mark Udall (D-CO), and Rep. Brian Baird (D-WA). The caucus was formed to raise awareness of issues affecting STEM education, provide information on these issues, and to serve as an information source and catalyst for improving science and math education. Don Ableson, 1999 SAE President, represents SAE on the caucus.

Morris spoke on SAE International’s A World In Motion (AWIM) program, a curriculum formed in 1990 as a way to increase student interest in math and science education. Since then, more than 2 million students and 15,000 volunteers have participated.

“When we began this program more than 15 years ago, we knew that our most important contribution would be the placement of science, technology, engineering, and math experts into the classroom,” said Morris. “Take the volunteers away and we are simply another developer and funder of programs.”

In the 2004-05 school year, more than 700 volunteers from industry visited schools in the Detroit Metro area alone.

Craig Childers of the California Air Resources Board outlined the regulatory environment for hybrid vehicles at the SAE symposium held in San Diego, CA, on February 2.
Kids turn out for National Engineers Week

In February, organizations all over the country helped recognize National Engineers Week, a week established to raise awareness of engineers’ positive contributions to society. While engineers certainly deserve a pat on the back, the week’s main function is to stress the importance of math and science education and to encourage young people to pursue engineering as a career.

As can be expected by an organization that continually works to make math and science education more exciting via its A World In Motion (AWIM) and Collegiate Design programs, SAE International did its part during the week by sponsoring a National Engineers Weekend event at the Carnegie Science Center in Pittsburgh, PA. “National Engineers Week provides the perfect forum for experts and students from the Pittsburgh area to learn from each other and explore the future of engineering together,” said Raymond A. Morris, SAE’s Executive Vice President and Chief Operating Officer.

One of more than 60 exhibitors at the event, SAE hosted a booth and passed out balsa-wood gliders and had engineers on site to answer questions and explain how math and science are used in the design of both land and air vehicles. The University of Pittsburgh Formula SAE team also had a presence at the event, displaying its car and explaining the work that went into it.

As a volunteer at the event, I had the opportunity to witness firsthand how SAE’s approach both intrigues and excites young people of all ages. Thanks to programs such as AWIM, many of the young people I talked to listed math and science as their favorite subjects. It appeared intensely as SAE engineers discussed the principles of flight.

Thinking back to my childhood and recalling how my Saturday mornings were consumed with excitement over new episodes of “Alvin and the Chipmunks” and “The Smurfs,” I was surprised by the students’ willingness to learn on a Saturday and by their enthusiastic approach to the projects. The children intently went from one booth to the next and participated in the variety of hands-on activities and demonstrations.

Introducing girls to engineering was a focus of both the Science Center event and the National Engineers Week. Each year, one day is dubbed “Girl Day” and thousands of engineers, both male and female, directly mentor more than 1 million girls and young women with firsthand experiences in engineering. Judging by attendance at the Science Center, this approach appears to be working, as the number of girls at the event outweighed the number of boys.

While the week serves as a good reminder to expose young people to engineering, you don’t have to wait until next February to get involved. Kids are ready and waiting to learn, even if it is a Saturday.

Frank Bokulich, an Aerospace Engineer at SAE International, teaches Ameya Velankar how to build a glider during National Engineers Week at the Carnegie Science Center, February 18.

The SAE global enterprise—more than meets the eye

If someone asked you to explain in what activities SAE International is engaged, I would be willing to wager that most SAE members would say conferences, engineering standards and publications, sections activities, educational programs, and a number of other familiar activities common to many engineering societies.

And all of this is true. SAE is a leader in publishing timely and relevant engineering information. SAE is a leader in offering continuing education courses. SAE is also a leader in hosting global conferences and events that serve as excellent venues for sharing information and for networking.

But, as the old saying goes, there is much more to the picture than meets the eye. At SAE International, that picture is a global one that includes many more services and resources for which the average member may not be aware.

The umbrella of SAE’s products and services is a far-reaching one, indeed. A good example of this is the SAE Institute, which began full operations in 2005. The SAE Institute was formed to enable organizations to affiliate with and enjoy the benefits of SAE, while still keeping their own identity. Currently, there are four programs within the SAE Institute:

• Americas Sector of the International Aerospace Quality Group (IAQG)—Develops industry standards and compliance systems for aerospace quality systems.
• Off-Road Vehicle Identification Number (PIN/WMC)—A standards consortia and database to manage VIN numbers for off-road recreational machines.
• Off-Highway Standards Consortia—Established to be a funding mechanism for ISO standards work.
• Professional Aviation Maintenance Association (PAMA)—Promotes a high degree of professionalism among aviation maintenance personnel and fosters and improves methods, skills, learning, and achievement in the field of aviation maintenance.

Through the SAE Institute, SAE handles the operational and management work for these organizations, enabling them to stay focused on completing the work of their programs.

Affiliate organizations have long been a major factor in the success of SAE. Two of them—the Performance Review Institute (PRI) and the Automotive Resources Institute (ARI)—offer valuable services primarily to the aerospace and automotive industries, respectively.

The PRI mission is to provide international, unbiased, independent manufacturing process and product assessments and certification services for the purpose of adding value, reducing total cost, and facilitating relationships between primes and suppliers.

Two of PRI’s key programs are Nadcap, which is an industry-managed, consensus approach to OEM oversight of special process and product suppliers; and PRI Registrars, which certifies organizations to a variety of management systems including ISO 9001, AS9110, and ISO 14001.

ARI is a network of talented automotive professionals with varied backgrounds. Simply put, ARI uses the knowledge of these professionals to form a powerful database of automotive specialists that can help organizations successfully solve challenges.

Education is one of the focus areas of my term as SAE President, and since 1986, the SAE Foundation has not only supported, but also nurtured students’ enthusiasm for science and technology education.

Through the funding mechanisms provided by the SAE Foundation, award-winning K-12 educational programs, dynamic Collegiate Design Series competitions, and numerous scholarship and award programs continue to thrive. The SAE Foundation builds bridges between corporations and the classroom by providing engineers, school teachers, and students many of the resources needed to work together and learn from each other.

I am hopeful that SAE members are very aware of the direct benefits they enjoy through their membership. But I urge you to explore a little deeper the full scope of the SAE enterprise. I’m sure that you will be pleasantly surprised; and you may be able to enjoy the benefits of your membership even more.

Hancock, Chairman, SAE Foundation
FROM THE PAMA PRESIDENT

Aging aircraft—and the mechanics that repair them—capture industry attention

It can be dangerous to discuss two separate topics in one article because of the risk that neither gets the attention it deserves. But in this case, it is difficult to address the problems we are experiencing with our aging aircraft fleet without acknowledging that aircraft mechanics are poised to be the next problem.

We must understand that every time an aircraft crashes because of “aging” issues, primarily corrosion or fatigue, the underlying reason will be poor maintenance.

A take at the Chalks Oceanes Airways Flight 101 crash of its 1947 Grumman G-73 Turbo Mallard on December 19, 2005, in Miami, FL. Its right wing separated shortly after takeoff, and within days the National Transportation Safety Board (NTSB) published detailed photos of metal fatigue on the fracture surfaces of the aircraft’s right wing main spar. The shorthand cause of the accident reported in the press: poor maintenance.

