

## Special Issue

# Wireless Power Transfer and Inductive Charging

### Message from the Guest Editors

Wireless power transfer (WPT) systems, particularly those utilizing inductive coupling (IWPT), have been under intensive research in recent years. This technology presents many applications, from charging electrical vehicles or mobile devices to powering biomedical devices. IWPT transmits power through magnetic induction between a transmitter and a receiver coil and relies on resonant circuits to improve and optimize the power transfer. The transmitter coil is powered with a high-frequency current (from a few kHz up to a few MHz), which induces a current in the receiver coil that can be connected to any load, including batteries. IWPT techniques allow the power to be transferred without electrical contact, making it possible to transfer energy when wired connections are impractical or even impossible. Also, it can transfer power in harsh environments with water, dust, or dirt. Additionally, these systems reduce the utilization of sometimes bulky, heavy, and expensive batteries, which is particularly important in applications such as electric vehicles and implantable biomedical devices.

---

### Guest Editors

Dr. José Alberto

COPELABS, Universidade Lusofona, Campo Grande, 1749-024 Lisboa, Portugal

Dr. Leonardo Sandrolini

Department of Electrical, Electronic and Information Engineering, University of Bologna, 40136 Bologna, Italy

---

### Deadline for manuscript submissions

30 September 2025



## Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/si/212479](https://mdpi.com/si/212479)

*Applied Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[appls@mdpi.com](mailto:appls@mdpi.com)

[mdpi.com/journal/](https://mdpi.com/journal/)

[appls](https://appls.mdpi.com)





# Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/journal/  
applsci](https://mdpi.com/journal/applsci)



## About the Journal

### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

---

### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,  
20133 Milano, Italy

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering )