
Editorial

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Biographical notes: Bingwei Liu received his PhD in Electrical and Computer Engineering from the State University of New York at Binghamton in 2015. He is a Lead Data Engineer at the Aetna Inc., USA. His current research interests include machine learning for large-scale datasets, big data architecture, and hybrid cloud. He is a member of the Technical Committee on Cloud Computing (TCCLD). He has over 20 published papers on cloud computing and big data, with a combined 389 citations. He also holds one US Patent. He served as the Track Chair in the International Conference on Consumer Electronics 2017 and Technical Chair of IEEE Cloud Summit 2018.

Vinayak Tanksale is a faculty member in the Computer Science Department and Chief Software Architect of the Applied Research Institute at the Ball State University. He has been a Faculty Fellow in the University's Center for Media Design. His research interests include authentication techniques, sensor networks, cloud computing, interactive systems, and software engineering. His research in software engineering, media delivery, and computer security has been funded by the US Army Research Laboratory, Channel One, Rockwell Collins, and Ontario Systems. He has been the technical lead on various interactive television projects. He has successfully developed interactive applications for mobile devices. He is the recipient of over \$1.2 million in external and internal funding. He has published book chapters and journal articles, presented at conferences, and delivered invited presentations at national conferences.

Cloud computing is growing towards its maturity to be a computing utility. It has become a preferred choice for enterprise data centre and analytics platform. Schools use cloud as a cost effective way for educational programs. It is also the incubator of innovative technologies such as artificial intelligence, voice assistant, object recognition, etc. This special issue aims to capture cutting edge theoretical and practical research work in cloud, including performance modelling of cloud data centre, cloud resource allocation and scheduling, fog computing, and usage of cloud resources to execute complex machine learning models.

The paper 'A scalable fine-grained analytic model for container cloud data centres' utilised interactive stochastic models to analyse the performance of container cloud system.

The paper 'Deadline-credit aware heuristic for dynamic resource provisioning in virtualised cloud environment' proposed an algorithm to allocate resources to user tasks under the constraint of deadline, so that resource utilisation is maximised and SLA violation is avoided.

The paper 'Financial default payment predictions using a hybrid of simulated annealing heuristics and extreme gradient boosting machines' presents advance predictive models for the likelihood of default payments.

The paper 'Agile polymorphic software-defined fog computing platform for mobile wireless controllers and sensors' presents an efficient and effective fog system using light-weight agile software-defined control for mobile wireless nodes for dynamic big data driven, real-time urban surveillance tasks of uninterrupted target tracking.

The paper 'Outlier detection techniques for big data streams: focus on cyber security' reviewed and compared recent studies in detecting outliers for data streams, especially in the context of cyber security.

The paper 'Improving cloud computing services indexing based on B^{Cloud} -tree with users preferences' proposed an indexation method of public IaaS virtual machines in an AVL-tree for integration of wireless sensor network with cloud.

The paper 'Autonomic resource management framework for virtualised environments' developed an intelligent resource manager which uses statistical learning methods to control the resource allocation in for dynamically allocating resources to individual VM.

The guest editors would like to thank all the authors from all over the world who has contributed to this special issue and all our reviewers who assures we have a high quality collection of research work.