As is common in our industry, we react swiftly following such tragedies. And so the Federal Aviation Administration’s (FAA’s) aging aircraft conference scheduled for March 22 and 23 in Kansas City, MO, has taken on a new significance. As a bright spotlight illuminates the increasingly severe problems we have with the airworthiness of our vintage and legacy aircraft, we must be aware that the primary reason these aircraft are flying is because a certifying mechanism returned them to service. Specific education and specialized skills are becoming increasingly necessary to address this growing maintenance challenge.

That is a very important human side of the aging aircraft issue. We must ensure all aircraft, especially older aircraft, are in compliance with the many standards set forth by the FAA. In some cases, the only applicable standard will be Advisory Circular AC 43.13-1B, Acceptable Methods, Techniques, and Practices/Aircraft Alterations. That means we must remain familiar with those standards and have the courage to refuse to return an aircraft to service if we are not confident in its compliance.

It has been asserted that mechanics sometimes must “sell” the need for safety enhancements to owners and operators of aircraft with aging structures or systems. If they are not successful, there is then tremendous pressure to return the aircraft to service, even though the mechanic may not think they should. Do not do it. If a lawsuit appears, we will only have our experience and integrity to back us up.

As an industry, we must work very hard to shield maintenance professionals from this kind of pressure.

Just as the aging aircraft issue is moving to the front burner of FAA priority, so is the reality that we are still certificating aircraft mechanics with standards written in the 1960s. Big problems are looming for the aviation maintenance industry with young people staying away, wages falling well below those of competing industries, and training and education a non-priority that top the “expenses-to-be-cut” list.

We must address aging aircraft problems with responsive engineering, data and procedures. Clearly, the key to recurrent training is key to keeping pace with both the challenges of advancing age in our aircraft as well as with the rapidly advancing technology in our modern and increasingly sophisticated global fleet.

Brian Finnegan
President
Professional Aviation Maintenance Association

PAMA DIRECT

Support for National Aviation Maintenance Technician Day growing

There has been a recent surge of support for National Aviation Maintenance Technician Day across the country and within Congress. A number of congressmen have stepped up as original co-sponsors, as have several Washington D.C.-based aviation associations. Offering active support for our initiative is the National Air Transportation Association, the Experimental Aircraft Association, the General Aviation Manufacturers Association, and the Aviation Maintenance Technician Association.

Active individual support of members and their colleagues continues to be sought. Support letters are asked to contact their representatives immediately. To identify local members of the U.S. House of Representatives, including address, phone, fax and e-mail information, visit www.house.gov; insert your ZIP code in the “Find Your Representative” box at the top of the page, and click enter.

When contacting representatives, supporters are asked to, of course, speak from their heart, but as a starting point, they can consider modifying and inserting the following comment in your e-mail:

“America’s enviable aviation safety record was created by the technical excellence and personal pride of the women and men who make their careers as aviation maintenance professionals. Please support the Resolution declaring May 24 National Aviation Maintenance Technician Day as an original co-sponsor. Please contact Congressmen Dan Lungren or James Oberstar to pledge your support. For more information, members can contact Brian Finnegan at bfinnegan@pama.sae.org.

NTSB stresses GA safety
National Transportation Safety Board (NTSB) Chairman Mark V. Rosenker reiterated the NTSB’s commitment to the safety of the general aviation (GA) community February 14, explaining that “Having a safe and efficient aviation transportation network is essential for the commercial viability, economic stability, and security of the nation.”

Rosenker made his comments at a meeting of the General Aviation Manufacturers Association (GAMA). Rosenker noted that GA often represents a “proving ground” for new technologies and that these will later be implemented in the commercial airline community. He cited advanced aeronautics and composite materials as examples of this sort of technology migration.

Rosenker also noted that GA is a venue in which professional pilots can gain experience and training before they join the ranks of commercial airline pilots (while he did not mention the importance of general aviation mechanics, we hope he was thinking about them).

Rosenker pledged that the NTSB will continue to work closely with the GA community to aggressively pursue initiatives to increase safety.

Hazard voluntary disclosure program
The Federal Aviation Administration (FAA) has recently published a hazmat voluntary disclosure program for air carriers. It is available to holders of air carrier/perator certificates issued under Parts 121, 125, 129, and 135. The program was published in FAA Advisory Circular 121-57 (January 31, 2006) and it applies to violations of Part 175 of the DOT regulations. Part 175 includes certain acceptance criteria and other air operator specific provisions.

The voluntary disclosure program does not apply to hazmat violations under other regulations (i.e. shipping regulations). Any PAMA member who works for an air carrier and who believes that his or her company has committed a hazmat violation should contact the air carrier’s legal authority first before acting under this voluntary disclosure program.

Limits to drug testing
Last month, we reported that the FAA had published its drug-and-alcohol testing guidance, which indicated that air carrier drug-and-alcohol testing regulations (found under Parts 121 and 135) must be applied to all maintenance contractors at all tiers. Thus, if you work for a repair station that does not perform any work directly for any air carrier but does work for other companies that do air carrier work, then you must be subject to drug and alcohol testing in compliance with the air carrier’s regulatory requirements (even if you are multiple tiers removed from the air carrier).

Since that time, we have gotten reports of companies sending out letters demanding that all of their contractors be subject to drug-and-alcohol testing. This is not the intent of the rule or of the policy change.

The FAA made it clear in the recent policy change that the only contractors subject to the drug-and-alcohol testing rules are those contractors performing covered safety-sensitive functions. This includes those who perform maintenance and/or preventative maintenance. It would not include those who perform non-safety-sensitive functions. For example, the FAA has explicitly stated that the drug-and-alcohol testing rules do not apply to those who merely sell aircraft parts (without performing maintenance or preventative maintenance functions on them).

The end of an era
In February, Boeing began production on the final 717 aircraft. The airplane, which is destined for delivery to AirTran, will be the 1567 717 produced by Boeing.

The 717 program challenged Boeing to develop new ways of working with its suppliers—procedures that laid the foundation for the way that Boeing has entered into the 787 program, and the way that Boeing plans to do business in the future.

The 717 program also reflects a sad farewell to one more legacy of the McDonnell Douglas era. The aircraft was originally developed as part of McDonnell Douglas’ MD-95 program, and was renamed the 717 after the 1997 merger with Boeing. The 717 is expected to be the last aircraft produced at Boeing’s Long Beach, CA, facilities, which were also acquired in the McDonnell Douglas merger. Since the Long Beach plant opened in 1941, it has been the production site for more than 15,000 aircraft.

Electronic logbook project
The Air Transport Association (ATA) e-Business Steering Group recently approved the creation of the e-Logbook Project Team (ELPT) to develop an exchange standard for electronic logbook information.

The ELPT will be tasked with the creation and maintenance of an industry standard defining electronic logbook data exchange. This means that they will establish standardized practices for such information so that such electronic information can easily be shared. The specification is expected to address flight logs (journey logs) and maintenance logs (airplane faults, maintenance actions, maintenance release, servicing).

In general, the standard is expected (at the outset) to cover line maintenance activities and exclude heavy maintenance activities.

The team will be co-chaired by Steve Yukawa of Boeing and Christian Callay of Airbus and will host its first meeting April 3-5, 2006, in Washington, D.C. Those interested in this program should contact the ATA.
SAE WORLD CONGRESS

Sessions spotlight diesel exhaust emissions control

The latest developments in the effort to reduce diesel exhaust emissions will be the focus of daily technical sessions featuring more than 40 papers presented at the 2006 SAE World Congress, April 3-6 in Detroit, MI.

Papers will cover a wide range of topics such as catalyst substrates, particulate filters, NOx adsorbers, selective catalytic reduction, and the integration of these technologies into emission control systems.

Looking at new developments, the opening Diesel Exhaust Emission Control session April 3 will feature a review of the most significant developments of 2005 by Timothy V. Johnson of Cumming. Johnson will also discuss this topic in the FEV Powertrain Innovation Forum in the exhibition hall April 4 at 9 a.m.

Throughout each day’s morning and afternoon sessions, papers will be presented by researchers from Ford, Hino Motors, Volvo Powertrain, Robert Bosch, Hyundai, FEV Engine Technology, National Renewable Energy Laboratory, Southwest Research Institute, Oak Ridge National Laboratory, and many other organizations.

Diesel Exhaust Emission Control Session Organizer Kevin Brown of Engine Control Systems says there is increased significance to these sessions this year, as vehicle manufacturers work to finalize control systems for production to meet impending U.S. Environmental Protection Agency heavy-duty engine emissions limits in 2007.

This subject will also be the focus of an Executive Management Conference panel discussion in the AVL Technology Theater on April 4. “What Will Be the Future Transportation Energy Sources—And at What Cost?” will be moderated by Nigel F. Gale, Vice President, Southwest Research Institute, and feature a keynote address by Joseph Desmond, Chairman, California Energy Commission.

For more information on the SAE 2006 World Congress, visit www.sae.org/congress, or call 877-606-7233 (in the U.S. and Canada) or 724-776-4970.

Motorsports panels at World Congress feature sanctioning organizations, manufacturers

Global sports car racing will be the focus of two panel discussions April 3 at the SAE 2006 World Congress. Representatives from major sanctioning organizations and automobile manufacturers will speak at the FEV Powertrain Innovation Forum in the exhibit hall.

The morning and afternoon panels will look at the relevance of sports car racing to the automobile manufacturer, covering the ways that racing design and performance innovations can apply to the design of production vehicles.

Paul Planner, founder of RACER magazine, will moderate the morning panel (at 10 a.m.) featuring the major sanctioning organizations. Panelists will include: Scott Atherton, President and CEO of the American Le Mans Series; Roger Edmondson, President, Grand-Am; Harry Turner, Senior Technical Director, Sports Car Club of America Pro Racing; and Stephanie Ratel, Chairman, FIA GT.

The morning and afternoon panels will feature presentations by representatives from major sanctioning organizations and automobile manufacturers.

Another question is whether some of the drivers influencing these prospects will continue for how long into the future, i.e., integration of a supply-chain system makes it difficult to determine where a company will end and another begins.

The dialogue between stakeholders from the East (main focus on major players such as China, India, and South Korea) and U.S. OEMs is expected to identify these opportunities including the likely market penetration from these countries.

The session has been organized by Susi Das of Oak Ridge National Laboratory and Ray Champagne of B.C. Associates. Some of the panel members include: Marcus Chao, Lean Enterprise China; Chang-Hee Lee, Director of Daewoo Research and Development, Mazda; and Dr.-Ing. Frank-Stephan Walliser, General Manager Motorsports Strategy, Porsche.

For more details on the panel discussions at the AVL Technology Theater, visit www.sae.org/congress.

Panel discusses issues facing Eastern suppliers

The Sustainable Development Program Committee has organized an SAE 2006 World Congress spotlight panel, Prospects of a Sustainable Supply Chain from the East, on April 5 at 1:30 p.m. in room W2-65.

Market share losses by the Big Three have prompted North American component suppliers to rethink their logistics and supply chain systems. As they struggle to develop products while keeping costs in check, there is a growing availability of suppliers from the East.

This panel will identify what competitive issues such as low-cost skilled labor, availability of raw materials, and quality differentiation represent. The session has been organized by Joseph Hsu of Oak Ridge National Laboratory, and Ray Champagne of B.C. Associates. Some of the panel members include: Marcus Chao, Lean Enterprise China; Chang-Hee Lee, Director of Daewoo International Detroit; Asok Taneja, President of Marketing and Product Development, Mazda; and Randall Pappal, Executive Director, General Motors.

Congress safety sessions cover emerging technologies

Leading experts from around the world will discuss the latest in vehicle and occupant safety during numerous sessions to be held at the 2006 SAE World Congress, April 3-6 in Detroit, MI.

More than 15 sessions will cover topics including: airbags, occupant restraints, biomechanics, vehicle aggressivity and compatibility, pedestrian safety, test methodology, accident reconstruction, and rear impact and rollover, and structural crashworthiness.

Additionally, the panel discussion Safer Cars through Crash Avoidance—New Solutions will be held at the AVL Technology Theater on April 5, at 10 a.m. Panelists will include representatives from OEMs (including Ford, BMW, Toyota, and Honda), major suppliers, and the National Highway Traffic Safety Administration.

The crash session includes papers discussing many emerging technologies, simulation methods, and analysis approaches. Occupant Restraint sessions will cover current and future Federal Motor Vehicle Safety Standard regulations, field accident performance, laboratory testing, and computational modeling.

The three-part biomechanics session will present current research on impact and injury. The vehicle aggressivity and compatibility session focuses on technologies for saving lives and reducing injuries in automotive crashes.

Papers in the pedestrian safety session will look at biomechanics of pedestrian impact, development of test devices, and countermeasures for pedestrian protection. The safety test methodology session presents papers covering the advancement of test and modeling of automotive safety areas. Accident reconstruction sessions will focus on the tools and techniques used to re-create the events leading up to, during, and after a vehicle crash.

For more information about the SAE 2006 World Congress, visit www.sae.org/congress, or call 877-606-7233 (in the U.S. and Canada) or 724-776-4970.

AEI’s ‘Best Engineered Vehicle of 2006’ to be announced at World Congress

The readers and editors of Automotive Engineering International (AEI) will select the “Best Engineered Vehicle of 2006,” with the winning vehicle to be announced at the SAE 2006 World Congress in Detroit, MI.

Readers (and visitors to the AEI Web site) have been voting for the year’s best-engineered new or significantly revised passenger vehicle. The criteria is that the vehicle should possess better performance than its competitors through its engineering excellence in areas such as interior accommodation, comfort, durability, economy of operation, environmental responsibility, handling and stability, manufacturing cost, quality, safety, and performance.

Vehicles are also considered if they have successfully introduced new engineering systems or technologies that will likely be adopted by other vehicles.

The Chevrolet Corvette was voted “Best Engineered Vehicle of 2005” by the readers and editors of Automotive Engineering International. The 2006 winner will be announced at this year’s Congress.

The Chevrolet Corvette was the recipient of the 2005 award. For more information on the selection of AEI’s “Best Engineered Vehicle of 2006,” visit sae.org/automag.

SAE 2006 World Congress reminders

Pre-register for new free attendance membership benefits

SAE Members can attend one of SAE’s three main industry events (World Congress, Commercial Vehicle Engineering Congress, General Aviation Technology Conference) for free by applying the $99 discount during the pre-registration process. Members who do not pre-register will still be able to apply the $99 discount to the $199 on-site registration fee (resulting in a $100 registration fee).

