Editorial

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Biographical notes: Rahat Iqbal is a Senior Lecturer in the Distributed Systems and Modelling Applied Research Group at Coventry University. His main duties include teaching and tutorial guidance, research and other forms of scholarly activity, examining, curriculum development, coordinating and supervising postgraduate project students and monitoring the progress of research students within the department. His research interests lie in requirements engineering, in particular with regard to user-centred design and evaluation in order to balance technological factors with human aspects to explore implications for better design. He has published more than 60 papers in peer-reviewed journals and reputable conferences and workshops.

Neeraj Kumar is working as an Assistant Professor in School of Computer Science and Engineering at Shri Mata Vaishno Devi University, Katra (India). He has more than 30 publications in peer-reviewed journals and conferences including IEEE, Elsevier and Springer. His research is focused on mobile computing, parallel/distributed computing, multiagent systems, service oriented computing, routing and security issues in wireless adhoc, sensor and mesh networks. He is leading the Mobile Computing and Distributed Systems Research Group. He is on the programme committee of several international conferences and workshops.

Information Retrieval (IR) systems such as Google and Yahoo provide access to different resources available on the World Wide Web (WWW). Usually, current IR systems produce results based on specific keywords and therefore they do not take into account user context such as location, browsing history, previous interaction patterns, emotional state and domain expertise. In order to produce accurate search results according to a user's current needs, it is necessary to investigate search engine personalisation for optimisation purposes.

The motivation for this special issue is to deepen our understanding of how individual user or user groups' needs can be supported by personalised information retrieval systems. For example, what information about a user's needs does a system need to be aware of, and how can this be gathered? How can this process be automated? Can systems adapt to changing user needs, including changes of context and task?

The special issue of the *International Journal of Knowledge and Web Intelligence* on personalised information retrieval attracted a range of high-quality submission from researchers working in the areas from task-specific information retrieval systems, through case studies, to evaluation methodologies for specific systems. This issue consists of eight high-quality papers.

The first paper by Niranjan et al. presented an efficient web recommendation system based on incremental mining of sequential patterns in large database. The incremental database contains the new navigational sequences from the user and this incremental database can be added with the existing sequence database. The performance of the proposed recommendation system is evaluated using precision, applicability and hit ratio.

The second paper by Mittal et al. presented a hybrid approach for web information retrieval. The approach is based on ontology, user profile and collaborative filtering. This hybrid approach finds the context of a user query with the least user's involvement by using ontology. Secondly, this approach uses a time-based automatic user profile updating with user's changing behaviour. Thirdly, this approach uses recommendations from similar users using a collaborative filtering technique. The performance of the proposed approach is evaluated using precision, recall and F-score.

The third paper by Mulwa et al. presented an evaluation framework for adaptive systems. The paper emphasised on the need of applying accurate and efficient methods for the evaluation of such systems. The paper reviewed a variety of evaluation techniques applied in adaptive and user-adaptive systems. It focused on the user-centred evaluation of adaptive systems such as personalised recommender systems and adaptive information retrieval systems.

The fourth paper by Kashefi et al. presented web inspection architecture to extract localised users' favourite websites. This was achieved through logging the addresses of websites and categorising the content of those logged websites in order to create users' favourite website addresses dynamically. The performance of the proposed approach was evaluated in a real setting by dynamically building up a database of users' favourite website using a web URL filtering database.

The fifth paper by Mudhasir et al. presented a provenance based near-duplicates detection and elimination technique in order to improve the search results. Usually, the results of existing search engines are affected by the problem of near-duplicates and therefore addressing this problem is crucial to improve the quality of the search results. The performance of the proposed approach was tested and compared with existing algorithms using a test bed of web documents. This comparison proved that the provenance-based web search system is more effective.

The sixth paper by Grzywaczewski and Iqbal presented experimental results relating to software engineers' information behaviour and discussed implicit relevance indicators for a domain-specific recommender system for software engineers. Based on two user studies, a questionnaire and an automated observation of user interactions with the browser, they identified that software engineers engaged in a finite number of work-related tasks and also developed a finite number of 'work practices'/'archetypes of behaviour'. The authors identified a group of domain-specific behaviours that can

successfully be used as a source of strong implicit relevance feedback and, as a consequence, can become a backbone of a domain-specific and semi-collaborative information recommendation system that can support software engineers in performing their daily work-related tasks more effectively.

The seventh paper by Yates et al. presented a platform for discovering and sharing confidential ballistic crime data. This paper described the development of a prototype solution to the linking, presentation and analysis of cross-border gun crime data within the European Union. This domain is one where technical, policing, national and EU legal frameworks and the behaviours of police forces and criminals regularly change, sometimes dramatically within a short time span. The proposed approach ensured the system can remain responsive, domain relevant and effective whilst adapting reasonably dynamically to these changes.

The eighth paper by Lambropoulos and Romero addressed the issues relating to personalised information retrieval through the use of a collaboration awareness tool for collaborative learning purposes. The authors considered the use of personalised information retrieval in a computer-supported collaborative learning task through the use of a group-awareness widget (GAw). The GAw was designed to aid collaborative learning at a distance to tackle the challenges created by the students' different locations and time zones. The proposed system, called EuroCAT, is aimed to enhance small-group students' organisation by increasing the group awareness information available in the shared interface and allowing inter-subjective personalised information retrieval within the group members participating in the learning task.