SAE International remembers former leader, friend

Joseph Gilbert, who served as SAE’s Executive Vice President from 1960 through 1985, died January 16 at the age of 85.

Gilbert’s career at SAE spanned 40 years. He joined the staff in 1946 and served as Technical Editor, and later Managing Editor, of The SAE Journal (now Automotive Engineering International magazine). He also held the positions of Technical Committee Division Manager and Assistant General Manager before being named General Manager in 1960. He is one of only five chief staff officers in SAE’s 100-year history.

“The entire SAE family suffered a loss with the passing of Joe Gilbert,” said Raymond A. Morris, Chief Operating Officer and Executive Vice President of SAE International. “During his tenure, when most people thought of SAE, they thought of Joe. His legacy will live on as long as SAE is around to advance mobility engineering worldwide.

“I had the pleasure of working for Joe since I began my career at SAE more than 30 years ago. He truly was an amazing person.”

Among his many accomplishments at SAE International, Gilbert is perhaps most remembered for leading the relocation of the SAE World Headquarters from New York City to Warrendale, PA, in 1974. The move is credited with helping SAE maintain a competitive cost structure, providing the foundation for the subsequent growth of the organization.

Throughout his career, Gilbert received numerous prestigious awards, including: the Council of Engineering and Scientific Society Executives Leadership Achievement Award (1982); the American Society of Association Executives Key Award (1982); and the 1985 Distinguished Service Citation from the Automotive Hall of Fame.

In 1993, the book “Make Me Feel Important,” a collection of Gilbert’s monthly editorials from 1960 through 1985, was published by SAE. In his final column before his retirement in December 1985, Gilbert wrote:

“The 40 years have gone by pleasantly and all too swiftly. I couldn’t have asked for a more rewarding career. If I had to do it all over again, I would do exactly as I have done in casting my lot with SAE.”

DaimlerChrysler confirmed as host of 2008 World Congress

DaimlerChrysler has agreed to host the SAE 2008 World Congress, the world’s largest automotive technology event.

As a sign of its continued importance within the automotive industry, the SAE World Congress now has confirmed host companies through 2008. DaimlerChrysler follows Toyota, host of the 2007 event, and BMW, host of this year’s SAE World Congress, which will be held April 3-6 at Cobo Center in Detroit, MI.

“The positive impact that the SAE World Congress has on automotive engineering cannot be understated,” said Frank O. Klegon, Executive Vice President, Product Development for DaimlerChrysler, who will serve as Chairman of the SAE 2008 World Congress.

Klegon noted that his company’s decision to host the SAE World Congress was based on the value that the event provides. “The event brings together the best minds and technology in a truly open forum for discussion,” he said.

This is the first time that SAE has had confirmed hosts for its annual automotive meeting three years out.

“DaimlerChrysler’s decision to host the 2008 SAE World Congress is demonstrative of this company’s forward vision, and we are very pleased they’ve signed on,” said David L. Amati, Director, Global Automotive Business and Automotive Headquarters for SAE International. “In joining BMW and Toyota as future host companies, DaimlerChrysler’s support reiterates the relevance of the SAE World Congress.”

Caterpillar contributes $750,000 to SAE Foundation centennial campaign

Caterpillar has pledged its support to the SAE Foundation and its $20 million centennial campaign. The centennial campaign, Inspiring a New Generation, was launched at SAE’s World Congress in April 2005 to coincide with SAE’s 100th anniversary.

Caterpillar has pledged a $750,000 core grant. The funds are designated to support the SAE Summit on Education and SAE’s A World in Motion, a curriculum supplement for grades 4 through 10. In announcing the gift, Mark Pflederer, Caterpillar Vice President, Technology & Solutions Division, said, “We embrace the opportunity to support SAE’s educational efforts to ensure a diverse talent pool of future engineering graduates. It’s more critical now than ever that we reach out to young people as early as possible to develop their interests in math and science. By supporting SAE Foundation’s educational programs, we can spark the natural curiosity of young people and nurture their interest in pursuing engineering careers.”

Hoping to inspire additional support from the commercial vehicle industry, Caterpillar also issued a special $250,000 matching challenge grant. The Caterpillar Foundation will match new and increased contributions from industry and business partners, as well as contributions made by Caterpillar employees and retirees. If the matching grant challenge is fully met, Caterpillar will be contributing a total of $1 million to support SAE’s educational programs.

Frank O. Klegon, Executive Vice President, Product Development for DaimlerChrysler, will serve as Chairman of the SAE 2008 World Congress.

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Göschel primed for SAE Congress Chair role

Serving as General Chairperson of the world’s largest annual gathering of automotive engineers is an honor held in high regard in the automotive industry. The SAE World Congress annually attracts the industry’s foremost executives to its podiums, and this year is no different.

Dr. Burkhard Göschel, Member of the BMW Group Board of Management, is set to open the event April 3 at the AVL Technology Theater in Detroit’s Cobo Center. There are very few automotive decision-makers held in higher regard than Göschel. Last year, he ranked as the fifth-most powerful executive in a list compiled by Motor Trend.

I recently had the opportunity to submit questions to Göschel, and he was kind enough to respond to them via e-mail from Munich, Germany. To give members some insight into Göschel’s plans and what to expect at the ’06 Congress, I have selected some excerpts from the interview, which appear below.

Matt Monaghan: What are your goals as Congress Chair, and what’s your strategy for achieving those goals?

Göschel: We at the BMW Group strongly believe that car manufacturers, suppliers, and independent research institutes must work closely together in order to effectively and efficiently incorporate all the latest innovations and technologies into our vehicles. The theme for this year’s Congress is “Driving Innovation through Partnerships,” and that is also the key message we hope to get across.

At the Congress, executives from manufacturers and suppliers will discuss partnerships in the AVL Technology Theater, car manufacturers and suppliers will be positioned side-by-side on the show floor, and special events will allow participants to network and to meet in an informal atmosphere. We therefore not only hope to get the message across, but also to demonstrate that partnerships are in fact a sensible way for the automotive industry to be both innovative and successful.

MM: What is the main thing you want people to take away from the ’06 Congress?

BG: The SAE Congress is an automotive industry event. The event is conducted on behalf of all persons that work in the automotive engineering community. We see it as an opportunity to improve networking efforts within the automotive industry. We hope that every participant will find interesting and innovative technological developments that might inspire yet another wave of new developments. We hope that one result of the SAE Congress will be that every speaker, organizer, and attendee will bring added value back to his or her organization.

MM: What sets this Congress apart from previous ones?

BG: This is the first time that, over a period of three years, the Congress has had host car manufacturers from the U.S., Europe, and Asia.

The manufacturer’s exhibition will be larger, and have more participants, than it has ever had before. The fact that Toyota is displaying for the first time and that General Motors, Ford, and DaimlerChrysler, as well as the BMW Group, will be exhibiting is significant.

For the first time this year, there will be a supplier park on the exhibit floor. Many first-tier suppliers will be displaying immediately adjacent to the car manufacturer stands. This will give visitors a chance to see the latest technological developments and to speak to many of the suppliers that developed these innovations together with manufacturers.

This year’s event will be a truly international event.

A new SAE President and a new 100 years

As I begin my tenure as SAE International’s President, I look back at the first 100 years of this organization with awe. The roster of past and current SAE members reads like a “who’s who” among mobility engineering professionals. The impact and importance of SAE’s standards and technical expertise have grown to be truly global in scope. As I marvel at such a storied history, one question keeps springing to mind: “How do I help SAE improve on the first 100 years?”

I must admit, it can be a daunting issue to ponder, but it can also be a tremendous opportunity for countless accomplishments. That is how I choose to approach my term as SAE President.

I have the unique opportunity to help set the tone for the next 100 years. There are many similarities between what has happened in the past and what will happen in the future, but there are also some inherent differences. I believe that the main difference is the scope of global engineering. SAE began to get into the global mode in the last 10-15 years of the first 100 years, but that is clearly going to be an important arena for the next 100 or 1000 years.

Before I continue with my thoughts about the mobility industry and my goals as SAE President, I would like to share a little of my background.

Most of my days are spent working in the aerospace industry, where I serve as Director of Weight and Management at Lockheed Martin Aeronautics. But racing fast cars and finely tuned yachts is how I spend a great deal of my evenings and weekends. I believe that having some level of experience in all three industry sectors of SAE will serve me productively in the next year.

Early on in my career, I saw the value that SAE provides, both professionally and personally. So, I made a choice to get involved with the society as much as possible. In 1986, I had the honor of serving as the first SAE White House Fellow in the Executive Office of the President, Office of Science Technology and Policy.

I have also served as SAE Assistant Treasurer, Treasurer, and I’ve been a member of the SAE Board of Directors from 1991-1993 and 2001-present. Serving as President has been a lifelong dream, and I am very excited and honored, especially as this great organization enters its second century.

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Mechanic killed in El Paso—We must learn from this tragedy

January 16, 2006, was not a good day for our profession. We lost a colleague in a tragic El Paso, TX, ramp accident when a mechanic was drawn into the inlet of the operating right engine of a Boeing 737-500 while he was looking for a leak. He was a contract mechanic performing outsourced line maintenance on an air carrier.

The National Transportation Safety Board accident investigation is ongoing and deserves the opportunity to determine the accident’s probable cause and contributing factors without interference. However, as a community, we have an obligation to raise probing questions about contributing factors without interference. We must strive to understand how these events conspired to end his life. How can we prevent these tragedies in the future?

The single largest reason behind maintenance leaders have told me repeatedly that we must not only be technically accurate, we must be quick. There is a gentle balance between these two conflicting pressures, and we must not fail to maintain that balance.

As certified maintenance professionals, we are constrained to perform maintenance only after we have received appropriate training or have performed the maintenance under the supervision of someone who has received the training. The question that continually arises is whether the training we have received is in fact appropriate for the specific task we are about to do. As professionals, we can frequently, and appropriately, make the leap that the training we have received is valid for the task at hand. We must strive, however, to recognize our own limitations in performing maintenance. We must be brutally honest with ourselves over whether the training we have received, or the environment in which we are performing it, will conclude with the safe dispatch and conduct of the flight.

