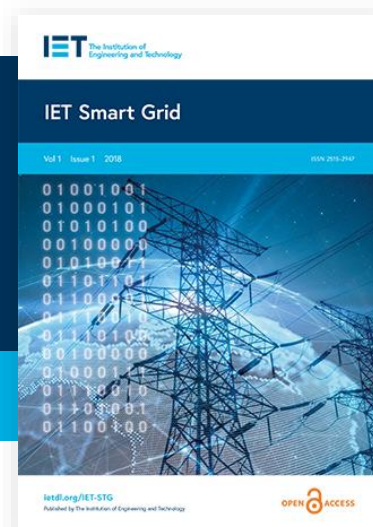


IET Smart Grid

Call for Papers

Submission Deadline: 31st December 2021 | Publication Date: October 2022



Editors-in-Chief: Ram Rajagopal, Stanford University, USA
Hongjian Sun, Durham University, UK

Special Issue on:

Blockchain Technologies Empowering Peer-to-Peer Trading in Multi-Energy Systems: From Advanced Technologies Towards Applications

In efforts to decarbonise electricity, transport, and heat sectors, policy makers facilitate the integration of renewable energy sources and demand side management in the multi-energy systems. With the supports of the smart grid, increasing number of consumers start to produce, store, and consume energy using zero-carbon electricity and heat sources, e.g. solar panels, electric vehicles, and air source heat pumps, giving them the new role of multi-energy prosumers. A flexible local energy market structure and intelligent operations of smart grid are crucial factors for accommodating the role of multi-energy prosumers. The blockchain technologies, e.g. smart contracts and hypothetical technology, pave the path for the peer-to-peer (P2P) energy markets which are open and accessible to prosumers with enhanced automation, security, and privacy. The state-of-the-art research and scientific innovations bring these advanced blockchain technologies towards applications into multi-energy systems.

This special issue aims to solicit the innovative research on the blockchain empowering peer-to-peer trading in multi-energy systems. The scope of the research include a single(multiple) energy vector(s) (e.g. electricity, gas, or heat), technologies (e.g. blockchain, smart contracts, or machine learning), theories (e.g. P2P trading mechanisms, pricing schemes, communication protocols, or consensus mechanisms) and applications (e.g. blockchain platforms or prosumer-centric energy scheduling).

Topics of interest include, but are not limited to:

- Privacy preservation and security of P2P energy trading networks.
- Communication and networking of the blockchain based P2P energy trading systems.
- Design of scalable blockchain platforms and protocols for P2P energy trading.
- Demand side management and pricing design for multi-energy prosumers.
- Design of smart contracts based auction mechanisms for P2P energy trading.
- Data analytics, optimisation, and game theory for the management of prosumer centric multi-energy systems.
- Policy design for facilitating P2P energy trading and prosumers' engagement.
- Artificial intelligence and machine learning for supporting P2P energy trading.

IET Smart Grid received its first CiteScore of 2.9 in 2020!

El Compindex, Emerging Sources Citation Index (ESCI), Scopus, IET Inspec, Directory of Open Access Journals (DOAJ).

From January 2021, The IET will begin an Open Access publishing partnership with Wiley. As a result, all submissions that are accepted for this Special Issue will be published under the Gold Open Access Model and subject to the Article Processing Charge (APC) of 2,200 USD. For further information on APCs, and support for APCs including Wiley's institutional agreements and Research4Life initiative which offers waivers and automatic discounts for certain countries, please see our [FAQs](#). Please submit your paper via [ScholarOne](#), and for more information about the journal please visit our [website](#) and read our [Author Guide](#).

Guest Editors:

Dr Weiqi Hua (Lead), University of Oxford, UK, **E:** weiqi.hua@eng.ox.ac.uk
Dr Fengji Luo, University of Sydney, Australia, **E:** fengji.luo@sydney.edu.au
Dr Liang Du, Temple University, USA, **E:** ldu@temple.edu
Dr Sijie Chen, Shanghai Jiao Tong University, China, **E:** sijie.chen@sjtu.edu.cn
Dr Taesic Kim, Texas A&M University–Kingsville, USA, **E:** taesic.kim@tamuk.edu
Dr Thomas Morstyn, University of Edinburgh, UK, **E:** thomas.morstyn@ed.ac.uk
Dr Valentin Robu, CWI, Amsterdam & TU Delft, Netherlands, **E:** v.robucwi.nl
Dr Yue Zhou, Cardiff University, UK, **E:** zhouy68@cardiff.ac.uk