Call for Papers

IEEE Journal of Emerging and Selected Topics in Power Electronics

Special Section on Cybersecurity of Power Electronics through Hardware Hardening

Scheduled Publication Time: September 2019

Cybersecurity of power electronics is increasingly essential as more systems from electrical grids, electrified transportation, data centers and internet-of-things utilize power electronics with embedded sensor, converter, and actuation and control mechanisms through various wired and wireless connections. Power electronics needs to define hardware hardening, especially in the design phase, to guard embedded components and their influence on the system from incidental and deliberate interferences. Emerging requirements in hardware hardening across components, usage, and communication modes are the focus of this special section.

Prospective authors are invited to submit original contributions, or survey papers in this special section. Papers defining design-phase hardware hardening are particularly welcome. Topics of interest include, but are not limited to:

- Firmware compromise detection and integrity verification
- Hardening internal and external power electronics communications
- Cyber-physical attacks and approaches for hardware hardening
- Secure firmware update and patching, including over the air updates (OTAU)
- Secure designs for power electronics devices
- Integration of hardware- and software-based hardening solutions
- Prototypes, testbeds, and demonstrations
- Application specific needs and approaches for secure power electronics hardware (e.g. in distributed energy resources (DER), electric vehicle charging infrastructure, and data centers)

All manuscripts must be submitted through Manuscript Central at: http://mc.manuscriptcentral.com/jestpe-ieee. Submission must be clearly marked "Cybersecurity of Power Electronics through Hardware Hardening" on the cover page. When uploading your paper, please select your manuscript type "Special Section." Refer to https://www.ieee-pels.org/ for general information about electronic submission through Manuscript Central. The guest editorial board noted below will review and handle manuscripts submitted for this special section.

Deadline for Submission of Manuscript: January 14, 2019

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Proposed Time Line
- **1/14/2019**   **Manuscripts Submission Deadline**