

# Special Issue

## Flywheel Energy Storage

### Message from the Guest Editor

Flywheel Energy Storage Systems (FESS) convert electricity to kinetic energy, and vice versa; thus, they can be used for energy storage. High technology devices that directly use mechanical energy are currently in development, thus this scientific field is among the hottest, not only for mobile, but also for stationary applications. Precisely, FESS have a wide range of applications in transportation (especially in race cars), uninterruptable power supply (UPS) systems, off-grid electricity production and many others. Usually, magnetic bearings are used to reduce friction losses. The advantages of FESS, when compared with conventional storage technologies, such as batteries, are the limited maintenance needs, high round-trip efficiency, high-power density, long lifetime, and, mainly, their negligible environmental impact. We, therefore invite contributions on topics that include (but are not limited to):

- FESS design and operation
- Off-grid electricity production
- Mobile applications of FESS
- Materials used for FESS implementation

I look forward to your contributions,

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### Guest Editor

Prof. Dr. Frank A. Coutelieris

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### Deadline for manuscript submissions

closed (30 September 2019)



## Applied Sciences

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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.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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