

SPONSOR FEATURE

EcoCAR 2: North America's Premier Collegiate Automotive Engineering Competition

YEAR TWO Integration, Communications, and Business



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Information contained in this document does not constitute as an endorsement by the U.S. Department of Energy or General Motors.

SCHEDULE OF SPONSOR EVENTS*



Thursday, May 16	6:30 PM – 9:00 PM	NSF Judging	Corsica Room, Radisson Yuma
Monday, May 20	7:00 PM - 8:15 PM	Freescale Faculty Dinner Reception**	Bali Hai Restaurant
Wednesday, May 22	8:30 AM – 11:30 AM	Freescale Judging MathWorks Judging	Sierra B, Westin Gaslamp Sierra A, Westin Gaslamp
	9:45 AM	Break	
	11:30 AM – 12:30 PM	Lunch	Garden Terrace, Westin
	12:30 PM – 5:45 PM	Freescale Presentation MathWorks Presentation	Sierra B, Westin Sierra A, Westin
	2:00 PM	Break	
	6:00 PM	Presentation Conclude – Day 1	
Thursday, May 23	8:00 AM – 12:00 PM	Freescale Presentation MathWorks Presentation	Sierra B, Westin Sierra A, Westin
	12:00 PM	Presentations Conclude – Day 2	
	5:30 PM - 6:30 PM	MathWorks Awards Ceremony	Windsor Lawn, Hotel del Coronado Reception+

* Clean Cities, dSPACE, A123 Systems, and Snap-On Sponsored Awards are judged prior to competition or do not hold in-person judging presentations.

** Please join Freescale as they host the Faculty Dinner Reception for EcoCAR 2 faculty at Bali Hai Restaurant on May 20, 2013. Opened in 1955, this chic, sleek Polynesian paradise showcases an enchanting island setting and a passion for Asian and Hawaiian culture.

+ Please join the MathWorks as they host a reception for EcoCAR 2 students, faculty, organizers and sponsors at the Hotel Del Coronado Windsor Lawn on May 23, 2013 at 5:30 PM. Enjoy a panoramic view of the pacific ocean and the beach made famous by Marilyn Monroe in "Some Like it Hot." Guests will also enjoy a breathtaking view of the awe-inspiring Hotel Del, known to have "more fame and historical significance than perhaps any hotel in North America."

SPONSOR DESCRIPTIONS



Natural Resources
Canada

Natural Resources Canada The Government of Canada has been a longtime supporter of the U.S. Department of Energy's Advanced Vehicle Technology Competition program, providing technical and program support for more than 21 competitions over 18 years. EcoCAR underscores the Government of Canada's commitment to addressing greenhouse gas reductions and supporting sustainable energy policies and advanced automotive technologies. Support to EcoCAR is provided by Natural Resources Canada and Transport Canada.

Natural Resources Canada provides knowledge, expertise, and program activities for the sustainable development of Canada's natural resources and to support the global competitiveness of related industries. This includes policy development, market development programs, and international activities in energy efficiency, renewables, transportation technologies, alternative fuels, and conventional fuels. Transport Canada is responsible for transportation policies and programs. It ensures that air, marine, road, and rail transportation are safe, secure, efficient, and environmentally responsible.



MathWorks The MATLAB and Simulink product families are fundamental computational tools at the world's educational institutions. Adopted by more than 5,000 universities and colleges, MathWorks products accelerate the pace of learning, teaching, and research in engineering and science. MathWorks products also help prepare students for careers in industry, where the tools are widely used for research and development. MATLAB and Simulink users are making better and faster progress in vital areas. Using techniques like Model-Based Design they are changing how systems as diverse as automobiles, cell phones, robots, washing machines, and wind turbines are developed. Mathematical models, formerly the province of research, are now used to analyze, design, implement, and test these increasingly complex systems, addressing the competitive need to innovate while reducing development costs and time-to-market. In education, these same approaches are providing students with a stronger systems perspective, while enabling more engaging and hands-on learning.



California Air Resources Board California's state legislature established the Air Resources Board in 1967 to protect public health, the economy, and the state's ecological resources through the reduction of air pollution. With the passage of AB 32, the agency must now also develop and implement strategies to reduce greenhouse gas emissions. Since its formation, the ARB has successfully worked with the public, environmental groups, businesses, and local and federal agencies to cooperatively reach our clean air goals. While many problems persist, California now enjoys its cleanest air in more than 50 years.



dSPACE, Inc. is a market innovator and leading producer of engineering tools for embedded controller development. The company provides integrated systems for prototyping control algorithms, automatic production code generation, controller testing, controller calibration, and engineering support services. dSPACE looks forward to participating in the EcoCAR competition as an opportunity to empower student engineers to quickly develop innovative solutions to the challenges of reduced emissions, increased performance, and driver satisfaction. The company's robust and comprehensive ECU development environment can dramatically reduce development time and costs, while providing increased flexibility for continuous process modifications. Today, more than 15,000 dSPACE systems are in use worldwide, serving customers in the automotive, aerospace, commercial/off-highway, agricultural, educational, engineering, robotics, and noise and vibration industries. Visit www.dspaceinc.com for more information.



A123 Systems (NASDAQ: AONE) develops and manufactures advanced Nanophosphate[®] lithium ion batteries and energy storage systems for the transportation, electric grid, and commercial market. The company was founded in 2001 based on novel nanoscale technology initially developed at the Massachusetts Institute of Technology and currently employs more than 2,200 people globally. A123's high-performance Nanophosphate lithium-ion battery technology delivers high power and energy density combined with excellent safety performance and extensive life cycling in a lighter-weight, compact package. A123's growing list of blue-chip customers in the automotive market includes leading passenger car makers (including Fisker Automotive, GM, and SAIC, the largest automaker in China) as well as companies focused on the truck/bus market (including Eaton, Navistar, and BAE Systems).



Freescale is a global leader in the design and manufacture of embedded semiconductors for the automotive, consumer, industrial, and networking markets. The privately held company is based in Austin, Texas, and has design, research and development, manufacturing, and sales operations around the world. For more information, visit www.freescale.com.



AVL Powertrain Engineering is the world's largest privately owned and independent company for the development of gasoline, diesel, and alternative fuel powertrain systems, as well as fuel cell and hybrid technologies. For more than 60 years, AVL has been active in the development of engines and powertrains providing low fuel consumption. Powertrain Engineering activities embrace all functions from concept definition through to production development. Supported by comprehensive in-house research, AVL's engineering specialists design and develop engines for both stationary and mobile applications, transmissions, and complete powertrain systems. The company offers combined solutions of powertrain engineering, simulation software, and testing and instrumentation systems. AVL guarantees close cooperation with customers by affiliates and local offices worldwide. AVL's North American headquarters is located in the Detroit suburb of Plymouth, Michigan. By supporting EcoCAR, AVL is proving its commitment to the future of our industry with the ongoing, hands-on education of tomorrow's engineers and leaders. For more information, visit www.avl.com.



National Science Foundation (NSF) is a longtime supporter of the U.S. Department of Energy's Advanced Vehicle Technology Competitions. In addition to providing financial support to EcoCAR 2, each year the NSF provides awards to faculty members who have made significant contributions to the goals of the EcoCAR 2 program and to engineering education. NSF is an independent federal agency that supports fundamental research and education across all fields of science and engineering, with an annual budget of approximately \$6.5 billion in fiscal year 2009. NSF funds reach all 50 states through grants and cooperative agreements to nearly 2,000 universities and institutions. Each year, NSF receives about 55,600 competitive requests for funding and makes about 13,000 new funding awards. The NSF also awards over \$425 million in professional and service contracts yearly.



Transportation Research Center (TRC), an affiliate of The Ohio State University, is an independent manager of the Transportation Research Center in Marysville, Ohio, a transportation proving ground supporting the automotive industry. The company specializes in R&D testing as well as testing to FMVSS and industry certification/compliance standards. Testing for safety, fuel economy, emissions, durability and performance are accomplished at the 4,500-acre facility, which includes: 7.5-mile test track, crash testing facility, 24" HYGE Sled, Static Fixture Labs, emissions laboratory, 50-acre Vehicle Dynamics Area, 9,000-foot skid pad, off-highway area and ride quality roads. TRC Inc. is an ISO 9001 and 14001 registered company. For information on TRC Inc., visit www.trcpg.com.



ETAS provides a comprehensive suite of open tools for vehicle ECU development, used extensively by both automotive and heavy duty diesel manufacturers. Our business activities focus on increasing customer process efficiency and process quality. ETAS products can be easily integrated into existing customer processes including any required integration into and with 3rd party products. Complete solutions for control-systems development, i.e. modeling/integration, Hardware-in-the-Loop (HiL), rapid-prototyping, and measurement/calibration are the most widely used globally. INCA, ETAS' calibration and measurement software, for example, is the industry standard used by more than 15,000 engineers worldwide. Over 50 million vehicles around the globe run on software validated by LABCAR, ETAS' HiL testing system. The ETAS portfolio also includes engineering services, training, and premium customer support.

ETAS is an active participant in standards consortiums such as ASAM, OSEK, Nexus, AUTOSAR, AESAS, FlexRay, LIN, and JasPar. 680 ETAS personnel worldwide represent the company in the markets of Germany, the United States, Brazil, Japan, Korea, China, India, France, and Great Britain.



Snap-on To know Snap-on® tools is to love Snap-on tools. The Snap-on family of brands offers a broad range of products that are considered treasured objects by a wide variety of professional tool users. That's because associates in the company are obsessed with innovation. Never satisfied, Snap-on's designers, engineers, and product managers are continuously looking for ways to improve the company's products.

Snap-on Incorporated is a leading global producer and distributor of tool, diagnostics, shop equipment, and software solutions to the marketplace. All the brands in the Snap-on family are known for the highest possible quality and breakthrough innovation. Customers include professionals in transportation repair, industrial companies, government, education, agriculture, and other commercial industries.



Magna Powertrain is the most diversified automotive supplier in the world. The company designs, develops, and manufactures technologically advanced automotive systems, assemblies, modules, and components, and engineers and assembles complete vehicles, primarily for manufacturers of cars and light trucks. As an organization that values teamwork, innovation, and the entrepreneurial spirit, Magna is proud to sponsor the EcoCAR competition and the talented engineering students who participate.



BOSCH
Invented for life

Robert Bosch, LLC is a leading global supplier of technology and services. In the U.S., Canada, and Mexico, the Bosch Group manufactures and markets automotive original equipment and aftermarket products, industrial drives and control technology, power tools, security and communication systems, thermotechnology, packaging technology, household appliances, solar energy, and healthcare products. Having established a regional presence in 1906, Bosch employs over 20,000 associates in more than 70 locations, with reported sales of \$7.3 billion in fiscal 2009.