Technical excellence and the personal pride we bring to our work are the hallmarks of professionalism. Do not let Don Buchanan’s death be in vain. We must learn from this accident and impose those lessons on our infrastructure. Maintenance professionals must have the courage to acknowledge the challenges they face and ensure operations are responsive to meeting them.

FROM THE PAMA PRESIDENT

PAMA has set its sights on having President Bush sign a resolution designating May 24 as National Aviation Maintenance Technician Day to recognize Charles E. Taylor, the mechanic who first flight maintained, and all certificated aviation maintenance professionals.

In pursuit of PAMA’s goal, great strides have been made recently. Rep. Dan Lungren (R-CA) and Rep. James Oberstar (D-MN) have sponsored the resolution, and in a “Dear Colleague” letter to all members of the House and Senate, Lungren and Oberstar asked their colleagues to join them as original co-sponsors of this resolution.

PAMA President Finnegan stressed that an outsourcing of industry support is needed to finally recognize Taylor. PAMA asks all aviation professionals to call their congressman and senators and request they support National Aviation Maintenance Technician Day as an original co-sponsor.

Information on how to contact members of Congress is available on the PAMA Web site, www.pama.org, in the Industry Resources section. The timeline for contacting members of Congress is available at www.pama.org. “Please do it right now. With the ‘Dear Colleague’ letter released January 31, congressional staff will be anticipating your call. Once the letter does arrive in their offices, continued support is essential to earn their vote and President Bush’s signature in support of the resolution,” said Finnegan.

The FAA has decided to discontinue publishing this information in the Federal Register. Instead, final dispositions will be sent by letter to the applicant and the final letter will also be published in the FAA docket. The FAA docket is not well indexed and is not easy to search by subject matter, so this could make it effectively impossible for most mechanics to identify FAA exemption trends that could be useful to the maintenance community.

Exemptions harder to come by

The FAA has issued a new policy concerning petitions for exemption. Previously, all final dispositions of petitions for exemption have been published in the Federal Register. This allowed the public to know what exemptions were issued by the FAA. This was valuable to mechanics because it allowed them to know what exemptions were typically issued by the FAA (like exemptions from Mode S requirements) and which ones were typically rejected.

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Hazmat record retention

Under the new hazmat law, shipping records of hazardous materials must be retained for at least two years (nearly double the previous standard of 375 days). This means that copies of the shipping records (e.g. a shipper’s declaration for dangerous goods) must be retained for this period. The period begins to run when the material is tendered for shipment (not when the papers are first completed).

Drug testing

The Federal Aviation Administration (FAA) has published the latest revision to its drug-and-alcohol testing policy January 10, 2006. This policy clarifies, once and for all, that any contractor who performs work for a Part 121 carrier or Part 135 operator at any tier must comply with the operator’s drug testing requirements.

This means that if a mechanic works as a subcontractor in a chain of contracts that ultimately leads to work for a covered operator, the mechanic must submit to drug testing under the operator’s program as a condition of continued employment on that sort of work. The certificated operator is responsible for the compliance of the contractors with testing requirements.

Maintenance personnel whose work is exclusively devoted to aircraft operated under provisions other than Part 121 and Part 135 may be outside the scope of these drug and-alcohol testing rules. State privacy laws may limit the ability of a business to test employees who are not covered by federal drug and-alcohol testing laws.

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Four Ford engineers named recipients of Henry Ford II Distinguished Award

SAE International has selected four professionals to receive the Technical Standards Board Outstanding Contribution Award. The award, established in 1953, recognizes individuals for outstanding service in technical committee activities of the society. This year’s recipients are Roy Zeitlow of International Truck and Engine; Dan Kelsey of Caterpillar, and Richard Job and Stephen Burdette, retirees of AGCO and Case New Holland (CNH), respectively.

Technical Standards Board Award recipients announced

that the appropriate safety standards were applied to tractors in the North American market. Job is a 40-plus year member of SAE International and three-time chairman of the SAE Kansas City Section. He is also a member of the American Society of Agricultural and Biological Engineers and works on several agricultural and construction vehicle committees. Job holds a bachelor’s degree in mechanical engineering from Michigan Technological University.

• Dan Kelsey has worked at Caterpillar for 30 years. Before moving to his current position in the standards and regulations department, Kelsey was responsible for international research at Caterpillar’s European office in Geneva, Switzerland. A member of SAE International, he has been active in the society’s construction and agricultural standards development committees for the past 25 years. He is also the chairman of the International Organization for Standardization Technical Committee focused on earth-moving machines. Kelsey holds a doctorate degree in engineering with a major in ergonomics from the University of California.

• Roy Zeitlow is a Brake Systems Manager in the Chassis Systems Engineering Division at International. He focuses on leading new product development and holds two patents in air brake engineering. He is a member of SAE International’s Truck and Bus Foundation Brake Committee and Electronically Controlled Brake Subcommittee. Zeitlow is also a member of the American Society of Mechanical Engineers. He holds a bachelor’s degree in mechanical engineering from LeTourneau University and a master’s degree in management from Indiana Wesleyan University.

Allport receives SAE Excellence in Engineering Education Award

Chuck Allport, Assistant to the Academic Vice President at Cedarville University, has been selected to receive SAE International’s Excellence in Engineering Education (EEE) Award. He will be presented with the award at the SAE World Congress, April 3-6, 2006, in Detroit, MI.

The EEE award, established in 1995, recognizes outstanding contributions made by an individual toward activities related to the SAE Engineering Education Board.

Allport’s passion for the past 15 years has been integrating SAE International into engineering education. In 1996, he used his extensive industry experience to establish a new engineering school at Cedarville University. Since then, Allport has immersed his students in the school’s SAE chapter, winning several honors for his work. In his students’ first 10 years, they received seven consecutive Outstanding Collegiate Branch Awards, attended high-level internships in Washington, D.C., and won top honors in the SAE World Congress Student Booth competition. Allport’s students, who are active in the SAE Collegiate Design competitions, designed and built four advanced alternative-fuel vehicles, resulting in a feature article in Car and Driver magazine.

Allport has advised more than 30 competition teams during his career at Cedarville, earning an Outstanding Advisor Award from the Governors’ Ethanol Coalition, a personal recommendation from the Deputy Secretary of Energy, and an Award of Outstanding Professional Achievement from the Daytona Engineering and Science Foundation. A dedicated member of SAE International, Allport serves on several committees, including the SAE Board of Directors. He also serves on various professional boards and directs the Math & Science Teaching Enhancement Program for teachers in Dayton, OH, area schools.

Allport earned his bachelor’s degree in engineering from the U.S. Air Force Academy. He earned his master’s degree in mechanical engineering from Arizona State University and in personnel administration from George Washington University.

AWARDS

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AWARDS

**AEI** automotive technology series wins top Delphi journalism award

A series on European automotive technology has earned the SAE magazine Automotive Engineering International and writer Stuart Birch the Delphi Award for Automotive Technology Journalism.

The criteria for the award, which is organized by The Guild of Motoring Writers, includes providing good depth of technology that is interesting for non-specialists as well as specialists. According to judges, Birch’s articles achieved this by providing “good context, leading into a good depth of technical information with well-chosen quotes from a combination of Europe’s automotive industry leaders and highly regarded technology specialists.”

The award is designed to raise the profile of the many outstanding technology journalists working in the automotive industry. Previous winners have included specialist freelance journalists and the editors of some of Europe’s leading English-language automotive technology titles. The presentation was made recently at a dinner and awards ceremony at the Royal Automobile Club in London.

Wade honored for lifetime of engineering innovation

Wallace Wade, retired Technical Fellow of Ford, has been selected to receive SAE International’s 2005 Edward N. Cole Award for Automotive Engineering Innovation. Wade will be presented with the award at the Detroit Section Meeting held during the SAE World Congress on April 3, 2006.

The award, established in 1979, annually recognizes an SAE International member for a lifetime of accomplishments in automotive engineering. The award honors the memory of Edward N. Cole, former President and Chief Operating Officer of General Motors, and the inspiration he provided to others in the engineering profession.

Wade dedicated his 38-year career in automotive engineering to the areas of low-emissions engine technology, powertrain control systems, and emission control systems. He joined Ford in 1972, where he was most recently responsible for the application, development, and certification of emission and control system technologies for Ford’s powertrains in North America.

Wade has been credited with 26 patents related to improvements in powertrains and has written 25 published technical papers on powertrain research and development. An SAE International Fellow, he has received five Arch T. Colwell Merit Awards, the Vincent Bendix Automotive Electronics Engineering Award, and the Henry Ford Technology Award. He was honored as a Distinguished Corporate Inventor by the National Inventors Hall of Fame. Wade is also a member of the American Society of Mechanical Engineers and was invited to give the 2003 Soichiro Honda Lecture on Near Zero Emission Internal Combustion Engines.

He holds a bachelor’s degree in mechanical engineering from Rensselaer Polytechnic Institute and a master’s degree in mechanical engineering from the University of Michigan. He resides in Farmington Hills, MI.

**SAE UPDATE** now available online

Current and past issues of SAE Update are now available online to all SAE members and student members. If you were a member of SAE before March 2003, you can access past issues by selecting “Current and past issues of SAE Update” on the SAE Web site at http://members.sae.org.

Current and past issues of SAE Update are now available online to all SAE members and student members. Files of past issues back to March 2003 are available in PDF (Portable Document Format). Adobe Acrobat is needed to view the files.

The link to Update will appear in several places on the SAE Web site:

- In your MyMember Info page after you log on
- On the SAE Membership page in the “Member-Only Resources” box
- On the Update main page at http://store.sae.org/update.htm
- On the front page of Student Central at http://students.sae.org

A WORLD IN MOTION

The newest AWIM Challenge introduced

The newest activity in the A World In Motion (AWIM) series is Challenge 4: Electricity and Electronics. The activity consists of 35 hands-on experiments and helps students in grades 4-10 learn about the principles of electricity and electronics. Activities range from fundamental concepts to more advanced applications with subject areas including static electricity, batteries, circuits, magnets, and transistors.

