

Electric
Mobility



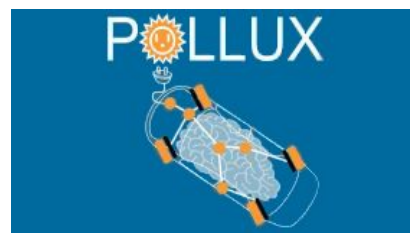
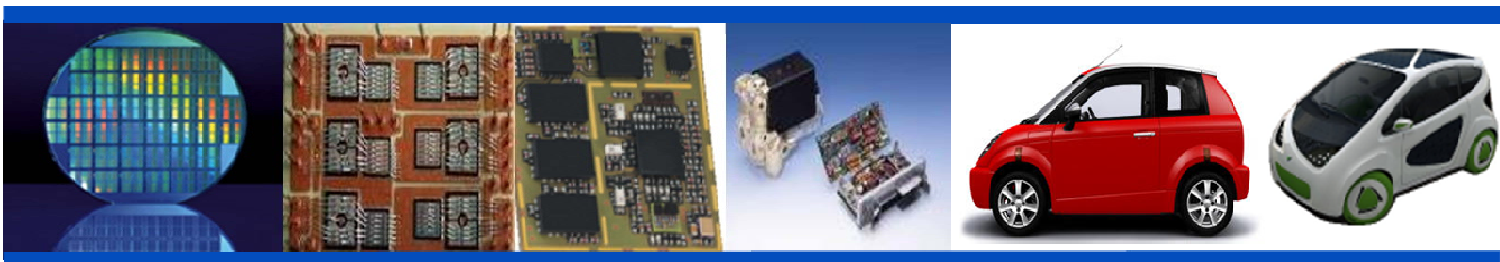
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JOINT UNDERTAKING



European Conference on Nanoelectronics and Embedded Systems for Electric Mobility

29 September - 1 October, 2010
Munich, Germany

Nanoelectronics and Embedded Systems for Electric Mobility



The conference will focus on the range of opportunities and challenges that nanoelectronics and embedded systems present for electric mobility applications. It will provide a forum for collaboration amongst industry, academia, utilities, governments and institutions to understand how EV technologies integrate into current and future electric mobility systems and the electric power grid.

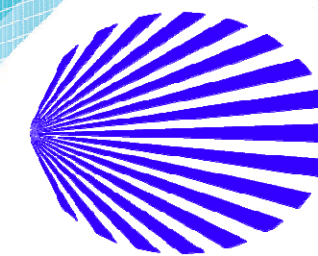
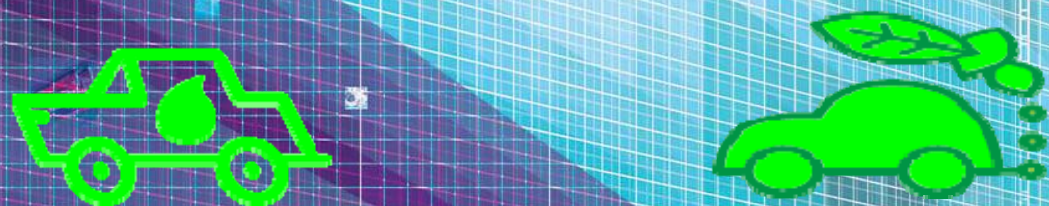
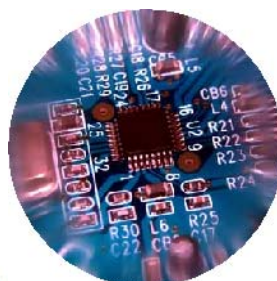
The conference will aim at:

- Establishing an European network of researchers focused on nanoelectronics and embedded systems for electric mobility applications,
- Cooperation among project across Europe, and discussion of the possible role of each project in supporting the European electric vehicle development.

Information:

www.e3car.eu/events/ecar_home.htm

www.artemis-pollux.eu/events/ecar_home.htm



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NANOELECTRONICS Electric Vehicles EMBEDDED SYSTEMS

The zero emission capability of the EV and the replacement of oil in the energy mix by using renewable energy sources is a challenging environmental task for the present as well as future generations. The electric vehicles technologies are currently facing several challenges amongst which are: limited driving range, high cost and overall limited efficiency. For the most part of these issues, solutions may be found on the level of the subsystems for energy storage/battery technology, power conversion, electric power train, energy management and connection to the power grid.



- NANOELECTRONICS TECHNOLOGIES, DEVICES, CIRCUITS ARCHITECTURES AND MODULES FOR ELECTRIC VEHICLES.
- DISTRIBUTED REAL TIME EMBEDDED SYSTEMS PLATFORM FOR NEXT GENERATION ELECTRIC VEHICLES, BY USING A COMPONENT AND PROGRAMMING-BASED DESIGN METHODOLOGY. BATTERY TECHNOLOGIES.
- CONSTRAINTS ON AND DRIVERS OF ELECTRIFICATION TO ASSESS THE FUTURE OF EV AND HEV.