Bosch's involvement in EcoCAR mirrors the company's focus on the future by fostering the development of future engineering talent. Bosch associates come from an extremely wide range of countries. This diversity is an ideal chance for the company and its associates alike to learn from other cultures and benefit from the wealth of perspectives and ideas. Bosch is sponsoring an EcoCAR Diversity Award to encourage EcoCAR teams to similarly embrace and learn from the diversity within teams and the community. For more information on the company, visit www.boschusa.com.



CrossChasm products and services serve a broad range of applications within the vehicle OEM and fleet management marketplace. The focus: to help vehicle manufacturers build best-in-class hybrid, electric and plug-in vehicles, and guide large-scale end users of those vehicles, such as fleet managers and fleet owners

in accurately assessing the full lifecycle costs of next generation vehicle adoption FleetCarma, a division of CrossChasm Technologies, determines if a specific plug-in vehicle will save you money, before you buy. FleetCarma combines data-logging & modeling to determine Total Cost of Ownership. Additionally, the system determines if the vehicle is range-capable based on your particular usage and driving style. After purchase, FleetCarma provides in-performance monitoring for plug-in (PHEV/EREV/EV) vehicles. FleetCarma was recently listed on Deloitte's Green15, a listing of 15 leading cleantech companies. Recognition on the Green15 was also based upon the model-based design and control systems work CrossChasm provides to OEMs and Tier 1s.



Siemens, a business unit of the Siemens Industry Automation Division, is a leading global provider of product lifecycle management (PLM) software and services, with 6.7 million licensed seats and more than 69,500 customers

worldwide. Headquartered in Plano, Texas, Siemens PLM Software works collaboratively with companies to deliver open solutions that help them turn more ideas into successful products. For more information on Siemens PLM Software products and services, visit www.siemens.com/plm.



CD-adapco is the leading global provider of full-spectrum engineering simulation (CAE) solutions for fluid flow, heat transfer, stress and more, including Computational Fluid Dynamics (CFD) software, CAD and PLM-embedded CFD tools. The company has over 30 years of experience in delivering industrial strength engineering simulation. CD-adapco has over 7,000 users, located at 3,000 different companies,

spending over \$100 million on our software and services. The company's customer approval ratings are very high; in its last customer survey 93% of customers declared themselves satisfied, or very satisfied, a fact reflected in a consistently high customer retention rate. Consistently growing at an organic rate of over 17% per year, CD-adapco employs over 550 talented individuals, working at 21 offices around the globe, involved in dedicated support, software development and engineering services.



Vector CANtech Inc., located in Novi, Michigan, was established in 1997 as a wholly owned North American subsidiary of Vector Informatik GmbH. Vector is the leading provider of software tools, embedded software components, and services to OEMs, their suppliers, and various other industries. Vector tools equip engineers with the finest capabilities for design, diagnostics, calibration, and testing of distributed

networking systems. Parent company Vector Informatik GmbH was founded in 1988 and currently employs over 900 people together with Vector Consulting GmbH. In addition to its headquarters in Stuttgart, Germany, Vector also has an international presence with subsidiaries in the U.S., Japan, France, United Kingdom, Sweden, and the Republic of Korea. Vector is proud to sponsor EcoCAR: The NeXt Challenge and programs that benefit universities and future engineers. For over 10 years, Vector has been committed to providing students and faculty access to its premium in-vehicle networking tools: CANoe, CANalyzer, and CANape.

To learn more about the Vector story, please visit www.vector.com.



GKN Driveline has 22,000 employees in more than 57 facilities in over 23 countries. A pioneer and systems leader in advanced electric and hybrid drivelines, GKN Driveline continues to deliver driveline systems and solutions to the world's automotive manufacturers. Within the eDrive Systems product segment,

GKN Driveline designs, develops and manufactures an impressive range of solutions- from eAxles, for hybrid, electric all-wheel drive and compact systems for low power drive, to compact, lightweight eTransmissions for purely electric vehicles. In addition to the standardized family approach, GKN Driveline works closely with vehicle manufacturers' teams to innovate eDrive systems for the future. With the focus on efficiency, performance and dynamics, GKN Driveline technologies are centered on continuous improvement and innovation in the application of alternative power sources and sustainable energy in systems that deliver outstanding performance. As an EcoCAR 2 Bronze sponsor, GKN Driveline is providing eTransmissions and technical support to three university teams as well as financial support to the EcoCAR 2 Program.



Sensors, Inc. was founded in 1969 and has evolved to become the leader in developing innovative gas analysis technology, primarily for use in the transportation industry. The company has decades of experience and expertise in the design and manufacture of measurement systems that are widely distributed throughout the U.S., Europe and Asia. Sensors, Inc. also provides in-field emissions and fuel-economy testing services covering a wide range of applications including on- and off-road vehicles and equipment, and marine, mining, and power generation systems using internal

combustion engines. In 1999, Sensors, Inc. acquired Sensors Devices in Germany, ensuring a presence in Europe and expanding its product base to include analyzers for environmental applications. The company's emissions measurement solutions are used by government regulatory agencies and universities, as well as engine and vehicle manufacturers in the U.S., Europe and Asia, for the measurement of CO, CO2, NO, NO2, THC, NMHC, CH4, NH3, O2 and Particulate Mass. The company recently introduced ECOSTAR, its fourth generation of emission analyzers, and LASAR, a trace gas analyzer primarily employed in laboratories and test cells.