Student participants are encouraged to perform the experiments in small independent groups. They then present their findings to the class for additional discussion, much like real-world scientific investigation.

The addition of Challenge 4 to the AWIM program underscores SAE’s continued commitment and dedication to supporting scholastic interest in science, math, and technology.

Introduced in 1990, AWIM was created to address the steady decline in enrollment in collegiate engineering programs across North America. The goal of the program is to foster a keen interest in science and technology while students are still in their formative scholastic years. To date, 15,000 schools across the U.S. have received AWIM kits with almost 2 million students participating in the program.

The curriculum pairs student teams with professional engineering mentors, requiring students to work together to address real-world engineering problems. Kits accompany each module to guide teachers with lesson plans and instructional materials.

AWIM from Montana to Texas

As part of a block of methods courses, pre-service teachers at the University of Montana teach integration of mathematics and science into other subject areas. Georgia Cobbs, math methods professor and a member of the SAE K-12 Education Committee, chose flight to model how math and science can be taught in a seamless fashion. AWIM Challenge 3 provided an appropriate model.

Cobb introduced Challenge 3 and the various components of the unit. After building the design, the pre-service teachers tested their flight capabilities in the science methods class. The project helped the students learn how math and science can complement one another and be fun.

Cobb then took Challenge 3 to the School Science and Math Annual Conference held in Fort Worth, TX. She presented Challenge 3 to teachers from California, Texas, and Louisiana. Teacher educators from Montana State University-Billings and Oregon State University were also part of the group. Learning, fun, and flight were all aspects of the session.

“SAE International is the premier society dedicated to advancing mobility engineering worldwide”

Reach the engineers of tomorrow...today!

Sponsoring the SAE Collegiate Design Series is an easy, cost-effective way to distinguish your company from the competition!

Thousands of students from hundreds of universities participate annually in the SAE Collegiate Design Series. As a corporate sponsor, your company will start a long-term relationship with tomorrow’s leading engineers.

Act now! Sponsor one or more of the following collegiate competitions:

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- Mini Baja®
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- Supermileage®

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

The newest AWIM activity, Challenge 4: Electricity and Electronics, consists of seven experiment sets including static electricity, batteries, circuits, magnets, and transistors.

University of Montana pre-service teachers participated in the AWIM Challenge 3 project as part of a math and science methods course.

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Behr returns to SAE World Congress

After a four-year absence, Behr America, a leading supplier of automotive engine cooling and air-conditioning systems, will return as an exhibitor at the SAE World Congress April 3-6 at Cobo Center in Detroit, MI.

The opportunity to exhibit new products and processes in the show’s new OEM-Supplier Park is a major reason for Behr’s return. The park concept co-locates OEMs and their Tier 1 suppliers in a single area just outside the AVL Technology Theater. The area will serve as a hub for meeting both current and potential customers.

“We’re pleased to be back,” said Frank Mueller, Behr America’s President and CEO. “This year’s show host, BMW, has done a great job in promoting improvements for this annual event. The manufacturer-supplier park addition is a new and innovative SAE concept that will serve to increase traffic throughout the exhibition hall.”

Technology Trip Tickets guide Congress attendees

SAE 2006 World Congress attendees can target their exhibit visits—and become eligible for valuable prize drawings—by using the new “Technology Trip Tickets” at the event.

Tickets will guide attendees on technology-focused trips (powertrain, materials, electronics, and more) through the exhibition. At each designated booth, tickets can be presented to participating exhibitors for an official logo stamp to document the visit. When all destinations on a ticket are stamped, it can be entered for a random prize drawing at the Automotive Engineering International International booth (Booth 2267).

The drawing will be held on the last day of the exhibition. Prizes will include a large-screen plasma TV and gift certificates valued at up to $1000. Entrants need not be present to win.

Pre-register to cash in on new member benefit

SAE members who pre-register for the SAE 2006 World Congress by March 10 can take advantage of the new member benefit that provides free registration for one of SAE’s three main industry events.

Beginning with the 2006 World Congress, members can attend one of these events—the 2006 World Congress, the 2006 Commercial Vehicle Engineering Congress & Exhibition, or the 2006 General Aviation Technology Conference & Exhibition—for free, by pre-registering online before the deadline.

To take advantage of this new benefit, members can pre-register online for their preferred event at a cost of $99. During the registration process, members can apply their $99 discount, which will result in a gratis conference registration.

Members who do not pre-register before the deadline will still be able to apply the $99 discount to the $199 on-site registration fee, resulting in a $100 registration fee.

Free attendance at SAE congresses and conferences will still apply to organizers, authors, session chairs, planning committee members, exhibitors, and executive committee members.

For more information, visit www.sae/org, membership, or call SAE Customer Service at 877-606-7523, or 724-776-4970 (outside the U.S. and Canada).

Attend the new SAE Awards Ceremony

More than 80 outstanding engineers will be honored at the SAE Awards Ceremony “Honoring Excellence” on April 4 from 5 to 7:30 p.m. at the Marriott Renaissance Center in Detroit, MI.

Tickets for the ceremony are $30 and can be purchased from the SAE Web site at www.sae.org/congress.

Some of the awards to be presented include:

- International Leadership Citation
  - Karl-Heinz Ziwica, BMW
  - Arnold W. Siegel International Transportation Safety Award

- Murray Mackay, University of Birmingham, England

- Henry Ford II Distinguished Award for Excellence in Automotive Engineering
  - Cedric Xia, Ford Motor Company

- Laurent B. Chappuis, Ford Motor Company

- Fang Ren, Ford Motor Company

- Danielle Zeng, Ford Motor Company

- J. Cordell Breed Award for Women Leaders
  - Kim de Groff, NASA Glenn Research Center

- George W. Dettoff (Mbr’91) has been named President and CEO of SKF USA, where he will coordinate activities for the SKF Group’s U.S.-based operations and oversee the departments of Human Resources, Administration, Legal, Information Technology Systems, Finance, and SKF’s shared service center. He will also continue to serve as President of the SKF Automotive Division—North America

- William R. Wyland (Mbr’65) has announced his retirement from Remy International after 50 years of service to it and its predecessor companies. His career dates to 1957, when he joined the Delco Remy Division of General Motors and its Delco Remy Unit as an Experimental Engineer.

- Bill Haushalter (Mbr’89) has joined the Commercial Vehicle Group as Vice President and General Manager of the Electrical/Mechanical Division. Haushalter has 23 years’ experience serving the electrical/electronic components segment of the commercial vehicle market.

- Bob Rogowski (Mbr’05) was appointed Executive Director of the Ford Business Unit at Dow Automotive. He is responsible for leading all customer initiatives at Ford.

- Max E. Rumbaugh III (Mbr’91) has been named Manager for Chicago Powdered Metal Products. He has joined the company to focus on business growth, primarily in the new domestic accounts.

- Thomas Watson (Asc’84) is employed by Ford as Hybrid Propulsion Systems Manager. In this position, he oversees the current and future generations of hybrid-electric systems.

- Hau Thai-Tang (Asc’05) has been appointed Director, Advanced Product Creation and Special Vehicle Team, at Ford, where he will oversee the creation of the 2007 Shelby GT500 and guide it into production.

- David Wagner (Mbr’95) has been named Vehicle Engineering Manager of the Ford F-250 Super Chief. He is responsible for packaging the innovative Tri-Flex fuel systems, which enable the Super Chief to run for 500 mi (805 km) between fill-ups on hydrogen, E85 ethanol, or gasoline.
Amendments to the SAE Bylaws recommended

The Annual Business Meeting of the members of SAE will be held April 4, 2006, during the SAE 2006 World Congress in Detroit, MI. The meeting will begin at noon in the SAE/AVL Technology Theater in Cobo Convention Center. As part of the agenda, the members in attend-

ance will be asked to vote on the following recommended SAE Bylaws changes. These changes have been approved by the SAE Bylaws Committee and reviewed and approved by the SAE Board.

Included are a number of minor changes since the last revision in 2002. Changes here also reflect and empower the society to conduct official business via means other than the traditional means of written notices and face-to-face meetings.

Recent changes in the law, especially as the law impacts the Directors and Officers of
not-for-profits, have necessitated changes in the SAE Bylaws, most notably in the area of
Director and Officer Liability and their fiduciary responsibilities.

Since its 75th anniversary in 1980, SAE has been operating as SAE International, while its legal name has remained The Society of Automotive Engineers. The Board of Directors of SAE felt that coming out of the 100th anniversary the legal name should change. This requires a change in the SAE Bylaws.

The following details the changes as proposed and recommended. (New text is underlined. Deleted text is struck out.)

ARTICLE I—NAME

The name of this corporation is: SAE INTERNATIONAL

SOCIETY OF AUTOMOTIVE ENGINEERS, INC.

ARTICLE II—PURPOSES

The purposes of the SAE International benefit of Automotive Engineers, Inc. (herein called “SAE”), as stated in its Articles of Incorporation, are: (a) to advance the knowledge of the arts, sciences,

and engineering practices connected with the development, design, construction, and use of self propelled machines, prime movers and related equipment (herein collectively called “mecha-
nisms”); (b) to preserve and improve the quality of life in the production and use of such mechanisms; (c) to maintain a library of publications; (d) to promote through meetings, lectures, courses, seminars and the presentation and discussion of scientific and engineering papers a better understanding of such mechanisms; (e) to develop technical and scientific reports, including engineering standards and recommended practices, in connection with the development, design, construction, use and reuse meth-
ods of such mechanisms, and publish and distribute such reports for the benefit of mankind; and (f) generally to provide for or carry on such other activities as may be necessary, incidental, convenient, or desirable to accomplish fully the foregoing purposes.

