IEEE VPPC'2017 Conference

December, 11th-14th 2017, Belfort, France

Special Session on

ELECTRIC (AND HYBRID ELECTRIC) BUSES TECHNOLOGIES

Chair: Pr. Paulo Pereirinha, Polytechnic of Coimbra and INESC Coimbra (Portugal/Coimbra)
ppereiri@isec.pt

Co-chair : Pr Hamid Gualous, University of Caen Normandy (France/Normandy)
hamid.gualous@unicaen.fr

Call for Papers

Mobility is deeply linked to our's society development. Among a huge number of other things, conferences like VPPC would not simply be possible without extensive and modern transportation systems. Nevertheless, mainstream transportation systems based on oil products have many negative impacts, namely global and local pollution with direct impact on climate issues, life expectancy reduction and mortality/morbidity rise. Populations are getting more and more aware of this, and recent pollution problems like in Beijing, London and Paris, to mention just a few, are putting increasingly pressure over politics and decision makers to address this problem. Public transportation contributes significantly to city pollution, particularly old diesel buses and there is a growing search for proper solutions to this issue, namely the development of full electric buses and hybrid electric buses. Chine took the lead on this, but currently there is a run all over the world from most bus manufacturers, including European and North American to offer competitive and suitable electric buses. Proposals using different battery chemistries, mostly based on lithium but not only, with different voltage levels, battery capacities and ranges, some with multiple energy storage systems, focused on night slow charge or fast and/or ultrafast opportunistic charge, cable or pantograph conducted or wireless charging systems are appearing at an ever-increasing pace.
This special session is focused on addressing these questions, especially for full electric buses (EB), of all sizes, but including also plug-in hybrid electric buses (PHEB).

Topics of interest include, for full electric and plug-in hybrid electric buses, but are not limited to:

- Power sources and energy storage systems for electric EB and PHEB
- EB and PHEB with multi-storage systems
- Charging systems Infrastructure
- Technical aspects of opportunistic charge
- Influence of fast/ultra-fast opportunist charging on storage systems lifetime and efficiency
- Motors, motor controllers and powertrain system
- Retrofitting or upgrade of powertrain and storage systems
- Standardization for electric EB and PHEB
- Electric buses exploitation experiences and defies

Deadlines:

Submission of abstracts:	Mar. 31, 2017
Notice of acceptance:	June 15, 2017
Submission of full papers:	Sep. 15, 2017

All special session digests must be prepared and submitted in the same way as those for the conference regular tracks (see http://www.vppc2017.org/), except that the corresponding special session should be identified during submission.

Paulo G. Pereirinha received his PhD Degree in Electrical Engineering from the University of Coimbra, Coimbra, Portugal. Since 1995, he has been with the Polytechnic Institute of Coimbra-Coimbra Institute of Engineering (IPC-ISEC), where he is currently a Coordinator Professor with the Department of Electrical Engineering and Coordinator of the Master in Electromechanical Engineering. His classes and research interests include electrical machines, electric vehicles, electromechanical drives, finite elements, and renewable energies, being (co)author of more than 90 papers on international journals and conferences.
Prof. Pereirinha is Senior Member of IEEE, and was General Chair of IEEE VPPC 2014, Publication Chair of VPPC 2015 and Award-Committee Chair of VPPC 2016. He is a member of the Vehicular Power Propulsion Standing Advisory Committee of the IEEE Vehicular Technology Society, VTS. He is a researcher at INESC Coimbra and Vice-President of the Portuguese Electric Vehicle Association, APVE.

Hamid Gualous received his PhD Degree in electronics from the university Paris XI Orsay, France, in 1994. From 1996 to 2009, he was an Associate Professor at the University of Franche-Comte in FEMTO-ST laboratory, France. He is currently a Full Professor at the University of Caen Normandy and head of the LUSAC laboratory. His main research activities include energy storage device, marine renewable energies, and energy management systems for smart grids and electric vehicle applications.