New Eagle, located in Ann Arbor, Michigan, offers controls system solutions including tools, products, and services. Founded in 2000, the New Eagle team has its roots in New Eagle Software, the developer of RapidHawk, the forerunner of MotoHawk owned by Woodward, Inc. Today, New Eagle is the distributor and integrator of Mechatronic Controls, including MotoHawk enabled products using the Talon model-based development process. New Eagle has sales and engineering offices in Ann Arbor, Michigan, and a world-wide network of service and product

suppliers. The company's markets served include clean energy, powertrain and emissions, vehicle controls integration, electric and hybrid electric vehicles, electronics, and unmanned systems. EcoCAR 2 teams will receive much needed hardware for their data acquisition systems from New Eagle. The company will also provide electrical and control engineers for safety/technical inspections and team mentoring. Connect with New Eagle on Facebook, Twitter, LinkedIn, and YouTube!



BlackBerry Research In Motion, parent company of QNX, is a manufacturer and marketer of innovative wireless solutions for the worldwide mobile communications market. Through the development of integrated hardware,

software and services that support multiple wireless network standards, RIM provides platforms and solutions for seamless access to time-sensitive information including email, phone, SMS messaging, Internet and intranet-based applications. RIM technology also enables a broad array of third party developers and manufacturers to enhance their products and services with wireless connectivity. RIM's portfolio of award-winning products, services and embedded technologies are used by thousands of organizations around the world and include the BlackBerry wireless platform, the RIM Wireless Handheld™ product line, software development tools, radio-modems and software/hardware licensing agreements. Founded in 1984 and based in Waterloo, Ontario, RIM operates offices in North America, Europe and Asia Pacific. RIM is listed on the Nasdaq Stock Market (Nasdaq: RIMM) and the Toronto Stock Exchange (TSX: RIM). For more information, visit www.rim.com or www.blackberry.com. The BlackBerry® Academic Program to provides colleges and universities around the world with a curriculum and course content to offer courses in administering and supporting the BlackBerry® solution and developing for the BlackBerry platform. More information can be found at www.blackberry.com/academic.



QNX Over the past 30 years, QNX software has become a big part of everyday life. People encounter QNX-controlled systems whenever they drive, shop, watch TV, use the Internet, or even turn on a light. Its ultra-reliable nature means QNX software is the preferred choice for life-critical systems such as air traffic control systems,

surgical equipment, and nuclear power plants. And its cool multimedia features have QNX software turning up in everything from in-dash radios and infotainment systems to the latest casino gaming terminals. Through the company's embedded market specialization and proven expertise, it has become a trusted partner to the world's largest device manufacturers and systems integrators. Developers rely on feature-rich QNX® Neutrino® RTOS and the highly-integrated QNX® Momentics® development suite to accelerate time to market, and its broad range of engineering services such as flexible support programs, professional training, expert consulting, and custom engineering help customers speed every stage of their development cycle. QNX is a wholly-owned subsidiary of Research In Motion Limited.



Woodward is an electronic system integrator and a leader in the application of code generation onto the production controller. Woodward is the supplier of MotoHawk® model-based software development tools used by many EcoCAR teams. Woodward's MotoHawk Control Solutions product line supplies electronic systems,

tools, and controller hardware to the industrial, power generation, automotive, marine, recreational, and aviation industries. Woodward enables its customers to be electronic system integrators using tools including MotoHawk® for the following applications: Gasoline Engine and Transmission Control, Diesel Engine/Emissions Control, Hydraulic Hybrid, Electric Hybrids/Plug-In Electric, Integration—Multiplexing/ CAN Based Control, Chassis—Hydraulics control, Autonomous Vehicles and Small Engine EFI.



Gage Products Company, a \$55 million firm headquartered in the Detroit suburb of Ferndale, is a growing supplier of custom-blended fuels for product development and for quality emission-control testing by automotive OEMs, engine manufacturers and their suppliers. Gage Products Company has been providing custom blended test fuels, calibration fluids, refined products, factory fills, and blended solvents since 1936. Gage

Products Company is proud to provide specially formulated fuels to the university teams participating in the annual Eco car competition. A leading supplier of test fuels, custom fuels blends and reference fuels, Gage is also a proud sponsor of the SAE Clean Snowmobile Challenge for the last 11 uninterrupted years.



U.S. Environmental Protection Agency (EPA) Office of Transportation and Air Quality's (OTAQ) mission is to reconcile the transportation sector with the environment by advancing clean fuels and technology, and working to promote more liveable communities. OTAQ is responsible for carrying out laws to control air pollution from motor vehicles, engines, and their fuels. Mobile sources include: cars and light

trucks, large trucks and buses, farm and construction equipment, lawn and garden equipment, marine engines, aircraft, and locomotives. Activities include: characterizing emissions from mobile sources and related fuels; developing programs for their control, including assessment of the status of control technology and in-use vehicle emissions; carrying out a regulatory compliance program, in coordination with the Office of Enforcement and Compliance Assurance, to ensure adherence of mobile sources to standards; fostering the development of State Motor Vehicle Emissions Inspection and Maintenance Programs; and implementing programs for the integration of clean-fueled vehicles into the market.

