Editorial

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Welcome to V 16 N 2 issue of *IJWET*. This issue has four papers. The first paper is 'Constructing an effective ontology for web page recommendation' by Satyaveer Singh and Mahendra Singh Aswal. These authors argue that to address the issue of new pages and for supporting more efficient web page recommendations, it is required to integrate the meaning of web pages in the form of ontology into all phases of the recommendation process. Most of the conventional ontology construction approaches are manual and highly dependent on knowledge engineers or domain experts. It is a complex and challenging task to construct a perfect ontology manually for a website because a website usually contains many pages. These authors argue that an automated or semi-automated technique will result in better ontology construction. Their paper presents a semi-automatic methodology for ontology construction by applying web mining techniques on the semi-structured web pages of a given website. The constructed ontology is implemented in a formal language such as OWL using the Jena framework and evaluated using the OntoQA framework.

According to these authors, evaluation results show the effectiveness of the proposed framework. The proposed framework is also compared with the existing approaches based on web mining techniques for analysis. More research is needed because the proposed framework can only be used to develop ontology for a particular domain only. It is important to carry out further research by developing cross-domain ontologies.

The second paper is 'Sensor networks simulation framework for target tracking applications: SN-SiFTTA' by Aaron Rasheed Rababaah. This paper presents a new simulation framework for wireless sensor networks dedicated for target tracking applications named: SN-SiFTTA, but it does not address routing protocols. According to the author, two scheduling finite state machine models are proposed to control the behaviour of the sensor nodes and cluster heads. Four different deployment methods are proposed and investigated using four performance metrics: target tracking accuracy (TTA), energy efficiency index (EEI), quality of clustering index (QCI) and deployment feasibility. A simulator with friendly and interactive graphical user interface was developed using MATLAB integrated development environment.

The author argues that the simulator provides a rich environment that allows the user to customise wide varieties of scenarios. However, there are limitations that must be addressed. For example, if the application requires the investigation of routing optimisation, SiFTTA is not able to address this task currently. Another limitation is the provided types of nodes accommodated in the simulator, head nodes and sensor nodes; if

other types are needed, redesign efforts would be required to incorporate these new types in the different layers of the simulator architecture. Finally, for real time simulation requirements, SiFTTA can handle 2,000 nodes comfortably; if a larger number of nodes is required, execution time will suffer. One solution to that is through parallel processing to utilise multi-core tasking technology which exist in MATLAB but not exploited in their work.

The third paper is 'Public innovation: what it is and how it happens through i-Labs' by Lizeth Fernanda Serrano-Cárdenas, Yessika Lorena Vásquez González and Flor Nancy Díaz-Piraquive. According to these authors, public policy implementations involves mobilising interventions in response to issues that do not have shared definitions, involve multiple actors with particular perceptions and aspirations, and at the same time, imply the interaction of multiple and complex dynamics, to respond to these challenges, public innovation is necessary. To realise public innovation, public innovation labs (i-Labs) have become a key element of governance and citizen participation, spreading rapidly in cities of various geographies.

These authors further argue that despite the research in public i-Labs, public innovation requires further research to understand the conceptualisation of the topic from an integrative approach rather than considering it a mere trend.

The purpose of this paper is to understand the public innovation concept and analyse how i-Labs promotes public innovation. A systematic review of the literature published in the multi-disciplinary database Web of Science® was carried out, to provide a theoretical contribution to the understanding of public innovation and its relationship with i-Labs. From their analysis of public innovation, these authors found that contributions in the literature on the topic can be divided in three groups: authors interested in the analysis of innovation from a competitive perspective; authors who contribute to the analysis of innovation through a systems perspective, separating the scope of innovation in the private and public sectors; and finally, in the most recent literature, an open debate on the challenges for collaborative innovation among multiple actors. Theses authors conclude that the laboratories must integrate the following characteristics: co-creation, collaborative innovation, experimentation, public-private partnership and citizen participation. Although the findings are useful, they are merely conceptual and need to be try out in real life.

The fourth paper is, 'Enhanced classification of crisis related tweets using deep learning models and word embeddings' by Dharini Ramachandran and R. Parvathi. According to these authors, Twitter is a powerful social media platform where information about the situational awareness is directly posted by victims or bystanders during crisis events. To identify essential information from natural language, deep learning models are used. The aim is to enhance the classification of crisis related tweets by utilising the deep learning models.

This aim of this paper is to analyse and identify the advantages of the state-of-the-art deep learning models, MLP, CNN, LSTM, CNN with LSTM along with the widely used embeddings, GloVe and Word2Vec. The domain of focus is short text classification of Twitter messages posted during disaster situations. According to these authors, from experimentation and the results obtained, the LSTM model is observed to work well with higher scores in evaluation metrics and shows better learning even when data scales higher. The inference on the outcomes is facilitated not only by the metrics of

classification but also by the learning graphs observed during the training and testing of the classifications. However, it is necessary to improve performance, since a tweets processing system must accustom to larger datasets to handle the abundant inflow of tweets. It is therefore important that future work should focus on contributing a LSTM with improvements to undertake the scalability and perform well with embeddings on increasing data size.