

Special Session on

INNOVATIVE EFFICIENT SYSTEMS FOR FUTURE RAILWAYS APPLICATIONS

Chair: Dr. Clément MAYET, University of Lille1, MEGEVH network (France)

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Call for Papers

Railway transportation is known as being a sustainable mode of transport. However, the environmental issues and the growing number of passengers conduct to continuously improve the transportation systems and their capacities. It leads to face several challenges, such as supply network voltage stability, energy efficiency, system design, etc. Innovative solutions are thus developed to ensure safety despite the increase in traffic, improve the quality of transport, respect the environment with significant technological improvements around energy efficiency, energy management, reduction of noise pollution, eco-design, etc.

To assess the interest of such developments, dedicated power flow techniques and other kind of steady or transient simulations or methodologies can be needed to study a part of or the entire railway system (vehicle and supply network).

The aim of this special session is to present different innovative solutions to solve complex design, control, and energy management problems, as well as, specific modelling and simulation approaches of railway systems (trains, tramways, subways, etc.).

Topics of interest include, but are not limited to:

- Trains, tramways, subways, etc.,
- On-board and wayside energy storage systems (supercapacitor, flywheel, etc.),
- Hybrid electric propulsion system design,
- Energy management and energy recovery,
- Reversible and non-reversible (diode-based) traction power substations,
- Supply railway network
- Power flow simulation of complete railway system

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.



Clément Mayet received the Ph.D degree, in 2016, in electrical engineering from the University of Lille1, Villeneuve d'Ascq, France, in collaboration with Siemens Company. During its Ph.D he has developed an energetic simulation tool dedicated to subway systems. He has currently a post-doctoral position at the Laboratory of Electrical Energy Power electronics (L2EP) of Lille, France, and the University Lille1, within MEGEVH, French network on HEVs.

His research activities deal with modeling, control, energy management, and Hardware-In-the-Loop simulation of EVs and HEVs, including railway systems.



Pablo Arboleya (SM'13) received the M.Sc. and Ph.D. (with distinction) degrees from the University of Oviedo, Gijón, Spain, in 2001 and 2005, respectively, both in Electrical Engineering.

Nowadays, he is the holder of the Gijón Smart Cities Chair at the University of Oviedo and responsible of LEMUR research group railway and transportation section.

Presently his main research interests are focused in distribution systems modelling and operation techniques, railway traction networks simulation and combined AC/DC power flow algorithms and the application of Big data techniques to power systems analysis and operation.

Special sessions submission guidelines

Special session (SS) organizers should follow the following guidelines:

- Each SS should have two organizers, who are from different countries/regions.
- The SS organizers are responsible for inviting digests/papers and arranging the peer-review for their own SS, via the VPPC2017 official submission and review platform (the same as that for the regular tracks). The SS organizers will receive a guide on using the review platform. The digest submission deadline is March 31, 2017.
- The SS organizers should make sure that the authors who register for all the papers in their SS should be from 3 or more countries/regions in order to make the conference and SS as international as possible. Otherwise, the SS will be cancelled and the accepted papers will be moved to regular tracks.
- The SS organizers should ensure a proper number (5 or 6) of papers finally accepted in their SS. In case there are only 4 or fewer papers finally accepted after the peer-review process, the SS will be cancelled and the accepted papers will be moved to the regular tracks.
- It is the SS organizers' duty to inform their invitees of the above rules in advance.
- A written (email) approval from the TPC chairs is mandatory before SS organizers can officially start calling for papers for the SS.

A proposal (i.e., a draft of the SS call for papers) should be raised by those who are interested in organizing an SS. The proposal should be prepared using this template, and be sent to the VPPC TPC chairs at vppc2017@femto-st.fr before Feb. 24, 2017. As they send their proposal to the TPC chairs, the SS organizers agree to follow all the above rules.