The EPA's National Vehicle and Fuel Emissions Laboratory (NVFEL) is part of OTAQ. Established in 1971 shortly after the creation of EPA, NVFEL is located in Ann Arbor, Michigan, and has about 400 employees with staff expertise spanning a variety of technical and public policy fields. The NVFEL provides emission testing services for motor vehicle, heavy-duty engine, and non-road engine programs in support of U.S. EPA-OTAQ rulemakings, enforcement actions, and procedures development. Testing activities include certifying that vehicle and engines meet federal emissions and fuel economy standards, testing vehicles and engines for in-use compliance, and analyzing fuels, fuel additives, and exhaust compounds.

EPA is proud to be a part of the EcoCAR program and looks forward to working with the other sponsors and academic participants to promote and advance the mission of developing energy-efficient and environmentally beneficial technology under the EcoCAR program.

The
DELPHI
Foundation

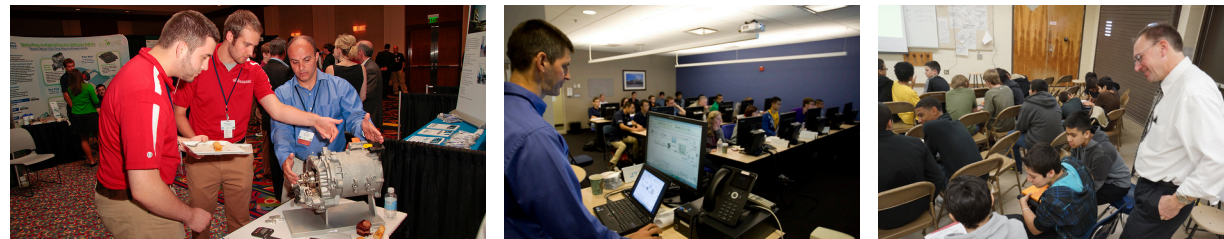
The Delphi Foundation The Delphi Foundation is an independent charitable foundation established in 1999. The targeted areas of focus for the Delphi Foundation are educational opportunities and support systems aimed at helping young people reach their full potential. Underscoring its commitment to corporate citizenship, the Delphi Foundation focuses support on education, particularly in the areas of science and technology as well as higher education programs in conjunction with Delphi's Education Relations activity. Delphi strives to achieve an effective global philanthropic program that supports its business objectives while helping society, particularly in the communities in which Delphi resides. Delphi's three-part approach to philanthropy includes the Delphi Foundation, Delphi Community Relations and Delphi Volunteers.

CATERPILLAR[®]

Caterpillar For more than 85 years, Caterpillar Inc. has been making sustainable progress possible and driving positive change on every continent. With 2010 sales and revenues of \$42.588 billion, Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives. The company also is a leading services provider through Caterpillar Financial Services, Caterpillar Remanufacturing Services, Caterpillar Logistics Services and Progress Rail Services.

R
RICARDO

Ricardo is a global, world-class, multi-industry consultancy for engineering, technology, project innovation and strategy. With a century of delivering value, the company employs over 1,900 professional engineers, consultants and staff. Its people are committed to providing outstanding value through quality engineering solutions focused on high efficiency, low emission, class-leading product innovation and robust strategic implementation. Ricardo's client list includes the world's major transportation Original Equipment Manufacturers (OEM), supply chain organisations, energy companies, financial institutions & governments. Guided by its corporate values of respect, integrity, creativity & innovation and passion, Ricardo enables customers to achieve sustainable growth and commercial success. Ricardo is proud to be a sponsor of EcoCAR 2: Plugging In To the Future. Working with the college teams, shaping the future of alternative energy and developing the innovative spirit of future engineers is part of Ricardo's corporate culture of innovation and technology excellence.



 **PROTERRA**

Proterra, Inc. Headquartered in Greenville, S.C. Proterra was founded in 2004 with a vision to design and manufacture world-leading advanced technology heavy-duty vehicles powered solely by clean domestic fuels. With the launch of their fast charge EcoRide™ BE35 battery electric bus, Proterra has become the leading innovator of zero-emission commercial vehicles. Proterra's products help transit agencies deliver clean, quiet-running, rider- and neighborhood-friendly vehicles that meet government regulations and local mandates.

At Proterra, each bus made is purpose-built and designed to meet the test of time and the needs of tomorrow's transportation market today. To learn more about Proterra and its advanced EV technology, please visit www.proterra.com. You can also like Proterra on Facebook and follow the company on Twitter.



SPONSOR AWARDS

MathWorks Modeling Award

Event Captain: Peter Maloney, MathWorks

The MathWorks Modeling Award is structured to provide a cash award to the team that best applies the MathWorks tools in support of the Year Two competition deliverables. Teams will give a 25-35 minute walkthrough of their MATLAB/Simulink models to a group of experts at this year's competition finals. The teams must demonstrate how they have applied the core concepts of Model-Based Design with MathWorks tools to help achieve the overall competition objectives. Teams must also show the judges models that address plant modeling, control design and tuning, data analysis, industrial grade model-based design development process elements and lessons learned.

The winners of the 1st, 2nd, and 3rd Place MathWorks Modeling Award will receive a trophy and \$750, \$500 or \$250 each, respectively.

dSPACE Embedded Success Awards

Event Captain: Santhosh Jogi, dSPACE Inc.

