9th International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA 2021) June 25 - 26, 2021

National Institute of Technology Mizoram, India

CALL FOR PAPERS

Special Session on "Blockchain 4.0: Artificial Intelligence and Industrial Internet of Things Paradigm in New Advanced Society Challenges, Applications**"**

Session Chair(s):

Dr. Sandeep Kumar Panda, IcfaiTech (Faculty of Science and Technology), ICFAI Foundation for Higher Education, Hyderabad, Telangana, INDIA. E-Mail: sandeeppanda@ifheindia.org, Mobile No:8895081701

Dr. D. Chandrasekhar Rao, Department of Information Technology, Veer Surendra Sai University of Technology, Burla, India, E-Mail: dcrao_it@vssut.ac.in, Mobile: 9337724582

Theme of Session:

The main aim of this special session is to focus on Blockchain 4.0 and its wide range of applications in the field of Artificial Intelligence and Industrial Internet of Things Paradigm in New Advanced Society.

Now a day, the world changes rapidly, a transition flow also seen in New Advanced Society (NAS). The traditional Society holds good establishment last one to two decades, but, the internal workflow confined in a single organization. They do not manage the workflow process and information across organizations. If they do so, again fall in same trap as the control transfers to third party that is centralized server and it leads to tampering the data, and single point of failure. To address these issues, integrated Artificial Intelligence (AI), and Industrial Internet of Things (IIoT) with Blockchain Technology in NAS evolved.

Blockchain is a trusted, distributed, peer to peer, open, public, techno-cryptographic ledger to manage and transfer the value of digital assets, to provide immutability, anonymity and security. Blockchain- the term means different things to different people. For developers, it is a set of protocols and encryption techniques for secure data storage in a distributed network. For business and finance, it is a distributed ledger technology giving rise to new digital currency. For others, it is a tool that profoundly reshapes the society and economy through the decentralized world. But in all ways, the term Blockchain fascinates and captures imagination of many as the implication of the technology is significant. For the first time in human history, people across the world can trust each other and transact over a large peer-to-peer networks without any central authority. This proves that, trust can be built not only by centralized institution but also by protocols and cryptographic mechanisms. The potential and collaboration between organizations and individuals within peer networks makes it possible to potentially move to a global collaborative network without centralization. Blockchain is a complex social, economic and technological phenomenon. This questions what the established terminologies of the modern world's like currency, trust, economics and exchange would mean. To make any sense, one needs

Springer

to realize how much insightful and potential it is in the context and the way it is technically developed.

Advancement in digitization of manufacturing is leading to a major transition in the way the goods are manufactured. A digital transformation in manufacturing in distributed computing is referred as Blockchain 4.0 popularly known as fourth industrial, and new advanced societal revolution. In this fourth industrial revolution, Automation and Data exchange of manufacturing technologies are considered to be the key elements. Fourth industrial revolution is the continuation of what was started in third i.e., software adoption and automation and strengthening it with smart and automated computer-and machine learning systems. In short, Blockchain 4.0 is nothing but optimization of Blockchain 3.0 digitization. Therefore, some of the technologies that could be a part of fourth industrial, and Societal revolution can be New Advanced Society, Supply Chain Management, Logistics, Cloud computing, Smart Cities, Internet of Things, Cognitive Computing are to name a few. In Blockchain 4.0, without human intervention connected computers can communicate and make decisions. The combination of cyber-physical networks, Internet of Things and Internet of Technology can make Blockchain 4.0 and the smart factory vision likely to become reality. However, the features are same as we learn from the Industrial Internet of Things, such as remote control or tracking and tracing. Therefore, with access to more data the systems are getting smarter thereby making the factories more productive and efficient.

The main intent of this Special Session Proposal is to cover the impact of Blockchain 4.0 on several industrial sectors, the various IoT, and AI tools that are used in those industries. This proposal also provides insights in developments and applications of IoT, and AI tools and the critical issues in deploying it. A detailed discussion on New Advanced Society, Supply Chain Management, Logistics, Cyber Physical System (CPS) and Big Data Technologies are also presented in the proposal. The technologies that are playing a major role in transforming the industrial production are analysed and described. Next, we discuss about the challenges ahead of making Blockchain 4.0 real. The security and privacy aspects of the data are also described in detail. Finally, how Blockchain 4.0 can benefit the economy, society, and environment, with the digitization of machines. Blockchain is an emerging technology and is experiencing fast growth. Within a timespan of two to three years, it is radically changing its application in different field. Rise of Blockchain 4.0 caters to new business models and services. Industrial, and Societal revolution is not something that can be experienced immediately. As with IoT, and AI installations it needs a planned, orchestrated strategy. In the end, it is the ecosystem of digitally connected machines generating and exchanging information that forms the real strength of Blockchain 4.0.

Topics of Interest:

We invite original (un-published) research contributions based on the above-mentioned theme including following topics **but not limited to**:

Blockchain 4.0 — Where this Revolution leading to?
Blockchain 4.0: New Services and Revenue Models
The Blockchain 4.0 building blocks: New Advanced Society
Technologies Transforming Industrial Production
Blockchain 4.0 and Supply Chain Management

E-Governance and E-Learning
Blockchain in Operation Management
Blockchain on Society and Government
Optimized Logistics
Industrial Edge Computing
Artificial Intelligence and Augmented Reality
Security and Privacy of Data
Biopharmaceutical integration with Blockchain 4.0
Contact tracing by a chip implanted via vaccines
Blockchain 4.0: Cyber Physical Systems

Paper Submission Process:
Please submit your paper (in word/pdf format) at
email: bciot.ficta2021@gmail.com
with 'Name of Special Session: ' mentioned in the subject line.

Program Committee:

1. **Prof. (Dr.) Amiya Kumar Rath, VSSUT, Burla, Adviser, NAAC**
2. **Dr. Sanjaya Kumar Panda, NIT, Warangal**
3. **Dr. Venkana U, IIIT, Naya Raipur**
4. **Dr. Ramesh Kumar Mohapatra, NIT, Rourkela**
5. **Dr. Subhrakanta Panda, BITs, Pilani (Hyderabad Campus)**

For any further queries related to this special session, please contact the session chairs at:
E-mail ID: sandeeppanda@ifheindia.org
Mobile No.:8895081701
E-Mail ID: rao.dchandrasekhar@gmail.com
Mobile No: 9337724582