Guest editorial: SAICSIT 2018 special issue

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In this special issue, we feature selected papers from the 2018 South African Institute of Computer Scientists and Information Technologists Research (SAICSIT 2018) conference, hosted by Nelson Mandela University at the Boardwalk International Convention Centre in Port Elizabeth on 26 to 28 September 2018. The authors of ten of the best SAICSIT papers were invited to submit extended versions of their research for this Special Issue. Two rounds of reviewing resulted in the six papers published here.

The paper by Henri Knoesen and Lisa F Seymour presents an investigation into the factors which impact the adoption of mobile enterprise applications (MEASs). Understanding these factors are important to understand in order to translate their value to improving business performance. The authors present a conceptual model, making use of a survey and qualitative analysis to examine the factors influencing the adoption of three MEAs in the insurance industry. Their findings highlight the importance of willingness to fund devices based on the adoption by users and the importance of job relevance and location dependency on the usefulness of the MEAs.

Yusuf Moosa Motara and Karl Van der Schyff present a paper that proposes and evaluates an alternative ontology of information systems. An information system ontology represents a way in which knowledge claims and theories are conceptualised and represented. Their proposed ontology is based on theory description, a method presented as more expressive than the dominant ontological model.

The paper by Sean Pennefather, Karen Bradshaw and Barry Irwin presents an extension to the existing NFComms framework. The proposed extension is based on the concept of indirect messaging and provides communication between a network flow processor and host CPU. The aim of the extension is to address the bulk throughput limitations of the existing framework and is intended to function with existing communication mediums.

In the paper by Ayodele Barrett and Machdel Matthee, context-aware technologies, via the vehicle of smartphones, are investigated, with a specific focus on the loss of user control and device autonomy on widely used platforms. The study is conducted by means of a critical discourse analysis of a speech by a CEO of a well-known social media company, the privacy policy of a widely downloaded mobile application and a series of interviews. By analysing the results from these research methods, it was

determined that the concerns of consumers, regarding the absence of choice, a lack of knowledge and information privacy erosion are not unfounded.

Zola Mahlaza and Catharina Maria Keet present a method for quantifying similarity between two closely related languages. The proposed method adapts four extant similar measures and presents a method for quantifying the ratio of verbs that would need phonological conditioning due to consecutive vowels. The study is conducted on the Nguni languages isiXhosa and isiZulu, based on verbs relevant to weather forecasts and newly specified as computational grammar rules.

The paper by Brenda Scholtz and Clara Mloza-Banda presents an application of incentive theory through a lens of the theory of planned behaviour (TPB) for using non-monetary incentives for citizens to participate in crowdsensing projects. Crowdsensing may be an incentive for empowering citizens to use their mobile phones to collect and share data, from their surrounding environments, with others. In this paper, a water resource monitoring project is used in conjunction with a survey to demonstrate that the theory of planned behaviour can be successfully used for predicting behavioural intentions and for highlighting motivational factors. The insights from the study are condensed as a set of guidelines to improve the success rate of using crowdsensing for water resource monitoring projects.

As guest editors we would like to thank all those who contributed to this special issue and the reviewers for their valuable feedback.