Win by using “Technology Trip Tickets” at the exhibition

New “Technology Trip Tickets” will guide attendees on technology-focused trips (powertrain, materials, electronics, safety/test) through the exhibition. At designated booths, receive an official stamp. When all destinations on your ticket are stamped, enter the ticket at the Automotive Engineering International booth (Booth 2567) for prize drawings to be held the last day of the exhibition. Prizes include a large-screen plasma TV, and gift certificates valued at up to $100.
Members on the move

Priya Prasad (Mbr’01), Gary Cowger (Mbr’98), and Alan Taub (Mbr’03) were among the 76 new members and nine foreign associates elected to the U.S. National Academy of Engineering out of 1,200 candidates. Prasad manages the safety research department at Ford’s Dearborn, MI, research lab. Cowger and Taub work for General Motors as Group Vice President of Global Manufacturing and Labor Relations and Executive Director of Research and Development, respectively.

Robert P. Soulliere (Aff’05) has been appointed President and CEO of automotive supplier ThysenKrupp Budd. Soulliere was previously Chief Operating Officer and President of the company’s body sector.

William M. Hopkins (Mbr’76), formerly Vice President of Global Product Marketing & Technology Planning at Goodyear Tire & Rubber, has been named Vice President, Technology and Strategic Initiatives. In this role, he will oversee global strategic initiatives, tire engineering, materials, performance prediction, and global vehicle systems.

Tim Rogers (Mbr’05), formerly Vice President-International, is now executive Vice President-International Operations at Clean Diesel Technologies. In this role, he is responsible for sales and marketing in Europe and Asia.

Theodore G. Duclos (Asc’85) has been promoted to Vice President, Operations and Technology at Freudenberg-NOK. In this role, he will help the company meet its goals in the areas of quality, flawless launch, and operational efficiency. He previously served as Chief Technology Officer.

Mitsunobu “Tony” Takeuchi (Mbr’92) was elected to the Board of Directors of Tenneco. He is also Chairman Emeritus of Denso International Americas, the North American arm of Japan-based Denso.

Michael Stanton (Aff’93) has been appointed Executive Director of Industry Affairs by the National Automobile Dealers Association.

Al Cohn (Mbr’92) has joined Pressure Systems International in the newly created position of Director of New Market Development and Engineering Support. Cohn spent his previous 28 years with Goodyear Tire & Rubber.

Vern L. Rayburn (Mbr’00) and Andrew A. Sadanowicz (Mbr’05) have been named to the Aerospace Industries Association Board of Governors Executive Committee.

Tobias Schenck (Aff’05) has been named Senior Manager of the Industrial Investment Council’s automotive team in Troy, MI.

Special acknowledgment

Kiara Harper (Aff’04) has been awarded the 2006 WISE (Women Into Science and Engineering) prize by Ford. The prize was initiated by Ford to recognize and reward women in the penultimate year of study for their engineering degree. Harper, who studied at Kingston University in Surrey, England, received a prize of £750.

Sponsor campaign encourages members to reach out

SAE’s Member Sponsor Campaign encourages members to spread the word about the value of SAE membership to colleagues or others who would gain from the benefits of joining SAE.

As a thank-you gift, an SAE leather key chain will be sent to any member who sponsors a new member. Anyone sponsoring five new members will receive a $15 SAE credit, and anyone sponsoring 10 new members will receive a $30 SAE credit. Credits can be used towards publication purchases, registration fees at SAE events, or toward SAE membership dues. To request membership brochures, please call 877-606-7323 (in the U.S. or Canada) or 724-776-4970, or e-mail customerservice@sae.org.

HYBRIDS CONFERENCE continued from p. 1

interest in the hybrid-electric vehicle segment in North America. "Balanced" is a word used by many attendees to describe the overall tenor of the conference. The first day’s morning session thoroughly examined the uniqueness and complexities of the hybrid marketplace, with particular emphasis on hybrid buyers’ attitudes towards hybrids, who are promoting hybrid technology. He added that the public’s perceived leadership of certain makes is driving broader consideration of hybrid-electric technology, with particular emphasis on hybrid buyers’ attitudes towards hybrids, who are promoting hybrid technology.

Technical insights into some of the latest hybrid-electric hybrid vehicles—the Honda Civic, Toyota Camry, Mercury Mariner, and Saturn Vue—were made during the afternoon by those companies’ engineering and program managers. Of particular interest was a look into the new General Motors-DaimlerChrysler-BMW hybrid development alliance, presented by Andre Metzner of Chrysler.

Networking over cocktails and hors d’oeuvres began the evening at the hotel. Many attendees continued talking hybrids later on after adjourning to the many harborside restaurants to cap an info-filled first day.

Hybrids day two really illustrated how hybrid-electric technology has intrigued the mobility industry. Presentations spanned from the U.S. Army’s keen interest in HEV developments, to Craig Childers of the California Air Resources Board outlining the regulatory environment. In between were real-world evaluations of hybrid transit bus fleet performance, as well as engine-in-the-loop testing procedures developed by the University of Michigan.

Perhaps the most intriguing second-day presentations covered next-generation battery technologies, and the plug in HEV movement.

For those who could stay through Friday morning, a bonus (besides the balmy air and sunshine) was a visit to IECE Corp., which enjoys a growing business in plug-and-play hybrid conversions (diesel and electric) for buses and commercial vehicles.
Making career contacts at SAE 2006 World Congress

While the main reasons that SAE members attend World Congress include the technical sessions, theater presentations, panels, special events, and many exhibits, there are also a lot of opportunities to expand your network and career at the same time. If you have not decided whether or not to attend, the opportunity to make a contact that could lead to a new job should certainly sound appealing even if you are not actively searching right now.

To bring together members looking for career opportunities and employers looking to hire, SAE is offering a Recruitment Fair on the exhibit floor April 3 and 4. Companies looking to hire will be on hand to take resumes, interview, and provide information on opportunities. For more details on the Recruitment Fair, visit the online Career Center at www.sae-career-center.org.

The SAE PowerTrack Career Center will be located in the Wayne Hall exhibit, Booth 91. The Career Center will be open during exhibit hours all week, and feature resume postings from members and attendees as well as hundreds of job postings from industry employers. Simply bring 50 copies of your resume or job posting and drop them off in the Career Center. If you are not confident about your resume, have it reviewed by a professional at one of our free resume critique clinics April 3 from noon to 3 p.m. or April 5 from 3 to 6 p.m. Members can sign up for a time slot in advance by contacting careerresources@sae.org. Resumes will be reviewed by volunteer professionals from industry or recruiting companies.

The Career Development Session will offer an executive panel of speakers to provide hands-on tips on how to improve your job search and build your career. The session is April 4 at 1:30 p.m. in Room W2-68 and will feature the following presentations:

The Variety of Interviewing Techniques: What to Expect and How to Prepare for Them, by David Hall, Director of Human Resources, AVL; North America

Successfully Managing Your Career: More Than Just On-The-Job Performance, by Dalana Brand, Senior Manager, Compensation & Employment, Yaskawa North America

Differentiating Yourself During the Recruiting and Selection Process, by Sky Foster, Manager, Recruiting, Payroll, Compensation, BMW Group.

With more than 30,000 automotive professionals at the conference, every session, event, and reception you attend opens the door to meet and network with peers and managers in your industry. These contacts you make through SAE could change your career and your future, a value that could prove to be priceless. Hope to see you there.

Career Corner articles are written by Tracy Feldshe, Product Manager for SAE Career and Member Services. If you have a suggested topic for a future article, e-mail her at careerresource@sae.org.

ARI client asks important question: “Where in the world…?”

Recently, a potential ARI client asked us to determine if we could handle a request that would involve us on a regional basis. By “regional basis,” the customer meant involvement that would occur globally, and if so, what countries were we postured to support? Easy for you to ask, I thought.

We know that sales and marketing, as well as importation of parts, require businesses to be able to interface not only with U.S. companies, but also with companies abroad. So this was, in fact, a very important and timely question. However, I was not 100% certain that I would like our answer: So we looked at our consultant stable in a different light—geo-cultural to answer. So we looked at our consultant stable and found that 80% of our resources are on the continents, that is 80% of our resources.

In Europe, we have 32 consultants who have worked in Belgium, England, France, Germany, Ireland, Italy, Spain, and Sweden. On the continent of Australia, we have eight who have worked in New Zealand and Australia. We have 25 consultants who have worked in China, Hong Kong, India, Japan, Korea, Pakistan, Philippines, Singapore, Taiwan, and/or Thailand. We also have five consultants who have worked in Egypt, South Africa, and Israel.

After I did my research, I am glad they asked the question. And, by the way, I like our answer.

To register as a sponsor or for more information, please contact Doug Shymoniak, Corporate Sales, SAE International Phone 1-724-772-4081; Email shymoniak@sae.org

SAE UPDATE PAGE 6 APRIL 2006
CALLS FOR AWARD NOMINATIONS

Ableson Award for Visionary Leadership
Open to: Leaders in support of SAE Foundation activities
Description: This award is the highest recognition that the SAE Foundation Board of Trustees bestows upon an individual who has exhibited exemplary leadership that benefited SAE, the SAE Foundation, and/or SAE Foundation Canada. The recipient will have been responsible for one or more major initiatives which have resulted in notable and/or highly innovative achievements or advancements of the Foundation Mission, and will have served in one or more responsible positions within SAE and/or its foundations.
Nomination deadline: April 15, 2006
Submission: Visit www.sae.org/news/awards/list/ableson/

Cliff Garrett Turbomachinery Engineering Award
Open to: Turbomachinery paper authors
Description: This award promotes engineering development involving the presentation of SAE papers on turbomachinery engineering. SAE administers an annual lecture by a distinguished authority in the engineering of turbomachinery in engine-highway-highway and, or, and spacecraft and aircraft uses.
Nomination deadline: March 31, 2006
Submission: Visit www.sae.org/news/awards/list/garrett/

Bruce R. Aubin Aerospace Customer Support Award for Excellence
Open to: Air transport individuals
Description: This award recognizes an individual in the air-transport industry working for an aerospace supplier (Tier 2 or 3) whose efforts contribute to the excellence of the prime manufacturers and the viability of airline operations. In the assessment of his/her peers, the individual should have contributed to the advancement in safety, reliability, and product worthiness in the air-transport industry through initiative, dedication, and personal interface in working with customers to achieve operational efficiency for customers and users.
Nomination deadline: May 1, 2006
Submission: Visit www.sae.org/news/awards/list/customersupport/

Clarence L. (Kelly) Johnson Aerospace Vehicle Design and Development Award
Open to: Aerospace design & development engineers
Description: This award recognizes an individual or team that has had a distinguished career involving significant contributions in the innovative design and development of advanced aircraft and or spacecraft. Nominations will be judged primarily for the technical value and originality of the contributions that have expanded the knowledge of aerospace engineering.
Nomination deadline: May 1, 2006
Submission: Visit www.sae.org/news/awards/list/johnson/

Franklin W. Kolk Air Transportation Progress Award
Open to: Air transportation professionals
Description: This award recognizes an individual or team for unique and outstanding contributions to air transportation and/or contributions to the work of the aerospace technical committees in developing aerospace standards, specifications, technical reports, and data through cooperative research. Selection is based on the quantity and value of the contribution, the impact and influence on the progress and development of air transportation, and peer recognition.
Nomination deadline: May 1, 2006
Submission: Visit www.sae.org/news/awards/list/kolk/

Marvin Whittleck Award
Open to: Aerospace professionals
Description: This award recognizes an individual or team for significant technical contributions and/or innovation related to the operational availability of aircraft. Operational availability includes areas such as repair, design, tooling, maintenance practices, logistics, inspection, modification, and safety.
Nomination deadline: May 1, 2006
Submission: Visit www.sae.org/news/awards/list/whittleck/

SAE Aerospace Engineering Leadership Award
Open to: Corporate-level aerospace leaders
Description: This award honors an individual at the corporate official level for outstanding contributions to the field of aerospace engineering. It recognizes an individual who has applied leadership skills in aerospace engineering to make contributions leading to positive impact on the aerospace community. Recognition may be for a singular accomplishment or lifetime achievement.
Nomination deadline: May 1, 2006
Submission: Visit www.sae.org/news/awards/list/aero_leadership/

Sid Olson Engineering Manager Award
Open to: Off-highway professionals
Description: This award recognizes an outstanding engineering manager in the off-highway industry who demonstrates capabilities in field-proven products and/or services, successful protégés, development of outstanding teams, unquestionable integrity, charismatic leadership, and creation of a supportive environment allowing a customer/product focus.
Nomination deadline: May 1, 2006
Submission: Visit www.sae.org/news/awards/list/olson/

AEM Outstanding Young Engineer Award for the Off-Highway Industry
Open to: Off-highway or powerplant industry engineers
Description: This award recognizes a young engineer who demonstrates outstanding leadership skills, teamwork, integrity, innovation, community involvement, and participation in SAE activities. Candidates should be nominated by their managers or supervisors.
Nomination deadline: May 15, 2006
Submission: Visit www.sae.org/news/awards/list/outstanding/youngoh.htm

Bill Agnew Award for Outstanding Aerospace Volunteers
Open to: A World In Motion (AWIM) volunteers
Description: This award recognizes volunteers who further develop students’ understanding and experience in math and science by helping teachers use the AWIM materials in the classroom. The nominee must be a volunteer that has assisted a teacher integrating the AWIM program in the classroom and must have participated in classroom activities during the current academic year. Nominees do not have to be professional engineers. College and/or high school students who have served as volunteers and non-engineers are eligible for the award as well as professional engineers.
Nomination deadline: June 30, 2006

Gary Dickson Award for Teaching Excellence
Open to: Middle school teachers using the AWIM program
Description: This award recognizes an outstanding middle school teacher or a team of teachers who have made creative and exemplary use of AWIM to further develop students’ understanding and experience in math, science, and engineering. The AWIM curriculum must have been implemented between September and May of the current academic school year.
Nomination deadline: June 30, 2006
Submission: Visit www.sae.org/news/awards/list/dickinson/

Lloyd Reuss Award for Teaching Excellence
Open to: Elementary school teachers using AWIM Challenge 1
Description: This award recognizes an outstanding elementary school teacher or a team of teachers who have made creative and exemplary use of AWIM Challenge 1 to further develop students’ understanding and experience in math and science. The AWIM curriculum must have been implemented between September and May of the current academic school year.
Nomination deadline: June 30, 2006
Submission: Visit www.sae.org/news/awards/list/reuss/

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Applications being accepted for SAE scholarships & loans

A number of $5000/year forgivable loans are available for PhD students in North America who plan to teach engineering at the university level upon graduation. For each year of eligible teaching, one year’s loan is forgiven. Applicants must be citizens of the U.S., Canada, or Mexico. Apply at students.sae.org/awdscholar/loans/ by April 1, 2006.

