# Editorial Preface

Vijender Kumar Solanki, CMR Institute of Technology (Autonomous), Hyderabad, TS, India

I am happy to present the editorial preface of International Journal of Hyperconnectivity and the Internet of Things (IJHIoT) volume 4 number 2 (2020). This issue is containing selective six manuscripts from repute researchers.

The first paper of this issue titled: "Context Aware Data Perception in Cognitive Internet of Things: Cognitive Agent Approach" belongs to Lokesh B. Bhajantri and Prashant M. Baluragi, focuses on the existing Internet of Things that causes traffic congestion and receiver uncertainty problems due to insufficient data transfer between the nodes or devices for data perception. They have proposed the method for context aware data perception in the Cognitive Internet of Things environment. The experimental results show that the proposed method outperforms without cognitive agent approaches for data perception in terms of network lifetime, energy consumption, data perception accuracy, and throughput in the Cognitive Internet of Things.

Second paper is titled: "An Architecture for Big IoT Data Analytics in the Oil and Gas Industry," submitted by Ramiz M. Aliguliyev, Rashid G. Alakbarov, and Shalala F. Tahirzada. The manuscript focuses on the application of the fast-growing information and communications technologies (ICT) in the industry that has led to an increase in the quality of industrial processes. The application of IoT in the industry can lead to collecting an exponential volume of data and, consequently, to some challenges in the analysis phase. Taking these into account, the article deals with the research on IoT technologies and the application of industrial processes to improve the quality of production processes in the oil and gas industry. In this paper, multi-layered analysis architecture for processing big data in the oil and gas industry is proposed.

The third article titled: "Functional examination of the evolution of universities' use of hyper-connected and internet marketing strategies" by Darrell Norman Burrell et al. The manuscript focuses on today's fifth industrial revolution, social media, and marketing trends. The number of social media users continues to increase and is expected to grow through the coming years. Diverse potential student populations hold accounts. The data shows the need to develop a marketing strategy to attract and locate potential learners (customers). The answer lies in social media where millions of potentials can be established, with branding to attract possibilities, and using AI to help locate the needed numbers. A combined social media methodology and technology can support recruitment and retention efforts.

The fourth article title: "The Exploration of Government as a Service Through Community Cloud Computing," was written by Vasileios Yfantis and Klimis Ntalianis. The article focuses on the Cloud governance is a concept that has to be adjusted in the new challenges of information technology. The application of e-government in the autonomous communities through cloud computing is a way to reduce the corruption and empower the bonds between the members of the community. On the other hand, the communities have to use the advantages of the cloud computing in an ethically. It is important to find out if a community cloud computing network would be a strong weapon for the terrorists. However, the issues of unauthorized access to confidential information and the website hacking actions will be reduced if the government as a service model will be developed from the citizen's side. As long as there is limited political motivation, the citizens will probably develop a more responsible and respectful behavior towards the public policy. The proposed approach increases sharing and participation within the users' communities and guides them to respect governments and their politics.

In the fifth article is contributed by Julian Scott Yeomans titled: "Alternative Generation in Complex Decision Modelling Using a Firefly Algorithm Metaheuristic Approach." The manuscript

shows an MGA procedure was introduced that demonstrated how the population-based FA could be employed to simultaneously generate multiple, maximally different, near-best alternatives. In this MGA capacity, the procedure can efficiently generate the requisite set of dissimilar alternatives, with each generated solution providing an entirely different outlook to the problem. This may highlight possibilities potentially overlooked under traditional modelling approaches that decision-maker scan now incorporate into their deliberations. The computational efficacy of employing the MGA algorithm in conjunction with the population-based FA metaheuristic was demonstrated on a widely-tested, optimization benchmark problem.

In the sixth and the last article of this issue titled: "SEF4CPSIoT: Software Engineering Framework for Cyber-Physical and IoT Systems," contributed by Muthu Ramachandran sharing interesting work on cyber-physical systems (CPS). This article proposes a systematic software engineering framework for CPS and IoT systems. This article also proposed comprehensive requirements engineering framework for CPS-IoT applications which can also be specified using BPMN modelling and simulation to verify and validate CPS-IoT requirements with smart contracts. In this context, one of the key contributions of this article is the innovative and generic requirements classification model for CPS-IoT application services and this can also be applied to other emerging technologies such as fog, edge, Cloud, and Blockchain computing. In addition, this article presents reference architecture and a service component model for CPS-IoT Applications.

I am sure that that these six papers will make this an interesting issue in International Journal of Hyperconnectivity and the Internet of Things (IJHIoT) volume 4 issue 2 of 2020. At this juncture, I am thankful to the editorial board members for their timely support in review. I am also thankful to Ms. Alexis Miller for, without her continued support, it was not possible to complete the issue on time. I am looking forward to receiving your unpublished research work for volume 5 issue 1 of 2021.

*Vijender Kumar Solanki*
*Editor-in-Chief*
*IJHIoT*