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Special Session on

"Emerging Technologies in Wireless Power Transfer"

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Call for Papers

Energy storage is an enabling technology for many sophisticated mechatronic and power-electronic systems, such as electrified transportation, portable electronics, and smart grid. Advanced and intelligent management is desired to unlock its potential in performance and cost combining the knowledge of chemistry, material, control theory, and electrical engineering. The properties of advanced management technologies should include enhanced safety and efficiency, prolonged service life, and environment-friendly.

Topics of the Session:

As one of the most rapid expanding - techniques, wireless power transfer (WPT) has been promoted for various applications, especially for the electric-driven devices. Since the WPT technique possesses the advantages of reliability, automation, safety, low maintenance, convenience, and electrical isolation, more and more academic researchers and industries are getting involved in this emerging area. Thus, the WPT shows significant meanings for charging portable electronic devices, implanted medical devices, integrated circuits and electric vehicles, etc.. This session aims to offer a timely opportunity for academic researchers and industrial engineers to present, discuss, and exchange the latest results and findings of WPT technologies on the topology design, electromagnetic field theory, power electronics and applications, as well as the future development directions.

Topics of interest include, but are not limited to:

- Wireless charging for electric vehicles;
- High frequency converters for WPT;
- Wireless charging systems for portable devices and smart home appliances;
- Analytical and finite element methods for WPT technologies;
- Electromagnetic compatibility and safety designs;
- Detection techniques for wireless charging;
- Multiple-frequency multiple-objective WPT applications;
- Emerging applications such as wireless motor lighting, heating; etc.;
- Overview paper on WPT techniques and development.