



Annual International Symposium on Industrial Electronics (ISIE) 2023

Special Sessions on

“Advanced Technologies in Wireless Power Transfer
and Biomedical Power Electronics”

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Call for Papers

Theme:

Electrification, integration and intellectualization in biomedical engineering bring definite opportunities and unlimited possibilities for future wireless power transfer (WPT) and biomedical power electronics (BPE). Advanced technologies of WPT and BPE can improve the medical modalities and upgrade treatment equipment with distinguished merits, in particular advancing medical research, diagnostics and treatments. For instance, the WPT can recharge medical implants without battery replacement surgeries, while the BPE enables noninvasive therapies such as transcranial magnetic stimulation with barely any contraindications or pains in treatments of depression, epilepsy, post-traumatic stress disorder, etc. Accordingly, future WPT and BPE should operate with ultrahigh power density, ultrahigh stability and ultrahigh functionality while minimizing their side effects during treatments.

Topics of interest include, but are not limited to:

1	Advanced technologies of inductive and capacitive wireless power transfer
2	Advanced biomedical power electronics for intelligent diagnostics and medical treatments
3	Wireless charging and propulsion technologies for biomedical implants and robots
4	Ultrahigh-power-density converters and ultrahigh-stability networks
5	Advanced design, modulation and control strategies for wireless power transfer and biomedical power electronics
6	Modeling, calculation and solution of thermal issues in biomedical engineering applications
7	Field analysis and design optimization for wireless charging and biomedical power electronics
8	Human exposure issues and protection from high-frequency electromagnetic fields
9	Artificial intelligence applications in biomedical engineering and neurosciences
10	Advanced medical laboratory technology and laboratory diagnostics

Submissions Procedure:

All the instructions for paper submission are included in the conference website:

<https://2023.ieee-isie.org/>

Deadlines:

Full paper submission: January 31, 2023

Paper acceptance notification: April 15, 2023

Camera-ready paper submission: April. 30, 2023