ARTICLE III—MEMBERSHIP

Section 1. Grades of Membership. SAE shall have the following grades of membership:

(a) Honorary

(b) Fellow

(c) Member

(d) Associate

(e) Affiliate

(f) Joint Member

(g) Student

Section 2. Qualifications for Each Grade. Any individual whose personal qualifications enable him
to contribute to the purposes of SAE are eligible for membership in SAE provided they meet the following qualifications:

(a) Honorary. This grade shall be composed of the Past Presidents of SAE, who shall automatically be awarded this grade at the end of their year of service on the Board of Directors (herein called "the Board") as Past President.

(b) Fellow. This grade shall be composed of persons of exceptional distinction by reason of out-
standing and extraordinary qualifications, experience, and sustained accomplishment in mobility or
related engineering, who have been members of SAE for at least 10 years, and are voting members at the time of their election to this grade. In special cases, at the discretion of the committee designated by the Board to review nominations for Fellow grade, the term of SAE membership may be reduced to 5 years at the time of election to Fellow grade, as may be approved by the Board. The Board or its designated committee shall determine the grade to which a candidate shall be awarded this grade. Nomination for election to Fellow shall be made only by voting members. Nominations shall be considered by a committee designated by the Board and, if approved by the committee, the Board shall elect the nominee to Fellow, subject to the approval of each selection by the Board. Status as a Fellow shall become effective upon approval by the Board.

(c) Member. Members shall:

• have a qualified college or university degree in engineering and a minimum of five (5) years of professional technical experience.

• have the required equivalent years of technical education and professional technical experience.

• have distinguished service and noteworthy accomplishments.

• have a qualified college or university degree in engineering.

• have the required equivalent years of technical education and professional technical experience but have not yet attained the experience and level of responsibility to qualify for grade of Member.

• be individuals whose affiliation supports the objectives of SAE but do not meet the requirements for Member and Associate Member.

• Joint Members. Joint members shall be members in good standing of an organization with which SAE has a joint membership agreement and have complied with the terms of that agreement.

• Student. This grade shall be comprised of persons who, at the time of application, are post secondary students pursuing studies leading to a college degree.

• Interpreting and determining the requirements defined in paragraphs c, d, e and f should be made by the bylaws committee or its designees.

Section 4. Application for Membership or Change of Grade. All applications for membership or change of grade, except a change to Honorary or Fellow, shall be made in writing to SAE on application forms furnished for that purpose. All applications, except applications for the student grade, shall be referred to the Board, or their designates, which shall consider and act upon such application. Election to the student grade shall be automatic upon submission to the Secretary of satisfactory proof of qualification.

Section 5. Admission to Membership. Membership in SAE or change of grade shall begin upon election. No dues or other charges shall be assessed in the Bylaws. Voting Members of Record. The Board may provide for the issuance or replacement of a certificate evidencing membership in SAE, to be in such form as the Board may from time to time prescribe and stating on the face of the certificate that SAE is a nonprofit corporation. The name and address of each member and the date of issuance shall be recorded on the records of SAE.

Section 7. Student. The right to use the SAE emblem shall not be granted to any members and is only for SAE purposes.

Section 8. Resignation. Any member may resign by submitting to the President or the Secretary a written resignation, which shall become effective upon its receipt by such officer or at any later time specified therein, and, unless specified therein, the acceptance of such resignation shall not be neces-
sary to make it effective. A resignation shall not relieve the member so resigning of the obligation to pay dues or other accrued or unpaid charges to SAE.

Section 9. Suspension and Expulsion. For good cause shown, any membership may be suspended or expelled by a vote of the Board. Sufficient cause for such suspension or termination shall be nonpayment of dues, violation of these Bylaws or any agreement, rule, or regulation adopted by the Board or SAE, or any other conduct prejudicial to the best interests of SAE. Suspension or expulsion may occur at any meeting of the Board duly convened to a statement of the charges against the member shall have been sent by registered mail to the member’s address as it appears on the books of SAE at least 20 days before final action is taken thereon.

This statement shall be accompanied by a notice of the time and place of the meeting of the Board at which the charges will be considered and shall state that the member shall have the opportunity to appear in person, by attorney, or other representative and present any defense to such charges before action is taken thereon.

Section 10. Reinstatement. Upon written request signed by a former member and submitted to the Board, such former member may, if approved by the Board, be reinstated to membership upon such terms and conditions as the Board deems appropriate.

Section 11. Transfer of Membership Rights. The rights and privileges of each membership are per-
sonal to the member and may not be transferred or assigned by the member’s own act or by operation of law, except that the member may appoint a proxy as provided in these Bylaws.

Section 12. Dues and Fees. The Board or its designee shall determine the amount of time the amount of the initiation fee, if any, and the dues payable to SAE by each grade of membership. Dues shall be payable at such time as the Board may prescribe.

The Board or its designee may also establish separate dues rates and costs for providing services for SAE members who have gained membership through an agreement with another mobility/technical or affiliate organization.

Section 13. Default and Termination of Membership. When a member shall be in default in the payment of any dues, assessments, or other charges to SAE for a period of three months from the date such charges become payable, the membership of such member may be terminated as provided in these Bylaws.

Section 14. Refunds. No dues, assessments, or other charges shall be refunded to any member whose membership has been terminated.

Section 15. Voting Members of Record. The date of record for determining eligibility of a voting mem-
ber shall be sixty days prior to any action to be taken at the annual meeting or any special meeting. A member not eligible as of the date of record shall not be entitled to participate at the annual meeting or any special meeting.

Section 16. Participation. SAE is a global organization, and as such, makes its membership, products, and services available to anyone interested. SAE does not restrict participation due to specific govern-
mental policies. It is the responsibility of each individual to ensure that participation in SAE activities or membership in the Society does not violate corporate policies or national laws/regulations.

ARTICLE IV—MEETINGS OF MEMBERS

Section 1. Annual Meetings and Notice. An annual meeting of the voting members shall be held each year on such day and at such hour and place within or without the Commonwealth of Pennsylvania as may be specified by the Board of Directors. Written notice of the annual meeting, stating the day, hour and place of the meeting, shall be provided to each voting member at least 20 days prior to the date of such annual meeting. written notice shall appear on the books of SAE at least five days prior to the day of the meeting. Any business may be transacted at the annual meeting irrespective of whether the notice of the meeting contains a reference to such business, except as otherwise expressly provided by law or in these Bylaws.

Section 2. Special Meetings and Notice. Special meetings of the voting members may be called at any time by the Board, the President, or a voting member with a petition of signatures of at least one-
tenth of the voting members as of the previous fiscal year end by delivering a written request to the Secretary. Special meetings shall be held at the principal office of SAE or at such other place within or without the Commonwealth of Pennsylvania as may be specified by the Board. Written notice of every special meeting, stating the day, hour, place and general nature of the business to be transacted, shall be provided to each voting member of record and the voting member’s address as it appears on the books of SAE at least five days prior to the day of the meeting.

No business may be transacted at any special meeting other than the general nature of which is stated in the notice of meeting, and business which is germane thereto.

Section 3. Quorum. At any meeting of the members, a voting member may vote by proxy executed in writing by the member and filed with the Secretary. A proxy may be granted only to a voting member. A proxy shall be valid for all meetings of the Board.

See AMENDMENTS, p. 8
Section 4: Organization and Manner of Acting. At all meetings of the voting members, the presence in person, or by proxy, or by approved electronic connection of at least 50 voting members, or one tenth of all the voting members, whichever number is the lesser shall be necessary and sufficient to constitute a quorum of business. The voting members present at a duly-organized meeting can continue to do business until adjournment notwithstanding the withdrawal of enough voting members to leave less than a quorum. If a meeting cannot be organized because a quorum has not been attained, those present may adjourn the meeting from time to time and place as they may determine. The call other than by announcement at the meeting of the time and place of the adjourned meeting. Resolutions of the voting members shall be adopted and any action of the voting members at a meeting upon any matter shall be taken and be valid only with the affirmative vote of at least a majority of the voting members present in person or by proxy at a meeting duly convened, except as otherwise expressly provided in these Bylaws.

The President, or in the absence of the President, the most recent Past President present at the meeting, shall chair all meetings of the voting members. In the absence of the President and all Past Presidents, the convening of the new Board of Directors' organizing meeting immediately following selection of the President. The Secretaries or in the absence of the Secretary and an Assistant Secretary, the chairperson of the meeting shall designate any person to take the minutes of the meeting.

Except as otherwise provided by law, the voting members may, at the request of the Board, take any action or adopt any resolution by mail vote under such procedures as may be adopted from time to time by the Board. Such action or resolution shall be authorized, approved, and adopted upon receiving the affirmative vote of at least a majority of the mail votes returned to SAE provided that the number of mail votes returned to SAE within the time specified in the mail ballot is at least 50 or one tenth of all the voting members whichever number is the lesser.

ARTICLE V—BOARD OF DIRECTORS

Section 1: Responsibilities. The Board of Directors shall manage the business and affairs of SAE, shall designate any person to take the minutes of the meeting. In the absence of the Secretary and an Assistant Secretary, the chairperson of the meeting shall designate any person to take the minutes of the meeting.

Section 2: Composition. The full Board of Directors shall consist of the President, the Vice President, the Executive Vice President, the Treasurer, the EVP, the Secretary, the Assistant Secretary, 18 Directors. The President Nominee selected by the Annual Nominating Committee shall be the President. The Directors elected to the same office for a second term. The following regular annual meeting of the Board, there shall be a meeting of the new Board at which it shall organize itself.

Section 3: Term of Office. Each annual meeting of the voting members. The Directors elected to succeed the President Nominee/Elect for the ensuing year as the EVP, the Secretary, and 18 Directors. The executive elective officers of SAE shall be the President, the Vice President, the Treasurer, the EVP, and the Secretary. The Directors elected to the same office for a second term. The following regular annual meeting of the Board, there shall be a meeting of the new Board at which it shall organize itself.

