

## Welcome message from the Editor-in-Chief and Co-Editor-in-Chief

### Xiaohua Jia

Director of Mobile Ad Hoc and Sensor Network Lab, Department of Computer Science, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong SAR

### Hua Wang

Deputy Director of Centre for Applied Informatics, College of Engineering and Science, Victoria University, Ballarat Road, Footscray, Melbourne, Australia

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Welcome to this issue of the new research journal! Congratulations to the authors for their publications at the EAI Endorsed Transactions on Scalable Information Systems. The Transaction is started to be indexed by both DOAJ and DBLP (<https://doaj.org/toc/2032-9407> and <http://dblp.uni-trier.de/db/journals/sis/> respectively).

EAI Endorsed Transactions on Scalable Information Systems is a new open access scholarly archival journal that is committed to the timely publication of high-quality original research papers on all aspects of scalable communications theories, technologies, systems, and applications. Original contributions that have not been published and are not currently under consideration by any other journal are solicited. All submissions will go through a

rigorous peer-review process, and will be reviewed and evaluated by expert referees and the editorial board. Areas of interests include, but are not limited to:

- Scalable distributed information systems
- Scalable grid information systems
- Parallel information processing and systems
- Web information searching and retrieval
- Data mining
- Content delivery networks (CDN)
- VLDB
- P2P systems
- Scalable mobile and wireless database systems
- Large scale sensor network systems
- Index compression methods
- Architectures for scalability
- Scalable information system applications

- Evaluation metrics for scalability
- Information security

This issue includes a collection of four outstanding papers that are contributed by leading researchers and cover a diversity of topics in the area of scalable information systems. We hope that you will find the papers timely, informative, and enjoyable.

*The papers are:*

1. *Access methods for Big Data: current status and future directions*
2. *Wireless Sensor Network based Accident Avoidance Architecture for the Fleet of Long Route vehicles*
3. *Machine Learning and Predictive Analysis of Fossil Fuels Consumption in Mid-Term*
4. *Deployment of free Wi-Fi voice communications to report crime incidents in Botswana*

In the first paper, authors present a brief overview of the current status of access methods for Big data and discuss a few promising research directions [2, 3, 4]. Heterogeneity, size, timeliness, difficulty & confidentiality problems with Big Data hinder advancement at all phases of the channel that can create value from data. Data analysis, organization, retrieval & modeling are initial challenges for Big Data. Data investigation is a clear traffic jam in many applications, both due to lack of scalability of the core algorithms and due to the difficulty of the data that needs to be analyzed. Despite this, appearance of the results and its understanding by non-technical experts is vital to extracting actionable knowledge. To defeat these, there is a need for novel architectures, techniques, algorithms & analytics to deal with it as well as to retrieve the value and unseen knowledge.

In the second paper, authors proposed a wireless sensor network based architecture that monitors various parameters that needs to be considered effectively for avoidance

of accidents on long routes [7, 8]. Long route transportation is norm today for transporting goods and persons. Road transport has remained one of the important means of transportation. Increase in population and motorization in the country along with expansion of road network contributes to the number of road accidents, injuries and mortalities, as well as loss of productivity. Safety of the passengers, drivers and property is very important issue when we talk about long route travelling. There are many issues that endanger the safety of people and vehicle during long route transportation. Some of them are driver's negligence while driving, overtaking by the vehicles, over speeding of vehicles on the highways, health and mental state of the driver while driving, mechanical issues of the vehicle, sudden arrival of animals on highways, unfamiliar road conditions, negotiating with difficult winding roads, road traffic, overloading of the vehicles and many more. To ensure safety of vehicle and people it is very important to be more cautious and take proper safety measures while driving for long routes.

The third paper analyses machine learning techniques to predict the usage of fossil fuels (Diesel, Black oil, Heating oil, and Petrol) in mid-term [9, 10]. Exponential Smoothing, a model of time series and the Neural Network model have been applied on the actual usage data obtained from Shahroud area from 2010 to 2015. For estimation of predictive value by Neural Network method, the training and testing samples, the highest and lowest errors with a range of 41% -0.89% and 88% -3% for the Mean Absolute Percent Deviation are the most appropriate predictions for Petrol consumption.

The last paper explores the current scenario of crime in Botswana, and the current measures employed to help combat it, including usage of crime prevention clusters [1, 5, 6]. Through usage of the

quantitative approach, with the aid of questionnaire and interviews, the research found that, there is an increasingly growth of crime rate in Botswana, sustaining the literature findings. The research highlighted the presence of crime prevention clusters, but noted a disconnection between them and the police. The bleak state of communication between the two, and ineffectiveness of current measures, causes the disconnection. Cluster members have to use own limited resources to report crime to the police, and this disadvantages the crime prevention efforts. Ad-hoc networks with emphasizes on Wi-Fi networks were found to be a solution to the communication gap identified. In conclusion, the authors developed a Wi-Fi network facility model to enable cluster members to make voice calls with no costs.

We would like to take this opportunity to acknowledge all the authors who contributed to this inaugural issue of the journal. We are grateful to all anonymous reviewers for their time and effort in reviewing the papers and providing us and the authors valuable review comments, and thankful to all editorial board members for their strong support in founding this new journal. We are also thankful to all EAI publication staff, for their great efforts and assistance in producing and launching this inaugural issue of the journal.

Finally, we cordially welcome all readers and fellow researchers to submit your papers and contribute your work to this journal. We are also keen to hear your constructive ideas and suggestions for helping the growth of this new born but promising research journal.

Thank you all. We look forward to your contributions.

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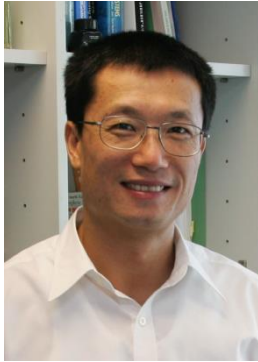
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## About the Editor-in-Chief



**Xiaohua Jia** received his BSc (1984) and MEng (1987) from University of Science and Technology of China, and DSc (1991) in Information Science from University of Tokyo. He is currently Chair Professor with Dept of Computer Science at City University of Hong Kong. His research

interests include cloud computing and distributed systems, computer networks, wireless sensor networks and mobile wireless networks. Prof. Jia is an editor of IEEE Trans. on Parallel and Distributed Systems (2006-2009), Wireless Networks, Journal of World Wide Web, Journal of Combinatorial Optimization, etc. He is the General Chair of ACM MobiHoc 2008, TPC Co-Chair of IEEE MASS 2009, Area-Chair of IEEE INFOCOM 2010, TPC Co-Chair of IEEE GlobeCom 2010 – Ad Hoc and Sensor Networking Symp, and Panel Co-Chair of IEEE INFOCOM 2011.

## About the Co-Editor-in-Chief



**Hua Wang** is a full time Professor at Victoria University, Australia. Dr Wang awarded a PhD degree in Computer Science from the University of Southern Queensland in 2004. He has been active in the areas of Information Systems Management, Distributed Database Management Systems, Access Control, Software Engineering and Electronic Commerce. He has participated in research projects on mobile electronic system, Web service, and role-based access control for Electronic service system, and has already published over 200 research papers.