SAE is also accepting applications for the scholarships listed below. These scholarships are awarded annually to student members who actively support SAE, the collegiate chapter, or the local SAE Section and its programs. Student grade point average is not a determining factor within the scope of this scholarship.

• SAE Long Term Member Sponsored Scholarship—The scholarship continues to be supported through generous contributions from long-time members of SAE. Several $1000 nonrenewable scholarships are awarded annually to student members who actively support SAE, the collegiate chapter, or the local SAE Section and its programs.

• SAE Foundation Canada Grant—Two $1000 grants sponsored by the SAE Foundation Canada and the SAE Central Ontario Section are awarded annually. Eligible applicants will be citizens of Canada and will be juniors entering their senior year of full-time undergraduate engineering studies at a Canadian university.

Arch T. Colwell Cooperative Engineering Medal
Open to: SAE technical committee members
Description: This award recognizes a unique and outstanding contributor over a period of time to the work of the technical committees under the SAE Technical Standards Board in developing standards, specifications, technical reports, and data through cooperative research.
Nomination deadline: July 1, 2006
Submission: Visit www.sae.org/news/awards/list/colwell/

Max Bentele Award for Engineering Technology Innovation
Open to: Engineering technology professionals (land, air, space)
Description: This award recognizes an SAE member whose work has furthered innovation in the manufacture, design, and improvement of engine technology for ground, air, or space vehicles. It is designated for engineers under the age of 35 who have made a major contribution through a new idea, concept, innovation, or application that provides a recognized improvement in engine technology and has been verified through proof-of-concept demonstrations.
Nomination deadline: July 1, 2006
Submission: Visit www.sae.org/news/awards/list/bentele/

Myers Award for Outstanding Student Paper
Open to: Student authors of SAE technical papers
Description: This award is given annually for the best SAE technical paper presented by a student. The paper must be based on work done by the lead author(s) while a student, and must be presented by the student at an SAE meeting between June 1, 2005, and May 31, 2006. Papers can be on any topic and from students worldwide.
Nomination deadline: July 15, 2006
Submission: Visit http://students.sae.org/awdscholar/awards/myers/
AWARDS

NASA engineer wins women’s leadership award

Kim de Groh, Senior Materials Research Engineer at NASA Glenn Research Center (GRC), has been selected to receive SAE International’s J. Cordell Breed Award for Women Leaders. De Groh will be presented the award at the SAE 2006 World Congress, April 3-6 in Detroit, MI.

The award, established in 1999, recognizes a woman for displaying strong leadership and outstanding performance in the mobility industry.

De Groh works in the Electro-Physics Branch at GRC in Cleveland, OH. She is an internationally known technical leader in areas relating to the durability of spacecraft materials exposed to the space environment.

De Groh’s research has directly impacted Hubble Space Telescope servicing missions and has resulted in improved ground-laboratory testing methods for predicting the environmental durability of spacecraft materials. De Groh is the principal investigator for seven International Space Station flight experiments and has participated in numerous shuttle flight and Russian Space Station Mir experiments.

She has served as an on-site mentor and team leader for young women working on the PEACE (Polymer Erosion and Contamination Experiment) projects, collaborative experiments with the Hathaway Brown School for girls. De Groh has mentored 31 university students during her 16 years at NASA, resulting in a total of 36 of her 79 publications co-authored by students.

De Groh is active in several outreach activities and is the recipient of numerous honors and awards, including two of NASA’s highest honors: the NASA Exceptional Achievement Medal and the Space Flight Awareness Honoree Award. She was also honored with the Rotary National Award for Space Achievement Stellar Award and has received numerous achievement awards from NASA GRC, including the recently awarded NASA Glenn Superior Accomplishment Award.

For her combined technical and mentoring efforts, de Groh has been honored with the NASA/GRC Federal Women’s Program 2000 Award and the 2000 Women of Distinction Award from the YWCA of Medina County. She was an active member of the Women’s Advisory Group at NASA/GRC for six years and is a member of the Society of Women Engineers.

De Groh holds bachelor’s and master’s degrees in materials science from the College of Engineering at Michigan State University.

SAE International World Congress garners first-place awards

SAE International’s 2005 World Congress won two first-place awards from the International Association of Exhibition Management for excellence in show design and promotional materials.

Top recognition was given to SAE International in the category of Brand Design Development for its use of an original piece of 100th anniversary artwork in its Centennial Campaign.

The SAE 2005 World Congress served as a launch pad to unveil the artwork, a painting by Pittsburgh, PA, native John Clover designed to honor the individuals and organizations that contributed to the success of SAE International in its first century. The painting was incorporated into promotional pieces for the event, including a commemorative coffee-table book and coin.

The SAE 2005 World Congress Show Daily also took home first prize for its up-to-date and comprehensive coverage of the convention. News items and stories promoting technical sessions and products of note from exhibiting companies were featured in the publication.

The competition involved the judging of 204 entries. The SAE 2005 World Congress, held at Cobo Hall in Detroit, MI, was recognized in the category of shows more than 150,000 net square feet in size (the category of the largest shows).

STANDARDS & COMMITTEES

STPO exploring best practices for hybrid maintenance

The Service Technology Program Office (STPO) is assessing interest in the need to develop best safety practices for maintaining and servicing hybrid vehicles.

The initiatives are in the formation stage. Current areas of focus include: personal protective equipment, general service practices, equipment and tools, and vehicle identification.

If you are currently involved in hybrid vehicle programs, including engineering development or training, and would like to participate in the initiative, contact Wayne Juchno, SAE staff liaison for Service Technology Programs, at wjuchno@sae.org.

STEPS & COMPONENTS

Continuing Education on Systems & Components

Attend SAE Seminars to learn about leading-edge technology and receive the most relevant training and development opportunities in the mobility industry.

The following systems and components related seminars are offered throughout the year at the SAE Automotive Headquarters in Troy, Michigan, USA.

• A Familiarization of Drivetrain Components
• Advanced Diesel Particulate Filtration Systems
• Advanced Electric Motor/Generator/Actuator Design and Analysis for Automotive Applications
• Catalytic Converters: Design and Durability
• Chassis & Suspension Component Design for Passenger Cars & Light Trucks
• Commercial Vehicle Braking Systems
• Compact Heat Exchangers for Automotive Applications
• Electronic Packaging: Thermal & Mechanical Design and Analysis
• Fundamentals of Automotive All-Wheel Drive Systems
• Fundamentals of Automotive Fuel Delivery Systems
• Fundamentals of Gear Design and Application
• Fundamentals of Modern Vehicle Transmissions
• Hydraulic Brake Systems for Passenger Cars and Light Trucks
• Introduction to Brake Control Systems: ABS, TCS, and ESC
• Static and Dynamic Sealing
• The Tire as a Vehicle Component
• Threaded Fasteners and the Bolted Joint
• Tire and Wheel Safety Issues

SAE Seminars are taught by professionals with academic and industry experience.

