



Editorial

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It is a matter of great privilege for me to unveil before you the twenty-third issue i.e. volume 10 number 03 of the “International Journal of Information Technology” [An official Journal of Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), New Delhi] with acronym BJIT. The issue is live on the Springer content platform SpringerLink and available to the prospective readers through Springer CS package globally.

Throughout the world, nations have started recognizing that Information Technology (IT) is now acting as a catalyst in speeding up the economic activities in efficient governance, citizens' empowerment, sustainable development and in improving the quality of human life. Recent advancements in IT have touched almost every conceivable area of human life. Its degree of pervasiveness, in day to day life, is rapidly increasing, every new day. On the backdrop of this, BJIT has accepted the challenge to consistently showcase, disseminate and institutionalize the rapidly changing huge knowledgebase globally, with authenticity and accuracy, having special focus on the new researches pertaining to IT applications for improving the quality of day to day life.

Volume 10 number 03 presents a compilation of 16 papers, chosen out of over 200 manuscripts, that span a broad variety of topics from various emerging areas of Information Technology and Computer Science, especially addressing current research problems related to IoT, Image Encryption, Machine Learning, Micromorph Solar Cell, Cloud Computing, Ontology and Intrusion Unearthing to name a few.

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The technological advancements in low-cost sensor devices have led to a rapid increase in smart homes and smart environments. The first manuscript in this issue “A context-aware data fusion approach for health-IoT”, Zar-tasha Baloch et al. conceptualizes a context-aware data fusion approach for health IoT. To safeguard sensitive data, the second manuscript “An image encryption approach using particle swarm optimization and chaotic map”, Musheer Ahmad et al. simulates an optimized image encryption approach for secure image-based communication. Timely detection of diseases is important for their effective treatment. The next manuscript “A machine learning based method to detect epilepsy”, Satarupa Chakrabarti et al. proposes an artificial neural network based technique to detect persons suffering from epilepsy. Solar photo voltaic cell (PVC) has emerged to be the cleanest form of renewable energy as well as a cost-effective source of electricity. The manuscript “Design and modelling of G-Zno nanocomposite electrode for a Si:H/ $\mu\text{c-Si:H}$ micromorph solar cell”, Rashmi Chawla et al. suggests that replacing ITO with mono-layer graphene in amorphous silicon (a-Si) can result in better efficiency. Proper allocation of virtual machine in a cloud configuration is important for its success. The manuscript “Global host allocation policy for virtual machine in cloud computing”, Mohit Kumar et al. puts forward a median absolute deviation framework for better resource utilization and minimal energy consumption. The manuscript “An empirical study of challenges in online distance education in Saudi Arabia”, Sulafah Basahel et al. explores institutional, technological, cultural and learner centric challenges in the success of Online Distance Education in Saudi Arabia. The manuscript “MwTExT: automatic extraction of multi-word terms to generate compound concepts within ontology”, Pratik K. Thanawala et al.

presents an architecture-MwText, for automatic extraction of Multi-word terms from un-annotated English documents. It is vital to maintain a stable topology for a Mobile Ad hoc network to enable operation under challenging conditions. The manuscript “Fuzzy-controlled energy-efficient single hop clustering scheme with (FESC) in ad hoc networks”, Anuradha Banerjee et al. proposes a relatively stable clustering scheme for MANETs. The manuscript “A novel approach to measure the quality of cluster and finding intrusions using intrusion unearthing and probability clomp algorithm”, M. Azhagiri et al. proposes cluster and intrusion unearthing algorithm for an efficient intrusion detection system. Emergence of open courseware movement has initiated the Open Educational Resources (OER) movement from UNESCO in developing countries. The manuscript “Opportunities and challenges in the adoption of open educational resources for course development: a case study of Uttarakhand Open University”, Jeetendra Pande evaluates the effect and consequences of adopting OERs at Uttarakhand Open University. The manuscript “Proportionate resource utilization based VM allocation method for large scaled datacenters”, Minu Bala recommends a novel virtual machine allocation policy to allocate VM to hosts considering RAM and CPU consumption. Energy consumption is critical in heterogeneous networks. The manuscript “An approach to energy efficient vertical handover technique for heterogeneous networks”, Silki Baghla et al. proposes an approach to energy efficient vertical handover for varied traffic classes. The manuscript “Agile teams as complex adaptive systems”, Badri N. Srinivasan et al. investigates the contemplation of agile teams as a complex adaptive system for higher probability of successful project delivery. The manuscript “An improved generalized DNA computing model to simulate logic functions and combinational circuits”, Kuntala Boruah et al. suggests a generalized, parallel DNA computing model to evaluate any logic function at molecular level. The manuscript “Stochastic modeling and cost–benefit analysis of computing devices with fault detection subject to expert repair facility”, Ashish Kumar et al. evaluates two stochastic models using imperfect fault detection. The last manuscript, “EEG signal analysis for early diagnosis of alzheimer disease using spectral and wavelet based features”, Vinayak Bairagi formulates a spectral and wavelet feature based approach for early identification of Alzheimer’s disease.

This issue is an amalgamation of novel trends and technologies in domains like Artificial Neural Networks, Internet of Things (IoT), Image Watermarking, Software

Cost Estimation, Protein Classification, Recommender System, etc. to name a few. I am sure, these contributions will definitely enrich our knowledgebase, our readers shall enjoy reading the research showcased in this issue and motivate many of us to take up these challenging application areas and contribute effectively for the overall prosperity of the mankind.

As a matter of policy, all the manuscripts received and considered for the Journal, are double blind peer reviewed by at-least two independent referees. Our panel of expert referees posses a sound academic background and have a rich publication record in various prestigious journals representing Universities, Research Laboratories and other Institutions of repute, globally. Finalizing the constitution of the panel of referees, for double blind peer review(s) of the considered manuscripts, was a painstaking process, but it helped us to ensure that only the best, interesting and novel of the considered manuscripts are showcased and that too after undergoing multiple cycles of review, as required.

I wish to express my sincere gratitude to the entire editorial board, members of the resident editorial team and our panel of experts in steering the considered manuscripts through multiple cycles of review and bringing out the best from the contributing authors. I thank my esteemed authors for having shown confidence in BJIT and considering it a platform to showcase and share their original research work. I would also wish to thank the authors whose papers could not have been published in this issue of the Journal, probably because of the minor shortcomings. However, I would like to encourage them to actively contribute for the forthcoming issues.

I will fail in my duty, if I do not thank the members of the team from the Springer, particularly Ms. Suvira Srivastav, Ms. Julia Dilger, Ms. Rekha Rajkumar and Ms. Nidhi Chandok from Springer for their constant support in realizing the issue and presenting it before you.

The undertaken Quality Assurance Process involved a series of well defined activities that, I hope, went a long way in ensuring the quality of the publication. Still, there is always a scope for improvement, and so, I request the contributors and readers to kindly mail me their criticism, suggestions and feedback at bjit@bvicam.ac.in and help in further enhancing the quality of forthcoming issues.

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