Regular meetings of the Board shall be held on such day and at such hour and place within or without the Commonwealth of Pennsylvania as may be specified by the Board. Any business may be transacted at any regular meeting.

Special meetings of the Board may be called at any time by the President, or any three members to be held on such day and at such hour and place within or without the Commonwealth of Pennsylvania as shall be specified by the person calling the meeting. Any business may be transacted at any special meeting.

Written notice of all meetings of the Board, stating the day, hour and place of the meeting, shall be provided to each Board member at the member's address as it appears on the books of SAE at least ten days prior to the day of the meeting.

Section 6: Business Conducted Without a Meeting. At all meetings of the Board, the presence of at least one third of the Board members in office shall be necessary and sufficient to constitute a quorum for the transaction of business. If a meeting cannot be organized because a quorum has not been attained, a majority of the Board members present may adjourn the meeting from time to time until a quorum as fixed in this Bylaw is attained.

The President shall designate any person to take the minutes of the meeting. In the absence of the President and an Assistant Secretary, the chairperson of the meeting shall designate any person to take the minutes of the meeting.

Section 7: The term of the President Nominee/Elect on the Board of Directors shall be one year. The year immediately following, that individual will serve as President, subject to election, in accordance with this Bylaw. The term of the President Nominee/Elect on the Board of Directors shall be one year. The year immediately following, that individual will serve as President, subject to election, in accordance with this Bylaw. The President or in the absence of the President, the most recent Past President present at the meeting, shall chair all meetings of the voting members. In the absence of the President and all Past Presidents, the convening of the new Board of Directors' organizing meeting immediately following selection of the President. The Secretaries or in the absence of the Secretary and an Assistant Secretary, the chairperson of the meeting shall designate any person to take the minutes of the meeting.

Meetings by Telephone or Other Communications Technology. One or more Board members may participate in any meeting of the Board or of a committee of the Board by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other or by any other communications technology at the time permitted by law.

Section 8: Emergency Provisions. Notwithstanding any other provisions of law, the Articles or these Bylaws, during any emergency period caused by war or any other major catastrophe or local disaster of sufficient severity to prevent the conduct and management of the business and affairs of SAE by its Board of Directors and officers as contemplated by the other provisions of these Bylaws, a majority of the available Board members (or the sole such member) who have not been rendered incapable of acting because of incapacity or the difficulty of communication or transportation to the place of meeting, shall constitute a quorum for the sole purpose of electing individuals to fill such emergency vacancies, and a majority of the Board members present at such a meeting may act to fill such vacancies or to reduce the size of the full Board or both. Individuals so elected shall serve until the absent Board members are able to attend meetings or until the voting members act to elect Board members to succeed them. During such an emergency period, if the Board is unable to meet, any action appropriate to the circumstances may be taken by such officers of SAE as may be present and able. Questions as to the existence of a major catastrophe or local disaster, and the number of surviving persons capable of acting, shall be conclusively determined at the time by the Board or the officers so acting.

Section 9: Vacancies in the Board and Vacationing Officers. Vacancies in the Board, or in the office of any director, resulting from the death or resignation, resignation, or removal, of any director, shall be filled by the Board, or by any three directors who may be appointed for the purpose, until director, or whichever is the greater number of surviving directors at the time of such vacancy. Any director so appointed shall hold office until the next annual meeting of the Board at which a director or directors shall be elected to fill the vacancies so created. The Board of Directors may designate any person to fill any vacancy in the office of any director in the interim before such director may be elected to fill the vacancy in the office of any director.

Section 10: Copy of the Bylaws. The President, or in the absence of the President, the most recent Past President present at the meeting, shall chair all meetings of the voting members. In the absence of the President and all Past Presidents, the convening of the new Board of Directors' organizing meeting immediately following selection of the President. The Secretary or in the absence of the Secretary, an Assistant Secretary shall take the minutes of the meeting. The presence of the Secretary and an Assistant Secretary, the chairperson of the meeting shall designate any person to take the minutes of the meeting.

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Section 1: Executive Officers. The executive elective officers of SAE shall be the President, the Vice President, the Executive Vice President, the Treasurer, the EVP, the Secretary, and the Assistant Secretary. The Board of Directors shall appoint an EVP/Secretary of SAE. The Treasurer and the Assistant Treasurer. The Board of Directors shall appoint an EVP/Secretary of SAE. The executive elective officers of SAE shall be the President, the Vice President, the Treasurer, the EVP, and the Secretary. The Directors elected to the same office for a second term. The following regular annual meeting of the Board, there shall be a meeting of the new Board at which it shall organize itself.

To the fullest extent that the laws of the Commonwealth of Pennsylvania, SAE UPDATE PAGE 8 MARCH 2006

In the absence of the President any Assistant Secretary shall take the minutes of the meeting. In the absence of the Secretary and an Executive Secretary, the chairperson of the meeting shall designate any person to take the minutes of the meeting.

Meetings by Telephone or Other Communications Technology. One or more Board members may participate in any meeting of the Board or of a committee of the Board by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other or by any other communications technology at the time permitted by law.

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ties as may be prescribed from time to time by the Board or the President.

Section 7: The Secretary and Assistant Secretaries. It shall be the duty of the Secretary (a) to keep or cause to be kept a record of the proceedings of the Board, the President, or the Secretary. At the direction of the Secretary or in the absence or disability of the Secretary, an Assistant Secretary shall perform the duties of Secretary.

Section 8: The Treasurer. The Treasurer shall be an individual who: (a) will have served on the Finance Committee, and/or (b) will have served on the Board of Directors. Preference should be given to individuals who have served both on the Board of Directors and the Finance Committee. The Treasurer shall be the chief financial officer of SAE and shall exercise such other powers and duties incident to the office of Treasurer and such other duties as may be prescribed from time to time by the Board or the President. The Treasurer shall be a member, without vote, of all other committees or boards of SAE, and sub-divisions thereof, except the Annual Nominating Committee. The EVP shall exercise such other powers and duties as may be prescribed from time to time by the Board or the President.

Section 9: The Assistant Treasurer. The Assistant Treasurer shall be an individual who: (a) will have served on the Finance Committee, and/or (b) will have served on the Board of Directors. Preference should be given to individuals who have served both on the Board of Directors and the Finance Committee. The Assistant Treasurer shall assist the Treasurer in the performance of the duties of Treasurer and shall exercise such other powers and duties as may be assigned to him by the Treasurer from time to time by the Board or the President. At the direction of the Treasurer or in the absence or disability of the Treasurer, an Assistant Treasurer shall perform the duties of Treasurer.

Section 10: The Vice Presidents. Each Vice President shall serve a three-year term. The election of the Vice Presidents shall be staggered, electing one Vice President each year. The Vice Presidents shall support the SAE local chapter or keywan without a chapter. In the absence of the President, the Vice Presidents will act as the chief spokesperson for the mobility sector in which they represent.

Section 11: Vacancies. Vacancies in any officer position by reason of death, resignation, removal, disqualification, disability, or other cause shall be filled by the Board in the manner prescribed in such Bylaws.

Section 12: Resignation. Any officer may resign by submitting his resignation to the President or the Secretary, provided that the resignation shall become effective upon its receipt by such officer or at any later time specified therein, and, unless specified therein, the acceptance of such resignation shall not be necessary to make it effective.

ARTICLE VII—NOMINATING COMMITTEES AND ELECTIONS

Section 1: Annual Nominating Committee. The Annual Nominating Committee of SAE shall select nominees for President, Treasurer (as required), Assistant Treasurer (as required), and Four Directors.

The Committee shall consist of members designated at large, one delegate from each of SAE, and one delegate from each of SAE Affiliate, one delegate from each as specified in the Board of Directors’ Annual Nominating Committee Governance Policy in the Board’s Governance Policy Manual. The delegates from each Operating Board, one delegate from each Program Office, and the three most recent Past Presidents available. The delegate shall be in the most recent Past Presidents available and such delegates as requested by the Annual Nominating Committee. The delegates shall be in attendance at meetings of the committee.

Prior to the first regular Board of Directors’ meeting which follows the organizing meeting of the Board, the President shall call for Past Presidents in the order of their time of service, beginning with the most recent Past President, in order to identify the following:

(a) First, then (3) delegates willing to serve on the Annual Nominating Committee, and
(b) Then, three (3) alternates, willing to attend in anticipation of being called and to serve if called, who shall be designated as the first, second, and third alternates respectively.

A Past President delegate shall not concurrently serve on the Annual Nominating Committee as a Section delegate or as an operating board delegate nor as another at-large delegate.

Section 2: Board Nominating Committees. On a rotating basis, each year, two of the following: the Engineering Education Board, Engineering Meetings Board, the Foundation Board of Trustees, the Membership Services Board, the Section Boards, and the Technical Standards Board shall elect from the list of nominating committee of voting members and each of those nominating committees shall select one nominee for the Board of Directors. Members of those nominating committees may not be represented by a proxy at meetings of the committees.

Section 3: Membership-at-Large Participation. Any voting member may, if they wish, participate in the nomination process by suggesting potential candidates to the Annual Nominating Committee.

Two methods exist for this purpose:

(a) Voting members may send the names and addresses of such candidate(s) to the SAE Secretary, who will transmit the information to the appropriate SAE Section/Commission. The Section/Committee may then develop the necessary background information on the qualifications of such candidate(s). The final decision on the selection of nominees will proceed with the suggestion through to the Annual Nominating Committee is left to the discretion of the Section/Committee and its governing board.

(b) Voting members may also write or call the SAE/Secretary to obtain an Individual Member Nomination Form. All such forms must be submitted to the SAE/Secretary by the date designated on the form.

The Secretary will communicate these recommendations to all such recommendations received from the voting members. In voting, voting members who complete such a form may, if they wish, attend the meeting of the Annual Nominating Committee for that period of time required to personally present the credentials of the potential candidate(s).

Section 4: Policies. The policies governing the nominating committees shall be adopted by the Board of Directors.

