Editorial

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It is a matter of great privilege for me to unveil before you the twenty seventh issue i.e. Volume 11 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 11 Number 03 presents a compilation of twenty papers, chosen out of over 400 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 VANET, Matrix Classifier, Mobile Ad-Hoc Networks, Pseudo Random Number Generators, Trajectory Anonymization,

Quantum-dot Cellular Automata and Support Vector Machines to name a few.

To deliver emergency messages to notify other road riders of any dangerous mishappenings. The first manuscript in this issue “An optimized Multichannel MAC Scheme with Dynamic Control Channel Interval in Dense VANET”, Vijay Kumar Singh et al. conceptualizes a dynamic control channel interval (DCI) MAC scheme that can variable fix the time interval efficiency percentage. Multiple matrix classifiers effectively process matrix samples directly. However, size of training samples may affect performance. The second manuscript “Improved Multiple Matrix Classifier with Five Kinds of Sample Information”, Changming Zhu introduces the IMMFI classifier that solves this issue by introducing Universum learning into the Multiple Matrix Classifier. Energy efficient scheduling of data packets is the need of the hour in case of Mobile Ad Hoc Networks. The next manuscript “WEEP: Weight Based Energy Efficient Priority Scheduling of Data Packets in Mobile As-hoc networks”, Anuradha Banerjee et al. suggests WEEP, a novel scheduling algorithm for ad hoc networks that analyzes the expected residual lifetime of destination alongwith path performance and fragility. The Open Educational Resources (OERs) movement flagged by UNESCO in 2002 is gaining momentum in developing countries worldwide. The manuscript “Open Educational Practices at Uttarakhand Open University: From Policies to Implementation”, Jeetendra Pande traces Uttarakhand Open University's journey of adopting Open Educational Practices and faculty attitude towards the same. The manuscript “Pseudo-random Number Generators based on the Collatz Conjecture”, Dan E. Tamir et al. intends the applicability of the simple collatz function for pseudo-random number generators. GPS enabled smart devices have left numerous

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mobility traces at an unprecedented scale. The manuscript “Personalized Trajectory Anonymization through Sensitive Location Points Hiding”, Rajesh et al. designs a privacy preserved anonymization approach to protect ordered spatio-temporal points from adversary attack. Quantum-dot Cellular Automata (QCA) has emerged as the most promising nanotechnology substitute for MOSFET-based devices. The manuscript “Performance Evaluation of an Ultra-High Speed Adder based on Quantum-dot Cellular Automata”, Firdous Ahmad et al. presents a novel, simple ultra-high speed QCA full adder which provides significant performance improvements in area and cell count domains. The next manuscript “Wideband Microstrip Band Stop Filter Realization with Interdigital Topologies”, Kamaljeet Singh et al. advises a novel wide band stop filter topology at C-band with simpler implementation in microstrip to achieve wideband performances. Rust disease identification in plants is limited to human visual capabilities due to microscopic symptoms of the disease. The manuscript “Support Vector Machine Classifier based Detection of Fungal Rust Disease in Pea Plant”, Pawan Kumar et al. introduces a Support Vector Machine based classifier to automatically detect and identify the early symptoms of rust disease at the microscopic level. The manuscript “Learner Characteristics of M-Learning Preferences”, Mohammad Yamin presents the impact characteristics on m-learning preferences for podcast length and types. Due to their wide applicability in numerous applications, Wireless Sensor Networks (WSNs) generate huge attention. The manuscript “Zonal based Approach for Clustering in Heterogeneous WSN”, Pawan Singh Mehra et al. proposes a dynamic zonal based clustering technique to balance the load with even dissipation of power by the deployed sensor node. The manuscript “A Checklist based Evaluation Framework to Measure Risk of Information Security Management Systems”, Faramarz Safi-Esfahani et al. defines a checklist based method to assess user’s response to measure the risk of information security management systems. Early cancer diagnosis is crucial to improve the quality of care and survival rate of cancer patients. The manuscript “Performance Study of K-Nearest Neighbor Classifier and K-Means Clustering for Predicting the Diagnostic Accuracy”, Kavita Mittal et al. propagates the performance and accuracy of K-Nearest Neighbor Classifier alongwith K-Means Clustering for early cancer diagnosis. Simulating Human Decision making capability on machines is a complex task. The manuscript “Face Sketch recognition-An Application of Z-Numbers”, Abdul Rahman et al. collaborates Sketching with Words (SWW) with Z-numbers to draw facial sketches of miscreants based on eyewitness perceptions. The manuscript “A Comprehensive Approach for the Evaluation of Recommender Systems using Implicit Feedback”, Shahab Saquib

Sohail et al. offers a comprehensive approach for the evaluation of recommender systems. The manuscript “Effort Estimation in Agile Software Development using Experimental Validation of Neural Network Models”, Saurabh Bilgaiyan et al. details application of feedforward back-propagation neural network and elman neural network to overcome the effort estimation problem in agile software development. High Data Rate transmission techniques in Access networks face numerous challenges. The manuscript “Power Budget Analysis of Proposed High Data Rate based Next Generation PON2 Architecture Supporting High Split Ratio”, Ahmed Muddassir Khan et al. evaluates an NG-PON2 based architecture on Bit Error Rate (BER) at receiver and power budget analysis parameters to overcome large power splitting ratio issues in high data rate transmission techniques. The manuscript “Signature Based Volatile Memory Forensics-A Detection based Approach for Analyzing Sophisticated Cyber Attacks”, Nilay Mistry et al. illustrates a usage of volatile memory forensics as a detection approach for analyzing sophisticated cyber attacks like recent ransom ware attacks. Ontologies are used to acquire, represent and process information in varied domains. The manuscript “A Metric Suite to Analyse Strength of Modularised Ontologies”, Antony John et al. presents a metric suite to analyze and evaluate the strength and quality of ontologies. The last manuscript, “Assessing Lexical Similarity between Short Sentences of Source Code based on Granularity”, Harpreet Kaur analyzes different state of the art techniques on source code strings to identify the most efficient technique.

I am sure the contributions in this issue, which is an amalgamation of novel trends and technologies in domains like Lexical Analysis, Wireless Sensor Networks, Ontology, Soft Computing Techniques, Cyber Attack Detection, Effort Estimation, etc. will not only enrich our reader’s knowledgebase but will also motivate many of the potential researchers 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, Mr. Madan Ellappan, Mr. Abilash Nair and Ms. Nidhi Chandoke 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.