



The logo features the IEEE diamond symbol to the left of the text 'IEEE Design & Test'. 'IEEE' is in a bold, sans-serif font, while 'Design & Test' is in a larger, stylized sans-serif font. Below this, the word 'Magazine' is centered in a bold, sans-serif font.

Magazine

Call for Papers - Special Issue on Energy and Power Management for Electric Vehicles

Electronic Design automation has been one of the most contributing technological backgrounds of transistor scaling over several decades. Recently, the application of design automation goes beyond electronics demonstrating showcases of significant contribution to other domain problems. The concept of *design automation of things* expands the applications of design automation from electronics to other engineering systems.

This special issue primarily promotes systematic design and management for electric vehicles especially from the power and energy standpoint within the framework of *design automation of things*. This special issue mainly focuses on battery electric vehicles (BEV) rather than hybrid electric vehicles. The state-of-the-art research and advanced industry practice papers are invited. A tutorial paper without new research contribution is discouraged.

Scope:

The special issue Guest Editor invites novel papers for the following scope of state-of-the-art research but not limited to:

- **Electric vehicle battery management:** state-of-charge and state-of-health estimation, aging (capacity, impedance, etc.) management, cell balancing, thermal management, future battery technologies, etc.
- **Electric vehicle propulsion power efficiency modeling and optimization:** drivetrain multi-physics modeling and simulation, design time optimization, runtime management, regeneration, multi-speed transmissions, component sizing and cost optimization, route-dependent optimization (auto-throttle, map and elevation based optimization), etc.

- **Electric vehicle non-propulsion power optimization:** HVAC power modeling and management, power steering and power brake modeling and optimization, on-board energy harvesting for electric vehicle, etc.
- **Electric vehicle infrastructure optimization:** power grid and EV integration/management, smart grid, EV charging standards and scheduling, and infrastructure planning, (wireless) battery charging, etc.

Important Dates:

April 10, 2017: submission deadline

May 19, 2017: 1st round review

June 16, 2017: paper revision

July 30, 2017: notice of final acceptance/rejection

August 18, 2017: final manuscript submitted to editor

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