Section 5: Elections. The Board of Directors shall from time to time establish the procedures for the conduct of the elections for which the voting members have a right to vote, including voting in person, by proxy, or by mail, and by approved electronic means.

ARTICLE VIII—MISCELLANEOUS CORPORATE TRANSACTIONS AND DOCUMENTS

Section 1: Notes, Checks, etc. All properly authorized notes, bonds, drafts, acceptances, checks, endorsements (other than for deposit), guarantees, and all other evidences of indebtedness of SAE whatsoever, shall be signed by such officers or agents of SAE, subject to such requirements as to signature or as otherwise authorized by the Board of Directors, as may from time to time be determined.

Section 2: Execution of Instruments Generally. Except as provided in these Bylaws, all deeds, mortgages, contracts, and other instruments requiring execution by SAE may be signed by the President, the Secretary, the Treasurer, or any Assistant Secretary of SAE or any other person or persons as may be authorized by the Board, the President, or the Secretary. Any such document signed by the Board, the President, or the Secretary shall be authenticated by the affixing of the corporate seal of SAE and the signature of the President, the Secretary, or the Treasurer.

The Secretary or the Treasurer shall keep a record of the proceedings of the members and shall exercise such other powers and duties as may be assigned to the Secretary or in the absence or disability of the Secretary, an Assistant Secretary shall perform the duties of Secretary.

Section 3: Voting and Acting with Respect to Stock and Other Securities Owned by SAE. The President, the EVP, the Assistant Treasurer, the Assistant Treasurer, or the Assistant Secretary shall have the power to vote and act and act with respect to stock and other securities in any other corporation owned by SAE, unless the Board confers such authority, which may be general or confined to specific instances, upon some other officer or person. Any person so authorized shall have the power to appoint an attorney or attorneys, with general power of substitution as proxies for SAE with full power to vote and act on behalf of SAE with respect to such stock and other securities.

ARTICLE IX—MEMBER AND NONMEMBER UNITS

Section 1: Member Units. The Board of Directors may authorize the organization of SAE Sections, Groups, Divisions, and Student Branches. They shall have such powers and conform to such rules and regulations as the Board may prescribe.

Section 2: NonMember Units. The Board of Directors may authorize the organization of unincorporated societies or institutes that fulfill the purposes of the SAE Bylaws and are not for profit or for tax exempt status. Final management authority shall reside with the SAE Board and shall be subject to the policies adopted by the SAE Board as may be amended from time to time. To the fullest extent appropriate, the Board may permit such societies or institutes to establish their rules and procedures, except that no society or institute shall have authority to establish any rule or procedure which violates the SAE policy. All rules and procedures will be subject to the approval of the SAE Board.

Societies or institutes shall be organized to have members and membership classes that do not receive financial assistance from SAE. Nothing shall prevent a member of such society or institute from becoming a member of SAE provided that the qualifications of such grade are obtained. However, a society or institute shall have no power or authority to confer the attributes of membership upon a society or institute member who has not otherwise attained SAE membership. Membership in a society or institute shall not be deemed to constitute membership in SAE.

Section 3: SAE Affiliate. An SAE Affiliate is defined as an organization, which the SAE Board of Directors has designated as being an affiliate.

ARTICLE X—APPEALS

An SAE Appeals Panel Board shall be created by the Board of Directors to hear and decide all appeals from decisions of the Board of Directors, operating boards, and program offices made by such officers or agents of SAE acting on appeals thereto, and to decide all appeals from any action or refusal to act of such Board committees, operating boards, or program offices, and/or (b) will have served on the Board of Directors, or of Board committees, operating boards, or program offices, and/or (c) who serve on the Planning Committee, Technical Standards Board, and the Women Engineers Committee. All members of the Executive Committee shall be voting members of SAE and may not be represented by a proxy at meetings of the committees.

Prior to the first regular Board of Directors meeting, which follows the organization meeting of the Board, the President shall contact Past Presidents in the order of their time of service, beginning with the most recent Past President, in order to identify the following:

(a) First, three (3) delegates willing to serve on the Annual Nominating Committee, and
(b) Then, three (3) alternates, willing to attend in anticipation of being called and to serve if called, who shall be designated as the first, second, and third alternates respectively.

A Past President delegate shall not concurrently serve on the Annual Nominating Committee as a Section delegate or as an operating board delegate nor as another at-large delegate.

Section 2: Board Nominating Committees. On a rotating basis, each year, two of the following: the Engineering Education Board, Engineering Meetings Board, the Foundation Board of Trustees, the Membership Services Board, the Section Boards, and the Technical Standards Board shall elect from the list of nominating committee of voting members and each of those nominating committees shall select one nominee for the Board of Directors. Members of those nominating committees may not be represented by a proxy at meetings of the committees.

Section 3: Membership-at-Large Participation. Any voting member may, if they wish, participate in the nomination process by suggesting potential candidates to the Annual Nominating Committee.

Two methods exist for this purpose:

(a) Voting members may send the names and addresses of such candidate(s) to the SAE Secretary, who will transmit the information to the appropriate SAE Section/Commission. The Section/Committee may then develop the necessary background information on the qualifications of such candidate(s). The final decision of which committee will proceed with the suggestion through to the Annual Nominating Committee is left to the discretion of the Section/Committee and its governing board.

(b) Voting members may also write or call the SAE/Secretary to obtain an Individual Member Nomination Form. All such forms must be submitted to the SAE/Secretary by the date designated on the form.

The Secretary will communicate these recommendations to all such recommendations received from the voting members. In voting, voting members who complete such a form may, if they wish, attend the meeting of the Annual Nominating Committee for that period of time required to personally present the credentials of the potential candidate(s).
b. In a particular case indemnification would jeopardize SAE’s tax exempt status under Section 501(a) of the Internal Revenue Code of 1986, as amended (the “Code”) or result in SAE’s failure to be described in Section 51(c)(3) of the Code, and except as prohibited by law, such director and officer of SAE shall be entitled as of right to be indemnified by SAE against any liability paid or incurred by such person in the defense of any Action in which such person is a party or (ii) in connection with any other Action, provided that, in either case, if the action is by or in the right of SAE to procure a judgment in its favor, the director or officer shall only be indemnified by SAE against expenses incurred in connection with the defense or settlement of the action, in accordance with the laws of the Commonwealth of Pennsylvania, as now in effect or as hereafter amended.

c. A person who is not a director or officer of SAE may be similarly indemnified in respect of service as an employee of SAE to the extent the Board at any time designates such person as entitled to the benefits of this Article, (i) if the indemnitee is a former employee of SAE who has been or is threatened to be made so involved by reason of such person being or having been a Director or Officer of SAE or of a subsidiary of SAE or by reason of the fact that such person is or was a party or an officer of any corporation, partnership, joint venture, trust or other enterprise as a result of the fact that such person is or was an employee of SAE or of any other representative of SAE or of a subsidiary of SAE or (iii) if the indemnitee is an employee of SAE or of any other representative of SAE or of a subsidiary of SAE.

d. As used in this Article, “indemnitees” shall include each director and each officer of SAE and each other person designated by the Board as entitled to the benefits of this Section.

II. Right to Advancement of Expenses

The only defense to an Indemnitee Action to recover a claim for advancement of expenses under Section 2.2 is that the indemnitee failed to provide the undertaking required by Section 2.2, but the burden of proving any such defenses shall be on SAE. The only defense to an Indemnitee Action to recover a claim for advancement of expenses under Section 2.2 is that the indemnitee failed to provide the undertaking required by Section 2.2, but the burden of proving any such defenses shall be on SAE.

Section 2.5 Right of Indemnitee to Initiate Action

If a written claim under Section 2.1 or Section 2.2 of this Article is not paid in full by SAE within 90 days after such claim has been received by SAE, the indemnitee shall have the right to bring an action at law in any court of competent jurisdiction to enforce SAE’s obligations to indemnify the indemnitee for such expenses. The indemnitee shall have the right to bring an action at law in any court of competent jurisdiction to enforce SAE’s obligations to indemnify the indemnitee for such expenses.

Section 2.6 Notice of Intention to Proceed

No suit for indemnification or advancement of expenses provided for in this Article shall be brought unless the claim for indemnification or advancement of expenses shall be in writing presented to SAE by or on behalf of the indemnitee and a copy of such claim shall have been delivered to the Secretary of SAE.
CALLS FOR AWARD NOMINATIONS

Cliff Garrett Turbomachinery Engineering Award
Open to: Turbomachinery paper authors
Description: This award promotes engineering developments and the presentation of SAE papers on turbomachinery engineering. SAE administers an annual lecture by a distinguished authority in the engineering of turbomachinery for on-highway, off-highway, and/or 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 aircraft supplier (Tier 2 or 3) whose efforts contribute to the excellence of the prime manufacturer and the viability of airline operations. In the assessment of his/her peers, the individual should have contributed to the advancement in safety, reliability, maintenance, and the customer in the air-transport industry through initiative, dedication, and excellence in personal interactions with customers to achieve operational efficiency for customers and users.
Nomination deadline: May 1, 2006
Submission: Visit www.sae.org/news/awards/list/custsupport/

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.
Nomination deadline: May 1, 2006
Submission: Visit www.sae.org/news/awards/list/kellyjohnson/

Franklin W. Kolk Air Transportation Professional 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 aeronautical technical committees in developing aerospace standards, specifications, technical reports, and data through cooperative research. Selection is based on originality 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 Whitlock 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 maintenance, design, tooling, maintenance practices, logistics, inspection, modification, and safety.
Nomination deadline: May 1, 2006
Submission: Visit www.sae.org/news/awards/list/whitlock/

SAE Aerospace Engineering Leadership Award
Open to: Corporate-level aerospace leaders
Description: This award honors an individual who has demonstrated outstanding 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 Olsen 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 prototypes, development of outstanding teams, unquestioned 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/olsen/

AEM Outstanding Young Engineer Award for the Off-Highway Industry
Open to: Off-highway or powerplant industry engineers
Description: This award recognizes an 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

Rumbah Outstanding Student Leader Award
Open to: Graduating SAE student members
Description: This award identifies and recognizes an SAE student member who has demonstrated outstanding leadership skills in one or more SAE activities during his/her final year of undergraduate or graduate school. The purpose of the award is to encourage a vision within the student to become an SAE leader during his/her adult career. Faculty advisers or SAE Section Officers should submit nominations.
Nomination deadline: June 15, 2006
Submission: Visit http://students.sae.org/awdscholar/awards/rumbaugh/ for information and a nomination form.

