

Call for Papers

Special Issue on

Energy Production and Harvesting: Modelling, Dynamical Analysis, and Control

The aim of the special issue is to bring together scholars and practitioners with expertise in the state-of-the-art fields of energy production and energy harvesting including both linear and nonlinear systems, and systems in fractional orders.

New phenomena in dynamics and control as well as new approaches to addressing known problems are being discovered in the theoretical, numerical, and experimental investigations of energy production and energy harvesting.

The special issue welcome original research articles that discuss current progress and challenge in the respective field and manuscripts that address topics from application to analysis, all with the focus on developing efficient energy production and/or energy harvesting system for renewable energy.

Review articles summarizing the current state of understanding of a particular topic in the vibration and system dynamics fields are also welcome.

Potential topics of interest include, but are not limited to:

- Chaos synchronization and antisynchronization applied in optimal energy production and/or energy harvesting
- Nonlinear control applied in energy production and/or energy harvesting
- Fractional order modeling of physical, chemical or biological systems applied in energy production and/or energy harvesting
- Applications of fractional order control systems applied in energy production and/or energy harvesting
- Modeling, analysis and control of vibration energy harvesters
- Bio Inspired energy generation, conversion, and storage
- Chemical process applied in energy generation, conversion, and storage
- Optimization techniques for efficient conversion, storage and energy production and/or energy harvesting
- Micro/nanoelectromechanical systems for energy production and harvesting
- Application and implementation issues in energy production and harvesting
- Hydrogen as energy carrier: Modelling and design optimization of complex systems
- Hydrocarbon reforming
- Energy and fuels production from renewable energy sources
- System integration. Solutions for energy and resources management

Submission Deadline	March 31st, 2022
Publication Date	June 30th, 2022

Please submit your paper to the following editorial team for review and publication consideration.

Guest Editors:

José M. Balthazar, Federal University of Technology – Paraná, Curitiba, Brazil; jmbaltha@gmail.com

Angelo M. Tuset, Federal University of Technology – Paraná, Curitiba, Brazil; tuset@utfpr.edu.br

Giane G. Lenzi, Federal University of Technology – Paraná, Curitiba, Brazil; gianeg@utfpr.edu.br

Stefania Specchia, Politecnico di Torino – POLITO, Torino, Italy; stefania.specchia@polito.it