Special Compendium on Power Electronics for Sustainable Transport Systems with Emphasis in Fluvial, Marine or Maritime Applications

Deadline for Manuscript Submissions: *1st May 2023*
Scheduled Publication Time: *September 2023*

Papers that demonstrate the potential of power converter to attaint reliable and efficient solutions in electrifying de transport sector for sustainable produce, charge, use or convey energy in particular but not exclusively for fluvial, marine or maritime environments showing limitations and trends, address technology bottlenecks and demonstrate potential breakthroughs are particularly welcome.

Topics of interest include, but are not limited to:

- Modeling and simulation: Modeling of devices and components in power converter systems, multi-domain and multi-level modeling (such as electro-thermal models, multi-physics models, and integration of simulation models with different detailing levels), efficient modeling and simulation of multi-level converters, numerical methods for simulation of complex systems, accurate converter models for large scale system studies.
- Control of Power Converters: Linear and nonlinear control algorithms for AC-DC, DC-DC, and AC-AC converters, digital control and discrete-time controller analysis, implementation techniques (such as DSP, FPGA), control of inductive power transfer systems, control of ultra-high switching frequency converters.
- Hybrid Systems and Power Management: Design and control of power converters in hybrid transportation systems (such as electric vehicles, trains, ships, and aircraft systems), power management techniques for power supply systems with energy storage (such as vehicles, telecommunication, computation systems, and grid-scale energy storage), wireless power transfer, energy storage management and operation techniques, systems with power ICs.
- Design, Optimization and Simulation Tools: Design methodologies for electronic power converters, reliability-optimized design approaches, multi-domain and multi-objective optimization of power converter system design, optimization-oriented simulations, hardware-in-the-loop (HIL) testing and simulation, real-time simulation and rapid prototyping.
- Stability of Power Electronics Systems: Stability analysis of power systems dominated by power converters, stability of integrated ac and dc power systems, controller interaction and stability problems in converter dominated systems, representation of power converter stability properties in power system stability studies, power system compensation and damping of power system resonances, constant power load instability effects in dc and ac systems, non-linear instability phenomena in power electronic converters (limit cycles, bifurcations, chaos).
- Education & Innovation: Innovative teaching methodologies, research and innovation powered by smart grid laboratories, virtual and interactive laboratories in education, multimedia tools, and interactive simulations.

We will be accepting both letter articles and full journal articles. A letter submission is still expected to include a literature review to establish its relationship to prior work, and present sufficient results to prove the validity and viability of proposed concept, but these parts must be written concisely to focus on the new idea and specific contribution. Works dealing with subjects that cannot be presented in this format because of the need for extensive literature review, lengthy analysis and derivation, and/or extensive experimental verification and validation shall be submitted as regular papers to the Transactions.

All manuscripts must be submitted through Manuscript Central at https://mc.manuscriptcentral.com/oj-pel. Submissions must be clearly marked "sustainable transport systems with emphasis in fluvial, marine or maritime applications" on the cover page. When uploading your paper, please select the corresponding manuscript type for the special compendium. Please refer to https://www.ieee-pels.org/ for general information about submitting through Manuscript Central.

Guest Editors	Guest Associate Editors	Proposed Timeline
José Fernando Jiménez Vargas (Universidad de los Andes) **Gustavo Ramos** (Universidad de los Andes)	**Davis Montenegro** (Electric Power Research Institute (EPRI)) **Adriana Luna** (University of Puerto Rico) **David Celeita** (Universidad del Rosario) **Enrique Quispe** (Universidad Autónoma de Occidente) **Guillermo Jimenez** (Universidad de los Andes) **Andrés Escobar Mejía** (Universidad Tecnológica de Pereira) **Michael Bressan** (Universidad de los Andes) **Miguel Garnica** (Colombian Navy) **Wilmar Martínez** (KU Leuven) **Alonso Gutierrez** (CEA, France)	***1st May 2023***: Submission Deadline ***1st June 2023***: First-Round Notification ***15th June 2023:*** Paper Revision Deadline ***1st July 2023***: Second-Round Notification ***25th July 2023***: Forwarded to IEEE for Publication ***September 2023***: Articles appear in OJ-PEL