SAE UPDATE PAGE 11 MARCH 2006

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 under 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 geared toward college juniors who will be entering their senior year of undergraduate studies in the fall of 2006. Details and applications are available on the SAE Web site at www.sae.org/students/scholarships. The application deadline is April 1, 2006.

Yanmar/SAE Scholarship—This scholarship, established by Yanmar Diesel America, awards a $2000 scholarship to a student who is pursuing a course of study or research related to the conservation of energy in transportation, agriculture, construction, or power generation, with emphasis placed on research or study related to the internal-combustion engine. Applicants must be citizens of the U.S., Canada, or Mexico.

SAE Long Term Member Sponsored Scholarship—The scholarship continues to be supported through contributions from long-time members of SAE. Several $1000 nonrenewable scholarships are awarded annually to student members who actively support SAE, the college chapter, or the local SAE Section and its programs. Student grade point average is not a determining factor within the scope of this scholarship.

William G. Belfry SAE Memorial Grant—Two $1000 grants sponsored by the SAE Foundation Canada and SAE Canada under 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.
Las Vegas hosts PAMA Aviation Maintenance Symposium

The Professional Aviation Maintenance Association (PAMA), an SAE Aerospace Alliance, will hold its 35th Annual Aviation Maintenance Symposium on March 28-30 at the Las Vegas Convention Center in Las Vegas, NV.

The PAMA Symposium, held in conjunction with the Aviation Industry Expo, will be preceded by PAMA’s popular one- and two-day Professional Development Workshops, March 26-27 at the Renaissance Las Vegas Hotel.

With the theme “Ensuring aviation safety through a commitment to lifelong education,” the symposium provides aviation mechanics from all areas of the aerospace industry with the opportunity to expand their education, learn about technology developments, and network with colleagues throughout the industry.

Full-day and multi-hour seminar sessions, taught by leading industry experts, will be presented in the following tracks:
• Business and Corporate Aviation
• Light General and Sport Aviation
• Air Carrier Maintenance
• Maintenance Safety and Security
• Technical Training and Development.

Workshop topics are:
• Technical Training and Development.
• Air Carrier Maintenance.
• Maintenance Safety and Security.
• Business and Corporate Aviation.

Workshop sessions will be preceded by PAMA’s popular one- and two-day Professional Development Workshops receive free symposium and exhibit hall registration.

Attendees can also take part in the “Human Factors in Aviation Maintenance Safety” roundtable, led by former National Transportation Safety Board Member John J. Goglia.

Among the highlights of the event is the PAMA Aviation Maintenance Olympics, which will be held on the show floor March 27-29. Aviation maintenance professionals compete against peers to demonstrate their skills. The heart of the Olympics is the three-person team competition showcasing speed, accuracy, and expertise.

The symposium will kick off with a Welcome Reception in the Convention Center’s South Hall on March 27 from 6–8 p.m. Another popular event, the PAMA Chili Cook-Off, will be held March 29 from 5–7 p.m. on the show floor.

The annual Awards Breakfast, honoring individual chapters, chapters, and organizations that significantly improve the association and the aviation maintenance industry, will be held March 31, from 7–10 a.m. in the South Hall. The keynote speaker will be Phil Grassa, Crew Chief of Virgin Global Flyer.

Safety Wiring, an event at the PAMA Aviation Maintenance Olympics, assesses a contestant’s skill and speed in performing a set of complex safety wire patterns.

Those attending the March 26-27 Professional Development Workshops receive free symposium and exhibit hall registration.

PAMA’s 35th Annual Aviation Maintenance Symposium is administered by SAE International for PAMA. To register, or for more information, visit www.pama.org or contact 866-865-PAMA or hpq@pama.org. PAMA/SAE members save $100 off the registration fee, and those who register by March 10 will receive additional discounts.
Dayton Section welcomes Porsche executive

The Dayton Section coordinated with the SAE Sections Speaker Bureau to engage Jeremy Goddard, Director of Business Development for Porsche Engineering Services (PES) for the section’s November meeting. The meeting was held at TajMaGaraj Museum, a private Porsche collection in Dayton, OH.

Goddard presented a program reviewing PES’ activities and the technology incorporated in the Carrera GT. The meeting attracted a large number of local SAE student members, reflecting the section’s current emphasis on activities that are appealing to younger SAE members.

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/toptecs.htm.

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<td>Ag Machinery Conference</td>
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<td>Aerospace Manufacturing and Automated Fastening Conference &amp; Exhibition</td>
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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.

Expand your education.
Increase your knowledge of technological developments.
Interact with colleagues throughout the industry.

Be a part of the Aviation Maintenance Event of the Year!

PAMA’s 35th Annual Aviation Maintenance Symposium
March 28-30, 2006
Las Vegas, Nevada

PAMA 2006 is held in conjunction with Aviation Industry Expo

Don’t miss the popular pre-symposium workshops March 26-27.

Register by March 10 and SAVE!

To register, or for more information visit www.pama.org or call 1-866-865-PAMA

"The premier society dedicated to advancing mobility engineering worldwide"
SAE offers many opportunities for Professional Development Hours

If you are a professional engineer, it is likely that you participate in activities to earn Professional Development Hours (PDHs) to maintain your professional license. The National Society of Professional Engineers (NSPE) contends that continuing professional education ensures the competency of professional engineers and, in turn, protects the public health, safety, and welfare. One approved continuing professional competency activity is completing a continuing education course such as any SAE professional development seminar.

SAE offers more than 200 professional development seminars to expand one's learning and job ability. Attendees can earn Continuing Education Units (CEUs) for each SAE professional development seminar completed. One CEU equals 10 PDHs. For example, a two-day SAE seminar that grants 1.3 CEUs equates to 13 PDH units. These interested can find the course description on the SAE Web site for the number of CEUs earned for completing a particular seminar.

The National Council of Examiners for Engineering, the umbrella organization of the state and territorial professional engineering and land surveying licensing authorities, states in its 2005 Model Rules of Procedures that PDH units can be earned for the following: “successful completion of college courses, continuing education courses, short courses, or tutorials offered through correspondence, television, videotapes, or the Internet; presenting or attending qualifying seminars; in-house courses, workshops, or professional or technical presentations made at meetings, conventions, or conferences; teaching or instructing approved activities such as a seminar; authoring published papers, articles, or books; active participation in professional or technical societies, and patents.”

Therefore, there are multiple ways to earn PDHs through involvement with SAE. In addition to completing professional development seminars, members can take part in an e-seminar, participate in an SAE in-house seminar, teach a seminar, attend or present at a technical session at the SAE World Congress or other meeting or symposium, or author a paper, article, or book.

Identifying ways to earn PDHs is becoming increasingly important as more states move to mandate continuing professional education for license renewal. Currently, 30 states mandate continuing education competency for licensed engineers. The NSPE, which supports a policy of mandatory continuing education, points out that licensed professional engineers have always voluntarily engaged in activities to improve their level of technical and professional knowledge. However, they state that the trend is to require professional engineers to formalize their completion of these activities in the form of continuing professional competency requirements. The licensee is responsible for maintaining records to be used to support credits claimed.

Licensees should look into their state’s requirements as the rules are not all the same. For example, five states (New York, Florida, Louisiana, North Carolina, and Oklahoma) require pre-approval of PDH sponsors. In the instance of New York, SAE is an approved PDH sponsor due to its status as an Authorized Provider of the International Association for Continuing Education and Training (IACET) and as such is authorized to award IACET CEUs for its continuing education seminars.

For more information on SAE seminars, e-seminars, in-house learning opportunities, or becoming an SAE seminar instructor, go to www.sae.org/events/training/.

For more information on Continuing Professional Competency Status in the U.S., go to www.nspe.org/govrel/gr2-4039.asp.

To read the National Society of Professional Engineers Issue Brief: Continuing Professional Competency, go to www.nspe.org/govrel/gr2-4039.asp.

The SAE contact for more information is Mary Samsa, Professional Development, 724-772-8524 or msamsa@sae.org.

Courses from SAE

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

March 2006

Troy, MI, USA - SAE Automotive Headquarters
March 2-3
Tolerance Stack-Up Analysis
March 2-3
Fundamentals of Gear Design and Application
March 6-7
New! Practical NVH Signal Processing Methods

Because signal processing has become a critical tool in optimizing vehicle noise, it is critical for NVH specialists to have a solid mastery of this technology. It is important to understand the foundation common to all NVH data acquisition equipment, including digitizing, windows, aliasing, averaging techniques, and common analysis functions such as the power spectrum, transfer function, and coherence. To provide an applied, real-world focus, most signal processing concepts are illustrated with computer demonstrations and physical experiments. Case histories are also used to illustrate two common data intensive NVH tasks: transfer path analysis and CAE model correlation. Each day the course will close with brief introductions to emerging concepts such as advanced time/ frequency analysis and automated pattern recognition.

March 6-7
Controller Area Network for Vehicle Applications
March 6-7
Threaded Fasteners and the Bolted Joint
March 8-10
Advanced Electric Motor/Generator / Actuator Design and Analysis for Automotive Applications
March 8-10
Automotive Fuel Cell Systems
March 9-10
Adhesive Bonding Technology
March 9-10
New! Collaborative Supply Chain Integration

This course is one in a five-course series that leads to a Professional Certificate in Automotive Product Development Management, jointly conferred by SAE and Oakland University’s School of Business. This course focuses on the product-development aspects of supply-chain management and post-launch operational supply-chain management. Today, when it is not unusual for companies to outsource as much as 60-70% of various components of their final product, the capability to design, manage, and control supply chains has never been more important. This is especially true for companies that are becoming more dependent on suppliers for product design and development support.