The dSPACE Embedded Success Award is given to the team who creates the best video promoting dSPACE to potential customers. Teams will be judged on creativity, professionalism and salesmanship in the videos, and the winners will be announced at this year's competition.

The winners of the 1st, 2nd, and 3rd Place dSPACE Embedded Success Award will receive a trophy and \$750, \$500, or \$250 each, respectively.

A123 Energy Storage System Integration Awards

Event Captain: Mike O'Kronley, A123 Systems

The A123 Energy Storage System Integration Award is given to the team with the best workmanship in battery construction. This award will go to the team that constructed a battery pack that met their design and performance needs while exemplifying quality workmanship in construction and the professional fit and finish that a consumer would expect to see in a production vehicle.

The winners of the 1st, 2nd, and 3rd Place A123 Energy Storage System Integration Award will receive a trophy and \$750, \$500, or \$250 each, respectively.

Freescale Innovation Award

Event Captain: John Cotner, Freescale

The Freescale Innovation Award is given to teams that best showcase innovation in their Freescale Center Stack development. Teams will give a 30 minute presentation about the overall concept of their Center Stack design (hardware, software, functionality, etc.), details of the software development, current status of development, and a demo. Teams will be judged on innovation, completeness, and functionality to win the award.

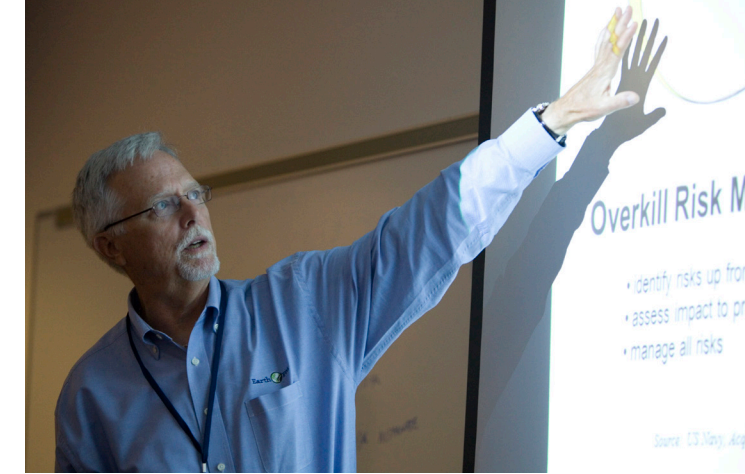
The winners of the 1st, 2nd, and 3rd Place Freescale Innovation Award will receive a trophy and \$750, \$500, or \$250 each, respectively.

National Science Foundation Outstanding Faculty Advisor Awards

Event Captains: Don Senich, National Science Foundation and Kristen De La Rosa, Argonne National Laboratory

The level of commitment required from a faculty advisor to establish a team of students and support their participation in U.S. Department of Energy advanced vehicle technology competitions (AVTCs) cannot be overstated. Often the huge amount of time, energy, and resources required can interfere with a professor's ability to conduct research or teach additional classes. Yet most students who participate, claim that EcoCAR is one of the highlights of their university experience. Since 1997, the Outstanding Faculty Advisor Awards, sponsored by the National Science Foundation, have recognized faculty advisors who, through their leadership and commitment to the AVTC program, are advancing the frontiers of science and engineering education while passing on a legacy to their students that extends throughout the automotive industry. Two awards are presented to the faculty advisors who best incorporate the EcoCAR goals, objectives, and activities into the undergraduate engineering curriculum and who have had the most significant impact on the engineering education of their students or have used the AVTC program to enhance the engineering education experience at their university. The award money is donated to each of the two winning EcoCAR teams to help the universities integrate the AVTC experience even more fully into their engineering curriculums.

The winners of the NSF Outstanding Long-Term and Incoming Faculty Advisor Awards will receive a trophy and \$10,000 each.



Snap-on Engineering Workmanship & Fabrication Award

Event Captain: Ben Brenton, Snap-on, Inc.

The Snap-on Engineering Workmanship & Fabrication Award is presented to the team with the best combined quality and workmanship to the student vehicle. The vehicles are assessed by Snap-on during the competition. Snap-On will nominate the vehicle they believe best shows quality workmanship and attention to detail.

The winner of the Snap-on Engineering Workmanship & Fabrication Award will receive \$1,500 and a trophy.

SPONSOR AWARD JUDGES



MathWorks Modeling Award

Javier Gazzarri is a Senior Application Engineer at MathWorks in Novi, Michigan. Javier focuses on the use of physical modeling tools as an integral part of Model Based Design. Much of his work gravitates around battery modeling, from cell-level to system-level, parameter estimation for model correlation, battery management system design, cell balancing, aging, and state-of-charge estimation. Before joining MathWorks, Javier worked on fuel cell modeling at the National Research Council of Canada. He has a mechanical engineering degree from the University of Buenos Aires in

Argentina, a Master of Applied Science (Inverse Theory applied to surface sensor design), and a Ph.D. (Solid Oxide Fuel Cell degradation modeling), both from the University of British Columbia in Canada.

Jim Kolhoff is the global Chief Engineer & Program Manager for Transmission Controllers and Powertrain Electronics at General Motors. His organization is responsible for the design, development and validation of engine and transmission controllers for GM globally. Jim was previously Chief Engineer of Hybrid Drive Units, Director of Transmission Controls and Director of Software Engineering for GM Powertrain. He has more than 25 years of experience in automotive powertrain engineering. Jim holds a Bachelor of Science in Electrical Engineering from General Motors Institute and a Master of Science in Electrical Engineering from California Institute of Technology.