For upcoming dates and to register visit www.sae.org or call 1-877-606-7323.
MEETINGS UPDATE

In January, SAE hosted an organizational meeting of the National Automotive Service Task Force at its World Headquarters in Warrendale, PA. The group met to define its organizational and governing processes.

Automotive Service Task Force meets at SAE World Headquarters

The process of forming an industry group that will facilitate the exchange of vehicle service and repair information was furthered January 23-24 when SAE World Headquarters in Warrendale, PA, hosted an organizational meeting of the National Automotive Service Task Force (NASTF).

Representatives from leading automotive aftermarket trade associations met to formally define the organizational and governing processes for NASTF, which was founded in 2000 as a voluntary task force dedicated to coordinating issues surrounding access to OEM service information for the benefit of automotive service professionals.

SAE staff facilitated the planning team meeting, which was attended by representatives of the following organizations: Alliance of Automobile Manufacturers, National Institute for Automotive Service Excellence, Association of International Automobile Manufacturers, National Automotive Dealers Association, Automotive Aftermarket Industry Association, Automotive Service Association, International Automotive Technician’s Network, Automotive Aftermarket Suppliers Association, Equipment and Tool Institute, Alliance of Automotive Service Providers, Society of Collision Repair Specialists, Automotive Training Managers Council, Associated Locksmiths of America, Automotive Service Council of California, and Mechanics Education Association.

The team defined the NASTF mission as “to identify, communicate, and resolve gaps in the availability and accessibility of automotive service information, service training, diagnostic tools, and equipment for the benefit of automotive service professionals and their customers.”

“The meeting’s attendees represented various sectors of the service industry, and we reached a very successful outcome,” said NASTF Chairman John Cabaniss, Director, Environment and Energy, Alliance of International Automotive Manufacturers. “A lot of progress was made. SAE provided a great venue—neutral ground, so to speak—which helped us focus on the task at hand.”

SAE has worked with NASTF for a number of years, first through the Service Technology Program Office. SAE’s participation as the meeting’s facilitator was a result of its reputation for effectiveness and neutrality in resolving technical issues within the automotive and transportation industries.

The transformation of NASTF from its current status as a voluntary task force to a formal, structured organization that involves all aspects of the industry is expected to greatly improve the dissemination of, and access to, service information between manufacturers and service personnel.

Meetings and symposia schedule

For more information about meetings and symposia, call SAE Customer Service toll-free at 877-606-7323 (or 724-776-4970 outside the U.S. and Canada). Additional meeting details can be found on SAE’s Web site at www.sae.org/calendar/meetings.htm; symposia details at www.sae.org/calendar/toptics.htm.

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<tr>
<th>Event Type</th>
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<tr>
<td>SAE 2006 World Congress</td>
<td>April 3-6, 2006</td>
<td>Detroit, MI</td>
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<td>Ag. Machinery Conference</td>
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<td>Government/Industry Meeting</td>
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<td>8th International Conference on Turbochargers and Turbocharging</td>
<td>May 17-19, 2006</td>
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<td>Defense Standardization Program Conference</td>
<td>May 23-25, 2006</td>
<td>Arlington, VA</td>
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<td>Cost Effective Low Carbon Powertrains for Future Vehicles*</td>
<td>June 8-9, 2006</td>
<td>London, UK</td>
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<td>Alternate Refrigerants Systems Symposium</td>
<td>June 27-29, 2006</td>
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<td>Digital Human Modeling for Design and Engineering Conference</td>
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<td>AVD Vehicle Symposium &amp; Ride &amp; Drive Event</td>
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<td>Onboard Diagnostics Symposium: 2006 Update</td>
<td>September 12-14, 2006</td>
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<td>Homogeneous Charge Compression Ignition Symposium</td>
<td>September 24-26, 2006</td>
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<td>North American International Powertrain Conference</td>
<td>September 27-29, 2006</td>
<td>Toronto, Canada</td>
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<td>SAE Aerospace Events</td>
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<td>Defense Standardization Program Conference</td>
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<td>96th International Conference on Environmental Systems</td>
<td>July 17-20, 2006</td>
<td>Norfolk, VA</td>
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<td>General Aviation Technology Conference</td>
<td>August 30-31, 2006</td>
<td>Wichita, KS</td>
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<tr>
<td>Aerospace Manufacturing and Automated Fastening Conference &amp; Exhibition</td>
<td>September 12-14, 2006</td>
<td>Toulouse, France</td>
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(* Co-sponsored by SAE)

Volunteers needed for fuel-system committee

The Fuel System Technical Standards Committee is forming a task force to revise SAE J285 Fuel Dispenser Nozzle Spouts. The committee is currently looking for volunteers to participate on this task force. Of particular interest are individuals involved with the design, manufacture, and testing of refueling systems of automobiles or fuel-dispenser nozzles. Others who might be interested would be regulators of automotive refueling systems or fuel-dispensing equipment. Please contact SAE at cindy.reese@sae.org, or Charles Sunderhaus at 513-870-3366 or csunderhaus@opw-fc.com.

Continuing Education on Materials & Chemicals

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SEMINARS

“The premier society dedicated to advancing mobility engineering worldwide”

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Competition build students’ interest in math and science

Students in Edith Cranor-Buck’s class at Helena Middle School in Helena, MT, are learning how modern technology will be a big part of their future, propelling them into jobs and careers that possibly shape the future of technology. Every student in the seventh grade participates in the Challenge 2 A World in Motion (AWIM) project.

Students divide into design teams of four. Each design team receives a letter from a mythical toy company asking it to design and build a toy model that appeals to kids age 6 to 10 and meets design specifications. After interviewing second and third graders, the design teams prepare to develop a prototype toy of their own design that will appeal to the children interviewed.

The toy is built using the SAE Challenge 2 materials; the body of the toy is constructed by students and is attached to the chassis of the Challenge 2 kit. The toy must be in the scientific group chosen by the teachers for that year (e.g., vertebrates, arthropods, mammals, ungulates). Design teams prepare to present their toy in a formal presentation. Representatives from the community serve as judges for the competition. They rank the design teams and their toy on criteria that include the technical discussion of the gears, toy appeal, teamwork, commercials, and scientific accuracy of the animals.

Students choose a name for their design team, create a logo, make and print business cards, produce newspaper ads for a mythical newspaper, and include in their presentations a 30-second commercial on their toy. In building their project and testing their gear ratios, students are encountering real-world engineering design problems and learning how to problem-solve.

The program is designed to enhance the math and science curriculum and introduce students to careers in which science and math are used. AWIM Challenge 2 is a hands-on, real-world design engineering experience for students. It is the highlight of many students’ seventh-grade experience.

New Jersey

Steelers Institute of Technology’s Center for Innovation in Engineering and Science Education, in partnership with the Museum of Science-Boston and AWIM, provided training for 35 New Jersey teachers representing elementary, middle, and high school. The project, “Engineering Our Future New Jersey,” is a demonstration project to assess the impact of grade-appropriate engineering curricula created by the Museum of Science and SAE International for elementary, middle, and high school students in student learning of science, mathematics, engineering, technology, and 21st-century workforce skills.

