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Clean Tech for Transportation

<http://www.vppc2010.org/>



Special Session on

STORAGE ENERGY MANAGEMENT IN ELECTRIC VEHICLES

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Call for Papers

Automotive applications have to face more and more stringent environmental norms, especially since clean air and climate change have become a societal concern. Therefore, electric vehicles (EVs) are becoming a potential propulsion technology for automotive transportation. Energy storage and its conversion in electric power required for propulsion are two of the main challenges of these new EVs.

In the short term, Lithium Ion batteries are becoming able to deliver the power needed by light-duty vehicles. However, batteries ageing conditions in vehicles constraints are yet not clearly known. More research is required to lead to a better battery management, a more accurate state of charge value and a better monitoring of the battery state of health. Furthermore, trucks and buses require much higher autonomy and power than can be accommodated readily by batteries. Hence, these vehicles will embed hybrid sources platforms coupled with a storage energy management system.

Hydrogen with its high energy density is a medium term solution. This option requires reliable fuel cells associated to energy storage devices (ultra capacitors or high energy density batteries) able to restore regenerative braking energy and to supply the high transient fluctuating power. Again, efficient storage energy management systems are required.

Topics of interest include, but are not limited to:

- Energy storage systems (batteries, ultra capacitors, fuel cells, flywheels, etc.)
- • Hybrid energy storage systems
- • Efficiency of energy storage systems
- • Modelling of energy storage systems (Lithium-Ion batteries, ultra capacitors, fuel cells, etc).
- • Ageing investigations of energy storage systems (Li-Ion batteries, ultra capacitors, fuel cells, etc).
- • Optimization of energy storage components
- • Storage systems monitoring (State of Charge, failure identification and localization, etc)
- • Battery Management System
- • Design and implementation of PHEV energy management strategies
- • Power electronics interface for energy storage resources: topology, control and design
- • Use of plug-in electric vehicles as a distributed energy resource

- Deadlines -

Submission of abstracts:	March 1, 2010
Notice of acceptance:	April 15, 2010
Submission of full papers:	June 15, 2010
Deadline for registration:	July 30, 2010

All the instructions for abstracts are included in the conference website <http://vppc2010.org/> :

- Special Session title, paper title, authors, affiliation(s), mailing and e-mail address(es),

- corresponding author clearly identified,

- Abstract of 100-300 words and a digest of 3-5 pages.