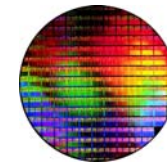
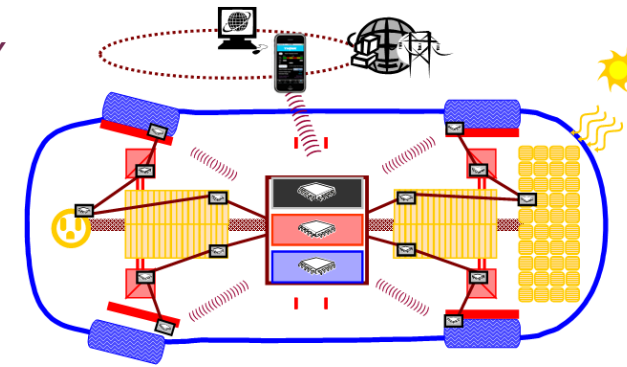
To provide input in this essential discussion, the Conference will be focusing on the nanoelectronics and embedded systems technologies for electric mobility applications and their impact on the future of electric vehicles and hybrid electric vehicles.

Experts from five European research and development projects (E³Car, CASTOR, POLLUX, BATMAN and SMARTOP) addressing the electrical vehicle technologies will report about first-hand experiences and latest developments.

ELECTRIC VEHICLE RESEARCH NOVELTY AND ENERGY EFFICIENCY

- ENVIRONMENT:** Reduce the environmental impact of the manufacture, operation and end of life disposal of vehicles.
- HEALTH:** Enhance the safety of citizens, drivers, occupants and the public in the manufacture and use of vehicles.
- ECONOMY:** Enhance the quality and performance of vehicles while reducing life cycle cost.
- SOCIETY:** Enhance the economic and social benefits derived from the manufacture and use of vehicles in Europe.

Europe is targeting research on innovative electronic components and embedded systems that play a key role in electric vehicle development. Research is focusing on semiconductor components, power modules and embedded systems that control the different functions in electric vehicles. These are used in the power train, which consumes most of the car's energy, as well as in power converters and lithium-ion batteries. The efforts are concentrated on extending the travel range per battery charge, on integrating components to make the battery, charge unit and power distribution network lighter and more compact, and on increasing the efficiency of the power converter so that as much battery charge as possible is used to drive the vehicle and is not lost through heat dissipation.



ENVIRONMENTALLY AWARE

The worldwide energy consumption is rising dramatically. In the next 20 years energy consumption will double and CO₂ emissions will rise accordingly. The consequence will be a dramatically escalating price for energy and difficult challenges for ensuring Europe's energy supply. Energy issues will become highly significant for competitiveness of the European economy and the quality of life in Europe.

OBJECTIVES

THE INTEGRATION BETWEEN THE NANOELECTRONICS TECHNOLOGIES, ELECTRONICS HARDWARE COMPONENTS AND THE SOFTWARE INFORMATION DRIVEN FUNCTIONS, RESULTING IN INTEGRATED MECHANIC SYSTEMS FOR ELECTRIC VEHICLES WILL BE A MAIN RESEARCH AND DEVELOPMENT AREA IN THE NEXT FEW YEARS.

The objective of the **European Conference on Nanoelectronics and Embedded Systems for Electric Mobility** is to bring together experts from the fields of nanoelectronics semiconductor, mechatronic and embedded systems to present the recent advances made in the area, discuss the future research directions, and exchange application experience with respect to the developments in the electric mobility applications.

Experts representing 5 projects (ENIAC-E³Car, ARTEMIS-POLLUX, FP7-CASTOR, BMBF-BATMAN, FP7-SmartTop) funded by national public authorities from several countries in Europe, ARTEMIS Joint Undertaking Initiative, ENIAC and the European Commission will focus during the Conference on the nanoelectronics and embedded systems technologies developments for electric mobility applications and the impact on the future of electric and hybrid electric vehicles.

EVENT INFORMATION

VENUE

The Workshops will be held on 29 September 2010 at:
Infineon Technologies AG
Am Campeon 1-12
85579 Neubiberg
Germany.

The Conference will take place on 30 September - 1 October 2010 at:

Holiday Inn München - Schwabing
Leopoldstr. 194
80804 Munich
Germany.

MUNICH

Being one of the largest cities in Germany, Munich is also the capital city of Bavaria. Munich is a leading location for science and research. The beautiful and lively city of Munich is located on the river Isar north of the Bavarian Alps. It is a "green" city with numerous and beautiful parks. The famous Englischer Garten (English Garden) is located close to the city centre and the university buildings and covers an area larger than Central Park in New York, therefore being one of the world's largest urban public parks. Munich offers a broad variety of cultural and leisure time attractions.

ORGANISING COMMITTEE

- Reiner John, Infineon, Germany
- Ovidiu Vermesan, SINTEF, Norway
- Marco Ottella, CRF, Italy
- Vito Lambertini, CRF, Italy
- Tanja Seiderer, Infineon, Germany.

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