



Modeling and Simulation of Electricity Systems for Transport and Energy Storage

Guest Editors:

Prof. Dr. Regina Lamedica

Department of Astronautical,
Electrical and Energetics
Engineering Via Eudossiana
Sapienza - University of Rome,
18, 00184 Rome, Italy

Dr. Alessandro Ruvio

Department of Astronautical,
Electrical and Energetics
Engineering, Sapienza University
of Rome, 18, 00184 Rome, Italy

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Message from the Guest Editors

Dear Colleagues,

The deep evolution of the electrical systems, due to the increase of distributed generation and renewable sources, has had effects also on electrical transportation systems, in order to improve energy efficiency and environmental sustainability.

In the urban context, the development not only of constrained guideway systems but also those of recent diffusion with hybrid and/or all-electric propulsion such as cars, bikes and scooters, has been characterized by both shorter times and high power charging requests, with a strong impact on the power systems in terms of stability, PQ, power flows management, etc. In the extra-urban context, the main technological evolution took place not only in railway transportation systems, but also in the transport of goods by road, with possible highway electrification. In these new frameworks, energy storage systems are widely used both for increasing energy efficiency and for voltage regulation. The new electric scenario for transportation systems therefore requires preliminary studies that involve the use of models and calculation procedures suitable for carrying out in-depth analysis.





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Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and
Aerospace Engineering,
University of Roma Sapienza, Via
Eudossiana 18, 00184 Roma, Italy

Message from the Editor-in-Chief

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