Pete Maloney is a Senior Principal Consulting Engineer for MathWorks, based in the Novi, Michigan office. His main areas of focus at MathWorks include powertrain calibration method development and application, model-based electronic engine control design, and powertrain system-level optimization for the automotive and off-highway industries. Before joining MathWorks in 2000, he designed and developed electronic engine control algorithms for Ford Motor Company and Delphi Automotive Systems over a 10 year period. Pete has a Bachelor of Science in Mechanical Engineering from Texas Tech University and a Master of Science in Mechanical Engineering from the Massachusetts Institute of Technology, and is currently Chairman of the SAE Control and Calibration Committee.

Wit Nursilo is a Senior Application Engineer based in the MathWorks Novi, Michigan, office. He supports physical modeling application for customers in the automotive and other industries. Including Delphi Corporation and MathWorks, Wit has over 10 years of industry experience in hydraulics/pneumatics component and system modeling. Wit has Bachelor of Science and Master of Science in Mechanical Engineering from Tokai University, Japan, and received his Ph.D. in Mechanical Engineering from The University of Texas at Arlington in the area of hydraulics transmission line dynamics.

dSPACE Embedded Success Award

Alicia Garrison has been the marketing manager for dSPACE Inc., the North American headquarters for dSPACE, in Wixom, Michigan, since 2006. She has more than 20 years of experience in marketing communications. Alicia has worked extensively in the automotive, quality, and environmental industry sectors.

Santhosh Jogi, Director of Engineering for dSPACE Inc., is responsible for technical operations in the company's North American market, and has held this position since 2007. Santhosh joined dSPACE in 1997 as a technical support engineer, later progressing into management, and today oversees product support, training, and application engineering services. Through the past 16 years, he has gained expertise in the application of tools and development methodology for embedded controls software, specifically in the area of Model Based Design, including algorithm prototyping, automatic code generation, and verification and validation through Hardware-In-the-Loop (HIL) simulation.

Kevin Kott has been president of dSPACE Inc., the North American headquarters for dSPACE, in Wixom, Michigan, since 2001. dSPACE is the world's leading supplier of tools for developing and testing mechatronic control systems. Kevin has more than 30 years of experience in automotive product development, engineering, testing services, and scientific instrumentation. He started as a project engineer at EG&G, Automotive Research, in San Antonio, Texas, and progressed to management and executive responsibilities in vehicle and emissions testing laboratories, engine dynamometer testing, proving grounds operations, and structural-test laboratory operations. He was president of Structural Kinematics in Troy, Michigan, in the late 1980s and president of EG&G's Instruments for Research and Applied Science in Oak Ridge, Tennessee, in the mid 1990s. He also served as president of EG&G's consolidated automotive operations—providing worldwide engineering and automotive testing services in the late 1990s.

Vivek Moudgal is the Director of Sales for dSPACE, Inc., and is responsible for sales operations in the company's North American market. Vivek joined dSPACE in 1993 as a technical support engineer and spent his first 10 years performing various roles for the engineering department, including supporting, executing, and managing software development projects. Throughout his tenure with the company, he has gained expertise in the application of model-based development tools for control software development and validation.





Mahendra Muli is Director of Marketing and New Business Development for dSPACE Inc., a global supplier of development tools for embedded systems software for the automotive, aerospace, defense, commercial vehicle, industrial and medical devices industries. At dSPACE, Mahendra is responsible for driving growth initiatives through strategic marketing for North America and overseeing all marketing initiatives. Mahendra has more than 17 years of industry experience in sales, marketing, project management, product development, engineering and business development. His background includes leading global projects, creating and leading engineering, sales and marketing organizations. Mahendra received his MBA from Ross School of

Business, University of Michigan. He also has a Master of Science in Electrical Engineering from Wright State University and a Bachelor of Science in Electrical Engineering from the Government Engineering College, Aurangabad, India.

A123 Energy Storage System Integration Awards

Mike O’Kronley is currently the Director of ASG Business Development in the Program Management Group at A123 Systems. In this role, Mike oversees the new business development process and quotes for all new business opportunities. In addition, Mike is responsible for all A-Sample development/build activities, government solutions vehicle projects, and starter battery product management, and he is also responsible for supporting nontraditional automotive activities, such as those associated with EcoCAR and the U.S. Advanced Battery Consortium (USABC). Before joining A123 Systems, Mike worked for Metaldyne as the Director of Business Development, Director of Business Planning/Program Management, and a program manager. Prior to his job at Metaldyne, Mike worked for Bosch as a product manager, account manager, and engineer. Mike has both a Bachelor of Science in Mechanical Engineering and a Master of Science in Engineering Management from the University of Michigan.



Freescale Innovation Award

John Cotner is a member of the field engineering team of Freescale Semiconductor. John has held a variety of positions with the automotive electronics industry for the past 23 years, including eight years on hybrid vehicle control and powertrain electronics at Freescale. John received degrees in electrical engineering from the University of Michigan and holds four patents.

Renato Frias joined Freescale in 2007 as a Field Applications Engineer where he provides technical support for companies designing automotive Multimedia systems with the i.MX processors. Renato started his carrier in the embedded systems space 10 years ago designing industrial and commercial applications for Motorola Semiconductors. Renato also worked in the telecom market (Cellular Networks) at Alcatel-Lucent. He holds a BSEE from Polythenic School of the University of Sao Paulo.



John Haraf is currently the General Motors Director of Electrification Performance and Calibration. In this position, he is responsible for vehicle level hybrid/electric system integration/performance and calibration development for all of GM’s Hybrid, Extended Range Electric and Electric Vehicles. John began his career with GM as an engine calibration engineer in the Cadillac Motor Car division and has held a wide range of leadership positions in GM’s Powertrain organization including: Premium V Engine Calibration manager, Diesel/Big Block Truck Engine Integration manager, Executive Technical Assistant for Powertrain Engineering, Director of Engine Management System hardware design/release and Director of Engine Development, Calibration and Verification for all of GM’s North American gas engine vehicle applications. John is a licensed Professional Engineer and a member of SAE.

National Science Foundation Outstanding Faculty Advisor Award

Connie Bezanson manages the Education and Outreach activities within the U.S. Department of Energy’s Vehicle Technologies Program Office. In addition to managing the Advanced Vehicle Technology Competition activity, she manages the Graduate Automotive Technology Education and a portfolio to support the transition to advanced electric transportation systems. She received a Bachelor of Science Mechanical Engineering from The Catholic University of America.

Kristen De La Rosa is the Director of the Advanced Vehicle Technology Competitions (AVTC) program at Argonne National Laboratory, where she has organized more than 22 competitions since first starting in 1996. Previously, Kristen served as Public Outreach Manager and Interim Assistant Director for Public Education/Media for the Alternative Fuels Research & Education Division of the Texas Railroad Commission (TRC). Kristen was first introduced to the AVTC program in 1995 when the TRC sponsored the Propane Vehicle Challenge. The experience had a profound impact on her and led her to the AVTC organizing team at Argonne, where she continues today. Kristen has been at the forefront of defining, executing and growing the AVTC program for more than 17 years. She leads all day-to-day activities, is responsible for establishing and managing the program's multi-million dollar sponsorship and fundraising efforts, and is the Chair of the EcoCAR Executive Steering Committee.



Snap-on Engineering Workmanship & Fabrication Award

Bennett Brenton joined Snap-on Incorporated as Chief Innovation Officer and Vice President of Innovation in February 2007. Snap-on is a leading global innovator, manufacturer and marketer of tools, diagnostics and equipment solutions for professional users. Ben's role is to drive innovative products, solutions and processes that fundamentally change the markets Snap-on serves and enhance customer perception of its brands. Ben has helped to create, support and institutionalize a culture at Snap-on that embraces creativity, risk, change and fearless innovation. In early 2009, Ben launched Innovation Works! – a physical center for innovation at Snap-on's office in Kenosha Wisconsin.

Prior to joining Snap-on, Ben spent four years in Marketing at PepsiCo, most recently as the Director of Innovation for the Frito-Lay Convenience Foods division. At PepsiCo, he also led innovation as Director of Innovation for Tropicana and prior to that as Director of Innovation for Shelf Stable Beverages. Before joining PepsiCo, Ben was Marketing Director of New Products at Kraft Foods. He spent more than 14 years at Kraft Foods, starting as a Research Scientist in Biotechnology and working in various roles with increasing responsibility and scope across R&D and Marketing. Ben has over 20 years of experience focused on new product development, marketing and innovation.

Ben holds a Bachelor of Science in Biology and a Master of Science in Microbial Genetics from the University of Nebraska, and a Ph.D. in Food Science and Nutrition with an emphasis in Molecular Genetics from the University of Massachusetts.



EcoCAR 2: North America's Premier Collegiate Automotive Engineering Competition

Daniel Mehr (Dan) earned his Bachelor of Science from the University of Wisconsin in 2008 after participating in the FutureTruck and ChallengeX Advanced Vehicle Technology Competitions (AVTCs). Upon graduating, Dan joined General Motors as an Energy Storage System Integration Engineer (ESS PIE). After working on three PHEV applications and completing a Master of Science in Engineering at the University of Michigan, he became the Energy Storage Systems Analyst at GM's Advanced Vehicle Design Center, working on the next generation Chevrolet Volt. Currently, he is the ESS PIE on the Volt and Cadillac ELR. In addition to his current assignments, Dan is currently the GM Co-Technical Lead for the EcoCAR 2 program.

Don Senich is the Senior Advisor for Academic Programs in the Industrial Innovation and Partnership Division in the National Science Foundation. He is responsible for implementing \$52 million in academic and industrial collaborative research in the Engineering Directorate and is the procurement interface with the Small Business Administration's Office of Government Contracting.



EcoCAR 2 sponsors have the opportunity to recruit annually from hundreds of North America's top graduates in the field of engineering, business and communications. These students carry with them not only a passion for advanced vehicle technologies but the hands-on experience with these technologies as well as the latest industry practices and tools. Sponsors also have the opportunity to donate their products, provide training, and foster a cooperative mentoring and educational opportunity for the EcoCAR students that they will take with them into their careers. As a result, sponsors are able to showcase their products to students and other sponsors, and observe how they perform during rigorous and innovative applications. This provides with access to the latest software and cutting edge vehicle technologies that might otherwise be unavailable or too expensive. Sponsors also gain national media coverage and develop and strengthen their strategic partnerships with government, industry and academia.



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