March 14-15
Turbocharging Internal-Combustion Engines
March 15-17
Chassis & Suspension Component Design for Passenger Cars & Light Trucks
March 16-17
Automotive Electronics—An Applications Primer
March 16-17
New! Acquiring and Analyzing Data from Sensors and In-Vehicle Networks

The evolution of personal computers, data-acquisition hardware, and analysis software has provided engineers with the ability to measure and interpret data quickly, make design enhancements, and bring a product to market faster. As in-vehicle networks become increasingly more sophisticated, both in terms of the number of controllers and the

continued on page 15
speed at which they communicate, they are becoming a virtual gold mine for the test engineer. If the data is already available on the vehicle and can be accessed from the standard OBD connector under the dashboard, the only one needs to add the missing sensors, if any. This course will provide you with information on current trends and applications in PC-based data acquisition and analysis. Hardware and software possibilities, as well as relevant technical standards to determine what can practically be acquired from the in-vehicle network and how to combine this with sensor data, will be covered. In addition, a practical guide for analysis and presentation techniques will be covered along with practical, hands-on examples. Students will have the opportunity to utilize a classroom PC with data-acquisition hardware and software to acquire and analyze test data.

April 2006
Detroit, MI, USA - Cobo Center
In Conjunction with the SAE 2006 World Congress & Exhibition

April 3-5
Benchmarking for Competitive Advantage

April 3-6
Hands-on Racor Suspension Setup

April 3-6
Managing Integrated Product Development

April 3-6
Fundamentals of Automotive Fuel Delivery Systems

April 3-6
Product Liability and the Engineer

April 3-6
Vehicle Accident Reconstruction Methods

April 3-6
Metal Corrosion and its Prevention

April 3-6
Catalytic Converters: Design and Durability

April 3-6
Engineering Effective Team Management and Practice

April 3-6
Fundamentals of Modern Vehicle Transmissions

April 3-6
Geometric Dimensioning & Tolerancing—Level I

April 3-6
Hydraulic Brake Systems for Passenger Cars and Light Trucks

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 4-5
Diesel Emissions and Aftertreatment Devices: Design and Durability

April 5
Tires and Handling for Racing and High-Performance Vehicles

The pneumatic tire is extremely complex and not well understood. Automotive and race engineers are forced to rely on experience as well as trial-and-error methods when trying to get the most from their vehicles. Capitalizing on instructor Paul Haney’s 20-year struggle to understand how tires work on a car, this seminar provides a practical applied approach to understanding how a car gets around a corner, rubber friction, tire behavior, and basic vehicle dynamics. While the information presented explains tire technology and vehicle dynamics in general, the seminar uses racing and high-performance settings to illustrate the major points.

April 5
Design Reviews for Effective Product Development

April 5-6
Accelerated Test Methods for Ground and Aerospace Vehicle Development

April 5-6
Control Systems Simplified

The advent of digital computers and the availability of ever cheaper and faster microprocessors have brought a tremendous amount of control system applications to the automotive new product development arena over the last two decades. This seminar begins by introducing the highly mathematical field of control systems, focusing on what the classical control system tools do and how they can be applied to automotive systems. Dynamic systems, time/frequency responses, and stability margins are presented in an easy-to-understand format. Utilizing Matlab and Simulink, students will learn how simple computer models are generated. Other fundamental techniques in control design such as PID and lead-lag compensators 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
Commercial 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 combination of the vehicle overall shape and the shape and location of its components. This seminar will introduce you to basic aerodynamic principles and tools to evaluate aerodynamic features including wind tunnel testing, flow visualization, track testing, and computational methods. Testing of scale models, measurement methods, and data interpretation will also be covered. Real-life situations and problems will be discussed and attendees will have the opportunity to solve problems utilizing skills learned.

April 5-7
Vehicle Dynamics for Passenger Cars and Light Trucks

April 5-7
Fundamentals of Metal Fatigue Analysis

April 6-7
Selection, Evaluation, and Measurements of Acoustical Materials for Vehicle Interior Noise

April 6-7
Occupant and Vehicle Kinematics in Rollovers

April 6-7
The Basics of Internal-Combustion Engines

April 6-7
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 mechanical engineering. Students 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.

April 6-7
Engineering Project Management

April 6-7
Diesel Engine Technology
**CAREER OPPORTUNITIES**

It’s easy to place an advertisement in SAE Update. Simply call with your space reservation and fax—or e-mail—and save the typesetting fee—your ad copy to Kathy Belles:

724/772-4014
724/776-3087

CustomerSales@saecareer.org

You will be contacted promptly to discuss your ad and to receive details about pricing and deadlines.

SAE Members can now post their resume and search job openings at http://www.saecareercenter.org/

SAE assumes no responsibility for the statements or falsehoods or omissions of those responding to a listing.

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**FULL OR PART TIME RETIREES**

**AUTO ACCIDENT RECONSTRUCTION**

Peter R.Thom & Assoc.
Fax 925/254-1650
www.prthomassoc.com

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**WANTED:**

**Automotive Industry Leaders**

ARI is currently registering industry leaders and experts as consultants to assist in solving industry challenges in areas such as engineering, international business, manufacturing, product lifecycle management, and sales and marketing.

To learn more visit www.ari.sae.org or contact Neil Schuele at neillschuele@sae.org or 248-273-4222.

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**MARKET DEVELOPMENT MANAGER**

To identify and lead growth initiatives for Specialty Tape’s Transportation business. Act as front-line contact in building strategic relationships with key Transportation OEM’s, Tiers, Converters, and other value chain influencers; to drive market- and new product-development programs to closure in line with segment priorities. Identify and lead programs to grow Specialty Tape’s Transportation Business. Generate ideas, complete market analysis, and lead priority commercialization programs with cross-functional teams (Sales, Technical, Finance, Operations, Logistics, Customer Service, etc.). Work throughout the Transportation value chain to identify unmet needs where Specialty Tape can add value to current/targeted customers Represent Avery Dennison Specialty Tape with key industry contacts; create and grow strong partnerships to drive growth. Develop Opportunity Analysis/Horizon 2 market/product development programs. Lead/participate in Horizon One Fastbreak Teams, as required. Analyze key market trends, drivers, and opportunities for Specialty Tape in Transportation Segment (auto, light/heavy duty truck, electric vehicles and stationary /telecom products). If you are interested in becoming an integral part of an up and coming successful company, Cobasys is looking for you!!! For further information please visit www.cobasys.com

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**ENGINEERING OPPORTUNITIES**

Cobasys offers a comprehensive benefits package including medical, dental and vision insurance. Paid vacations, holidays, bonus program and 401K company match.

Please forward your resume to work@cobasys.com or mail your resume to:

Cobasys
3740 Laper Rd South
Orton, MI 48359

Att: Human Resources Department

No phone calls please. No third party resumes will be accepted.

Cobasys is an Equal Opportunity Employer

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**Highway Engineer Forensic**

We currently seek forensic highway engineers for our Lancaster, PA, Albany and Mineola, N.Y.; Columbus, Ohio; and Cedar Knolls, N.J. offices.

You will investigate, analyze and effectively report (both orally and in writing) on highway/traffic issues as they relate to forensic casework. You will also be expected to market the highway engineering expertise of the firm (as requested) and to provide expert testimony via depositions and trials as necessary.

Prefer Licensed Professional Engineer, with a BS in Civil Engineering (concentration in highway/traffic engineering a plus). Must have 4+ years experience in highway engineering (including design, construction, operation and maintenance). Experience should include traffic control devices, such as traffic signals, and pedestrian-related facilities, as well as几何学和交叉路口。应有基本理解人类因素和它们如何影响交通环境。应是 knowledgeable, able to be communicated and have detailed understanding of cross sections. Should be familiar with site development.

Contact: Peter R. Thom & Assoc., 21001 State Route 739, Raynham, OH 43067-9705. Fax: 937-645-6337. Email: emp@oh.hra.com.

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**Honda R&D Americas, Inc.**

www.hondaresearch.com

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**Siemens VDO Automotive Corporation**

(Specializes in automotive electronic and supply manufacture, seeks the following: Software Engineers to plan, design, develop, test, and maintain project software, among other duties. B.S. to M.S. or foreign equivalent in Electrical Engineering or Computer Science or Engineering, varying levels of experience. Ref. #120066. Please send resumes to: N.V., Human Resources, Siemens VDO, 2400 Executive Hills Dr., Auburn Hills, MI 48326, or reply by fax to: (248) 253-2991.

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**Research Computer Specialist:** Requires Masters in Mech. Eng. + 1 yr exp. to include exp in Computational Fluid dynamics Simulations and computer/ multimedia presentation of research results. Apply by mail only to: U of Mich, 1231 Heal Ave, 2033 W. E. Lay Auto Lab, Ann Arbor, MI 48109

Att: Susan Clair

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**Senior Control Systems Eng.** Requires BS in EE plus 2 yrs. exp. with Matlab/Simulink, engine control system design and analysis, validation and simulation, and control algorithms and system accessories. Please apply by mail only to IAV Automotive Engineering, 4110 Varsity Drive, Ann Arbor, MI 48108. Use ref. code: 1961

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**Cobasys is a leading manufacturer of advanced batteries for hybrid electric vehicles and stationary /telecom products. If you are interested in becoming an integral part of an up and coming successful company, Cobasys is looking for you!!!**

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**We are currently hiring qualified individuals in the following areas:**

* Mechanical Engineering
* Electrical or Electronics Engineering
* Account Management
* Mechanical Engineering Design
* Software Engineering

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Cobasys offers a comprehensive benefits package including medical, dental and vision insurance. Paid vacations, holidays, bonus program and 401K company match.

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