Michigan/Illinois

On December 12, 2005, SAE International conducted a volunteer workshop at the Ann Arbor Hands-On Museum. More than 20 industry volunteers from Toyota, Eaton, and General Motors participated in the two-hour training that included a hands-on introduction to the AWIM JetToy activity. A similar volunteer workshop was also held in December at the Valeska Hinton Early Childhood Education Center in Peoria, IL. Caterpillar sent more than 20 volunteers to participate in the session. Employees from each company will be volunteering their time in local school districts.

Students at Helena Middle School in Helena, MT, learned about torque and gear ratios as part of the AWIM Challenge 2 project.

NASA seeks SAE input to launch new competitions

NASA is seeking the input of SAE International members as it prepares to launch six new prize competitions as part of its Centennial Challenges Program.

Draft rules for the competitions were released in early February and members are encouraged to provide NASA with feedback before the criteria is finalized and the challenges are initiated. “We want to know what adjustments we should make to the draft rules and what collaborations we should use to ensure these competitions are challenging, achievable, and valuable to both NASA and the competing teams,” said Program Manager Brant Sponberg.

The Centennial Challenges Program promotes technical innovation through novel prize competitions that encompass a range of capabilities and technologies.

The competitions are: Fuel Depot Demonstration Challenge; Human Lunar All-Terrain Vehicle Challenge; Low-Cost Space Pressure Suit Challenge; Lunar Night Power Source Challenge; Micro Reentry Vehicle Challenge; and Station Keeping Solar Sail Challenge.

SAE International members will be able to compete in the program once the challenges become available. For more information about the program, visit http://centennialchallenges.nasa.gov.

Courses from SAE

Detailed course descriptions are available online at www.sae.org/contedu. To register, complete the online registration form, e-mail prodev@sae.org, or call SAE Customer Service toll-free at 877-606-7323 (or 724-776-4970 outside the U.S. and Canada).

April 2-4 Detroit, MI - USA - Cobo Center

In Conjunction with the SAE 2006 World Congress & Exhibition

April 3 The Tire as a Vehicle Component

April 3 Patent, Trademark, and Copyright Law for Engineers

April 3-4 New! Benchmarking for Competitive Advantage

Benchmarking, a key strategic initiative, is responsible for helping many companies enhance quality, improve operations, increase performance, stimulate innovation, and achieve best-in-class status. This seminar provides an organizational framework for benchmarking and demonstrates how it can be a tool for change and continual improvement. Four kinds of benchmarking are presented: internal, supplier, competitive, and functional. This hands-on workshop will provide you with the tools and methods used to benchmark business and operational processes, products, and services. Utilizing automotive examples, attendees will practice concepts learned that may be implemented to achieve tangible

improvements in their own companies.

April 3-4 Hands-on Racecar Suspension Setup

April 3-4 Managing Integrated Product Development

April 3-4 New! Fundamentals of Automotive Fuel Delivery Systems

Key to a vehicle’s overall operation is superior, design of its major moving components. Automotive gasoline and diesel fuel delivery systems in particular must be virtually malfunction-free of all components for the entire vehicle prescribed service life. This course provides a basic yet thorough examination of technical issues involved in automotive gasoline and diesel fuel delivery. Participants will acquire a fundamental understanding of the current technology and requirement guidelines and apply some of the principles through an in-class project and exercises. Examples of frequently encountered technical issues of fuel delivery systems shall also be discussed. The course is designed to encourage discussion, insights, and possible solutions into the engineering problems encountered in the gasoline and diesel fuel delivery systems and components.

April 3-4 Product Liability and the Engineer

April 3-4 Vehicle Accident Reconstruction Methods

April 3-4 Metal Corrosion and its Prevention

April 3-4 Catalytic Converters: Design and Durability

April 3-5 Engineering Effective Team Management and Practice

April 3-5 Fundamentals of Modern Vehicle Transmissions

April 3-5 Geometric Dimensioning & Tolerancing—Level 1

April 3-5 New! Hydraulic Brake Systems for Passenger Cars and Light Trucks

Hydraulic brake systems, one of the most important safety features on road vehicles today, must meet manufacturer and customer requirements...
PROFESSIONAL DEVELOPMENT

continued from page 10

in addition to Federal Motor Vehicle Safety Standards. This course will analyze automotive braking from a system’s perspective, emphasizing legal requirements as well as performance expectations such as pedal feel, stopping distance, fade, and thermal management. Calculations necessary to predict brake balance and key system sizing variables that contribute to performance will be discussed. Major components of a brake system, including calipers, boosters, master cylinders, drum brakes, and park brakes, will be presented in detail, highlighting the many design variations. An overview of the chassis control components and operating principles will be presented with an emphasis on ABS, traction control, and stability control.

April 3-5 Weibull-Log Normal Analysis Workshop
April 3-5 Cost, Finance, and Economics for Engineers
April 4 Tire and Wheel Safety Issues
April 4 Continuing Professional Development Group
April 4-5 Diesel Emissions and Aftertreatment Devices: Design and Durability
April 5 New! Tires and Handling for Racing and High-Performance Vehicles
April 5 Design Reviews for Effective Product Development
April 5-6 Accelerated Test Methods for Ground and Aerospace Vehicle Development
April 5-6 New! Control Systems Simplified

The advent of digital computers and the availability of ever cheaper and easier-to-understand format. Utilizing Matlab and Simulink, students will be presented, as well as the basics of embedded control systems. During this interactive seminar, attendees will utilize case studies to develop a simple control design for a closed-loop system. And, with the aid of a simple positioning control experiment, students will learn the major components and issues found in many automotive control applications today.

April 5-7 Vehicle Braking Systems
April 5-7 Hybrid-Electric Vehicles: Control, Design and Applications
April 5-7 Introduction to Road Vehicle Aerodynamics

Aerodynamic considerations in the design phase of a road vehicle have significant implications for fuel economy, vehicle stability, safety, engine cooling, interior noise, and overall aesthetics. Both governmental regulations and customer requirements for comfort must be taken into consideration. Just as an airplane in flight is subjected to several forces, including lift, drag, and lateral forces, the same is true of ground vehicles, although the lift component is, in general, not as prominent as in flight vehicles. The aerodynamic characteristics of a vehicle are determined by the lift component is, in general, not as prominent as in flight vehicles, although lift, drag, and lateral forces, the same is true of ground vehicles, although the lift component is, in general, not as prominent as in flight vehicles, although the lift component is, in general, not as prominent as in flight vehicles.

April 4 Tire and Wheel Safety Issues
April 5-7 Advanced Diesel Particulate Filtration Systems

As diesel emissions regulations have become more and more stringent, diesel particulate filters (DPFs) have become possibly the most important and complex diesel aftertreatment device. This seminar covers many DPF-related topics using fundamentals from various branches of applied sciences such as porous media, filtration, and materials sciences and will provide the student with both a theoretical as well as an applications-oriented approach to enhance the design and reliability of aftertreatment platforms. Structure, geometry, composition, performance, applications, and optimizations of DPFs are some of the main topics covered in this advanced-level seminar. Computer simulation techniques for analysis and optimization of DPF performance are also demonstrated.

NEW! Fuel System Safety

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CAREER OPPORTUNITIES

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Email: emp@oh.hra.com
State Route 739, Raymond, OH 43067-9705. Fax: 937-645-6337.

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Vehicle Engineer:

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Hybrid Electric Systems

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