Editorial

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Biographical notes: Indrajit Pan is an Associate Professor at the Department of Information Technology of the RCC Institute of Information Technology, Kolkata. He obtained his BE in Computer Science and Engineering, following MTech in Information Technology and PhD (Engineering) from the Indian Institute of Engineering Science and Technology, Shibpur, Howrah. He is now a senior member of IEEE, USA, member of ACM, USA, and CSI, India. His research interests include digital microfluidic biochip design and simulation, cloud computing and data science. He is currently guiding three research scholars pursuing their Doctoral research in the field of Data Science and Cloud Computing. He has authored nearly 40 research articles in international journals of repute and international conferences and has published six edited books and more are under progress with various globally reputed publishers like Taylor and Francis, Springer, IGI Global, Willey UK, Cambridge Scholars and many more.

This special issue on 'Hybrid computational intelligence in big data analytics and cloud computing' is aimed to present different unpublished research articles addressing various issues associated with big data analytics and cloud computing addressed through application of hybrid computational intelligence. Recent advancements in artificial intelligence, soft computing and machine learning techniques have attracted researchers of various domains to apply computational intelligence in their work. Sometimes direct techniques are modelled to work upon a problem and quite often more than one but related intelligent models are combined and hybridised to address an issue. Primary focus of this special issue is to portray such hybrid intelligent models for existing problems in big data analytics and cloud computing.

Big data analytics and cloud computing have individually and to some extend together attracted interest of research community. Role and impact of big data analytics and cloud computing are also commendable in industrial applications. This special issue combines seven new research articles from diverse technological domains where hybrid computational intelligent model has been used along with the concept of big data analysis or cloud framework.

The work using fog cloud network architecture focuses on performance accuracy of different internet of things (IoT) medical devices by measuring signal precision and managing transmission protocols. Another research article has addressed hydrothermal scheduling issues. Authors have modelled generation load power balance, upper and lower reservoir capacity, water discharge rate and water spillage rate through real coded genetic algorithm and improved real coded genetic algorithm to observe various performance characteristics. A comparative analysis with different existing models like modified differential evolution, teaching learning-based optimisation, clonal selection

algorithm has been reported as well. Survey on researches related to big data, major challenges, various characteristics and conceptual framework associated with big data has been presented in one paper. Among other articles, comparative study in big data analytics using machine learning and deep learning approaches, multi agent system for cloud database failure prediction, distributed location detection through IoT-based units and combined economic emission and load dispatch through hybrid meta-heuristics will be the parts of presentation.

I believe the readers will find these papers very beneficial for their studies and future research plans. I hereby thank all the contributors, reviewers and Editor-in-Chief for their valued patronage all along the project.