

Call for Papers

Special Issue on Blockchain-Based 6G and Industrial Internet of Things Systems for Industry 4.0/5.0

Industrial Internet of Things (IIoT) and Industry 4.0/5.0 provide for the interconnections of machinery, equipment, processes and personnel working in different vertical industries such as manufacturing and logistics supply chains, transportation and medical care. However, heterogeneous types of sensor nodes attach to these interconnected machines/appliances that sense and transmit data to the nodes or cloud. To address these challenges, networking in the next generation, like 6G and Cybertwin is implemented. In supporting complicated wireless interconnectivity, sixth generation (6G) communication would play a crucial role. A network of the 6G is predicted to be able to operate millions of connected devices and systems seamlessly at high levels of data and low latency. Blockchain is one technology that is exposed and can contribute to stability in IIoT. Blockchain appears to be a way to preserve the user's anonymity and to keep the potential for immutable information and reproduction. A blockchain technology is used to enforce a distributed ledger free of charge to store transactions by the Peer-to-Peer network nodes (P2Ps) and to prevent a central authority required through a distributed consensus process.

The aim of this special issue is to study the Blockchain and Industry 4.0/5.0 new technologies, novel structures and future problems.

Topics include, but are not limited to, the following:

- Blockchain frameworks for IIoT and Industry 4.0/5.0
- Blockchain-based IIoT and Industry 5.0
- Security and Privacy assisted blockchain systems for IIoT and Industry 4.0/5.0
- Algorithms and approaches for IIoT and Industry 4.0/5.0
- Energy monitoring for radio access network (RAN) framework in Blockchain and Cybertwin-assisted 6G for IoE
- Allocation methods and techniques using IIoT
- Real-life Industrial applications for IIoT and Industry 4.0/5.0

Important Dates:

Submission Deadline: September 30, 2021

Reviews Due/Notification: December 31, 2021

Final Manuscript Due: February 15, 2022

Publication Date: 2022

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Guest Editors Short Bio:

Dr. Gaurav Dhiman received his Ph.D. in Computer Engineering from Thapar Institute of Engineering & Technology, Patiala. He has completed his Master Degree of Computer Applications from Thapar Institute of Engineering & Technology, Patiala. He is currently working as an Assistant Professor with the Department of Computer Science, Government Bikram College of Commerce, Patiala. He was selected as an outstanding reviewer from Knowledge-Based Systems (Elsevier). He has published more than 100 peer-review research papers (indexed in SCI-SCIE) and 10 international books. He is also serving as the guest editor of more than ten special issues in various peer-reviewed journals (including IEEE Transactions on Industrial Informatics). He is the member of IEEE. He is also in editorial board members of Current Chinese Computer Science (Bentham Science), Current Dissertations (Bentham Science), Journal of Fuzzy Logic and Modeling in Engineering (Bentham Science), Journal of the Institute of Electronics and Computer (IEC Science), Journal of PeerScientist, Artificial Intelligence Evolution, Acta Scientific Computer Sciences. His research interest includes Single-, Multi-, Many-objectives optimization (Bio-inspired, Evolutionary and Quantum), Soft computing (Type-1 and Type-2 fuzzy sets), Power systems, and Change detection using remotely sensed high-resolution satellite data. His research articles can be found in Knowledge-Based Systems (Elsevier), Advances in Engineering Software (Elsevier), Applied Intelligence (Springer), Journal of Computational Science (Elsevier), Engineering with Computers (Springer), Applied Soft Computing (Elsevier), Engineering Applications of Artificial Intelligence (Elsevier), Journal of Ambient Intelligence and Humanized Computing (Springer), among others. His research can also be seen in <http://www.dhimangaurav.com>

Prof Nagar holds the Foundation Chair as Professor of Mathematics at Liverpool Hope University where he is the Pro-Vice-Chancellor for Research and Dean of Faculty of Science. Prof Nagar has been the Head of School of Mathematics, Computer Science, and Engineering since December 2007. A mathematician by training, he possesses multi-disciplinary expertise in Nonlinear Mathematics, Natural Computing, Bio-Mathematics and Computational Biology, Operations Research, and Control Systems Engineering. He has an extensive background and experience of working in Universities in the UK and India. He has been an expert reviewer for the Biotechnology and Biological Sciences Research Council (BBSRC) grants peer-review committees for Bioinformatics Panel; Engineering and Physical Sciences Research Council (EPSRC) for High Performance Computing Panel; and serve on the Peer-Review College of the Arts and Humanities Research Council (AHRC) as a scientific expert member. Prof Nagar has edited volumes on Intelligent Systems, and Applied Mathematics; He is the Editor-in-Chief of the International Journal of Artificial Intelligence and Soft Computing (IJASCI) and serve on editorial boards for a number of prestigious journals such as the Journal of Universal Computer Science (JUCS). He has been Conference General Chair and member of the International Programme Committee (IPC) for several international conferences and have been invited to deliver keynote lectures at a number of such forums. He published with over 200 publications in prestigious publishing outlets and journals such as the Journal of Applied Mathematics and Stochastic Analysis; the International Journal of Advances in Engineering Sciences and Applied Mathematics; the International Journal of Foundations of Computer Science; the IEEE Transactions on Systems, Man, and Cybernetics; Discrete Applied Mathematics; Fundamenta Informaticae; IET Control Theory & Applications, to name a few.