

SAE 2012 Powertrain Electric Motors Symposium

for Electric + Hybrid Vehicles

April 23, 2012
Westin Book Cadillac Hotel
Detroit, Michigan, USA

Meet and mingle with
technology leaders by attending
the Electric Motors event.

Attend. Exhibit. Sponsor.

Maximum Savings—Join SAE and Pre-register by April 6

www.sae.org/events/emotorusa

OVERVIEW

Join technology leaders at the only event focusing exclusively on the electric motor. This one-day symposium promises to provide a comprehensive overview on the latest global innovations in the vehicle powertrain electric traction motor industry.

The program will address:

- Expanded coverage on the industry *hot* topic – rare earth metals
- How fast the major players are moving and how this affects the world marketplace
- New developing supply chains
- Market growth projections, requirements and cost structures for three varieties of electric traction motors:
 - Permanent magnet motor
 - Induction motor
 - Switch reluctance motor

Who Should Attend

Professionals, researchers and academia involved in:

- Electric Traction Motors
 - Permanent Magnet Motor
 - Induction Motor
 - Switched Reluctance Motor
- Propulsion/Engine
 - Drivetrain
 - Hybrid
 - Electric Vehicle
 - Rare-Earth materials

Take advantage of the entire SAE 2012 World Congress week by attending this symposium *PLUS* Congress – where these additional electric vehicle sessions will be offered:

Electric Motor & Power Electronics

Tuesday, April 24

10:00 a.m. – Part 1

1:00 p.m. – Part 2

Cobo Center - Room O2-44

Power electronics and electric motors are essential for improving vehicle efficiency through drivetrain electrification. Technologies that support high efficiency, high power density, and low cost motors and power modules are required for the success of vehicle electrification.

PRELIMINARY AGENDA



Symposium Chair: Wolfgang Bernhart, Partner at Roland Berger Strategy Consultants

- 8:00 a.m. **Welcome and Introductions**
Ray Bakerjian, SAE International
- 8:00 a.m. **Keynote Presentation:**
Alexander Schey, Imperial College London
- 8:30 a.m. **Global Market Developments**
Wolfgang Bernhart, Roland Berger Strategy Consultants
- 9:00 a.m. **Traction Motors**
David A. Fulton, Remy Inc.
- 9:30 a.m. **Networking Break and Exhibit**
- 10:00 a.m. **Metals in Motors**
Jack Lifton, Technology Metals Research, LLC
- 10:20 a.m. **Metals in Motors**
Yucong Wang, General Motors LLC
- 10:40 a.m. **Metals in Motors**
Invited, Ford Motor Co.
- 11:00 a.m. **Metals in Motors**
Malcolm Burwell, The Copper Association
- 11:20 a.m. **Metals in Motors**
Jon Hykawy, Byron Capital Markets
- 11:40 a.m. **Metals in Motors**
Larry Thomas, Primet Precision Materials
- 12:00 p.m. **Panel Discussion: Metals in Motors**
Moderator: Wolfgang Bernhart, Roland Berger Strategy Consultants
Panelists: Jack Lifton, Technology Metals Research, LLC
Yucong Wang, General Motors LLC
Larry Thomas, Primet Precision Materials
Jon Hykawy, Byron Capital Markets
Malcolm Burwell, The Copper Association
Invited, Ford Motor Company
- 12:30 p.m. **Networking Luncheon and Exhibit**
- 1:45 p.m. **Challenges and Requirements for High Volume Production**
William Cai, Jing-Jin Electronics, China
- 2:15 p.m. **Motor/Generator, Inverter, etc.**
Invited, D&V Electronics
- 2:45 p.m. **Networking Break and Exhibit**
- 3:15 p.m. **E-motors Reliability**
Peter Savagian, General Motors LLC
- 3:45 p.m. **Panel Discussion: OEM and Suppliers on Engineering**
Moderator: Wolfgang Bernhart, Roland Berger Strategy Consultants
Panelists: Peter Savagian, General Motors LLC
- 4:45 p.m. **Adjourn**

REGISTRATION AND HOTEL INFORMATION

TO REGISTER:

Online: www.sae.org/events/emotorusa
 Phone: 1-877-606-7323 (U.S. and Canada), or 1-724-776-4970
 Fax: 1-724-776-0790
 Email: CustomerService@sae.org

Pre-Registration Deadline: April 6!

Registration Categories and Fees

Category	By April 6	After April 6
SAE Classic Member (includes registration package)	\$730	\$830
SAE Premium Member (includes registration package)	\$705	\$805
SAE Elite Member (includes registration package)	\$680	\$780
Non-Member (includes registration package)	\$1130	\$1230
Participant (includes Presenter, Speaker, Symposium Chair, Panelist, Moderator) (includes registration package)	FREE	FREE

**Maximum Savings—
Become an SAE Elite
Member and pre-
register by April 6**

Registration Package

Symposium amenities include: access to the technical sessions, exhibit, networking lunch and refreshment breaks, electronic copies of the presentations (provided post-event).

Conditions of Sale: Registrations received after April 6, 2012 will automatically be charged the on-site price. NO CHILDREN UNDER THE AGE OF 16 PERMITTED. All cancellations must be received by SAE prior to April 6, 2012. A \$50 processing fee will be assessed for each canceled registration that results in a refund. Refunds for special event/meal tickets will not be processed after April 6, 2012. Refunds will not be issued if cancellation occurs on or after April 6, 2012.



SAE will do what is feasible to make its events reasonably accessible to attendees. If you have special accommodation needs, please let us know in advance by calling 1-877-606-7323 (1-724-776-4970 outside U.S. and Canada). Accommodations requested on site will be provided only if possible for us to do so on short notice.

