

## Special Issue

# Big Data, Blockchain and IoT in Energy Management for Sustainable Development

### Message from the Guest Editors

Blockchain technology and the Internet of Things (IoT) enhance trading the surplus of the electricity generated by communities or microgrids. A smart adaptive big data framework for demand side management fostering market strategies, settlement, and grid-efficient operation essentially necessitates big data solutions to extract, process, and analyze a large volume of data generated by consumers/prosumers from various sources: smart appliances (IoT and sensors), small-scale generation, such as photovoltaic panels and micro-wind turbines, integrated with storage devices and electric vehicles. Consumers' behavior is changing to a more active role empowered by recent advancements in ICT technologies. Thus, the operation of the smart appliances can be monitored, optimized, and controlled with smart home applications, sensors, and IoT architectures.

- big data
- blockchain
- IoT
- energy management
- sustainable development

---

### Guest Editors

Prof. Dr. Adela Bara

Department of Economic Informatics and Cybernetics, University of Economic Studies, 010374 Bucharest, Romania

Dr. Simona-Vasilica Oprea

Department of Economic Informatics and Cybernetics, University of Economic Studies, 010374 Bucharest, Romania

---

### Deadline for manuscript submissions

closed (31 December 2021)



## Sustainability

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 7.7



[mdpi.com/si/62153](https://mdpi.com/si/62153)

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

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





## Sustainability

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 7.7



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



## About the Journal

### Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

---

### Editor-in-Chief

Prof. Dr. Steve W. Lyon

School of Environment and Natural Resources, Ohio State University,  
Columbus, OH 43210, USA

---

### Author Benefits

#### Open Access:

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

#### High Visibility:

indexed within Scopus, SCIE and SSCI (Web of Science), GEOBASE, GeoRef, Inspec, RePEc, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Environmental Studies) / CiteScore - Q1  
(Geography, Planning and Development)