On-site Registration Hours

Sunday, April 22 11:00 a.m. – 3:00 p.m.
 Monday, April 23 7:00 a.m. – 3:00 p.m.

On-site Exhibit Hours

Monday, April 23 8:00 a.m. - 5:00 p.m.

Current Exhibitors:

ANSYS Inc.
 CD-adapco
 Cooper Development Association Inc.
 D & V Electronics
 Rea Magnet Wire
 TM4 Inc.
 Tridus Magnetics & Assemblies
 Zeus Inc.

HOTEL INFORMATION

For your convenience, SAE International has reserved a block of rooms at the Westin Book Cadillac Detroit Hotel – the location of the Symposium.

All attendees are responsible for making their own lodging and travel arrangements. Hotel reservations must be made through the SAE World Congress hotel block by April 10, 2012. A special event rate of \$160.00 (USD) is available within the reserved block of sleeping rooms at the Westin Book Cadillac Detroit Hotel.

Please help keep the costs of this event as low as possible by booking your housing needs through the online reservation process at www.sae.org/events/emotorusa/hotel.htm, or by calling the Housing Connection directly at 1-800-847-5810 or 1-801-505-4138, or emailing at thc@housingregistration.com.

Westin Book Cadillac Detroit Hotel

1114 Washington Blvd

Detroit, Michigan, USA, 48226



Similar SAE Powertrain Electric Motor events will be held this fall in Asia and Europe. More information soon!

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MARKETING SOLUTIONS

Regardless of your budget, SAE International offers marketing solutions to showcase your products and services to this very diverse and influential audience. This event is the ideal forum to increase your organization's visibility, and meet leading professionals involved in the rapidly expanding electric motor market.

Tabletop Exhibit Display\$2,500(USD)

Includes: (First come, first served - limited space availability)

- One (1) tabletop display space – 6' x 30" with 2 chairs
- One (1) complimentary symposium registration – includes sessions, presentations, lunches, and networking breaks (VALUE: \$1,095)
- Company recognition and profile in the Event Guide

Tabletop Display “Plus” Option\$3,100(USD)

Includes: All benefits above, PLUS:

- One (1) additional Symposium Registration – includes sessions, presentations, lunches, and networking breaks (VALUE: \$1,095)

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Gold Partner & Luncheon SponsorSOLD – D&V ELECTRONICS

- *Exclusive* host of the Monday Luncheon.

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- Choice of hosting one Monday Refreshment Break. Contact SAE International for more details.

Silver Partner/Registration Area and Lanyards.....\$2,500(USD)

- *Exclusive* sponsor of the Conference Lanyards with your corporate logo or message. Contact SAE International for more details.

Bronze Partner/Notepads

and/or PensSOLD – THE TIMKEN COMPANY

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- Company recognition in the Event Guide and on all sponsor signage at the event.

EVENT GUIDE ADVERTISING OPPORTUNITIES

- Inside 4c Front Cover (2nd).....\$1,500
- Inside 4C Back Cover (3rd)..... \$1,200
- Back 4C Cover (4th)..... \$1,300
- Inside B/W Full Page.....\$825
- Inside B/W Half Page\$475

More Information

For additional information, or to customize a package that's right for your company, contact:

Arlene DiSilvio, Event Sales Manager

Phone: 1-724-772060

Email: disilvio@sae.org

RELATED RESOURCES FROM SAE INTERNATIONAL



Automotive 2030—North America

By: *Bruce Morey*

This full-color book delves into key mega-trends that will guide the North American automotive market for the next 20 years:

improved fuel economy, alternative fuel sources; and the emergence of the smart car.

Product Code T-127; List Price \$99.00



Hybrid-Powered Vehicles, Second Edition

By: *John German*

This book provides a thorough yet accessible understanding of the latest hybrid technology developments by covering

topics such as: battery types and chemistries, environmental issues, a look at what lies ahead, and more.

Product Code T-125; List Price \$199.00



Chevrolet Volt—Development Story of the Pioneering Electrified Vehicle

By: *Lindsay Brooke*

This compendium presents

the most complete design and

engineering story available anywhere about this groundbreaking new vehicle, introducing you to the engineering team and how they made the world's first production extended-range electric vehicle a reality.

Product Code PT-149; List Price \$119.95



Electric & Hybrid Vehicles: Design Fundamentals, Second Edition

By: *Iqbal Husain*

Thoroughly updated to

encompass the significant

technological advances since the publication of the first edition,

this book presents the design fundamentals, component sizing, and systems interactions of alternative vehicles.

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are assembled from technical papers authored for an SAE session, are directly related to a specific topic or technology, and are available online anytime through My eLibrary.

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Electric Motor and Power Electronics, 2011

11 Technical Papers
Product Code: COLL-TP-00148

Electric Vehicle Technology - Batteries, 2011

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Product Code: COLL-TP-00214

Powertrains, Fuels & Lubricants - Electrical Propulsion, 2011

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10 Technical Papers
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Commercial Vehicle Hybrid and Electric Vehicles, 2011

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Professional Development

Hybrid and Electric Vehicle Engineering Academy - ACAD06

I.D.# ACAD06
October 29 - 31, 2012
The Hybrid and Electric Vehicle Engineering Academy covers hybrid and electric vehicle engineering concepts, theory, and applications relevant to HEV, PHEV, EREV, and BEV for the passenger car industry. While the theory and concepts readily apply to the commercial vehicle industry as well, the examples and applications used will apply primarily to the passenger car industry.

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