Editorial

Arun Kumar Sangaiah

School of Computing Science and Engineering,
VIT University,
Vellore, India
Email: sarunkumar@vit.ac.in
Email: arunkumarsangaiah@gmail.com

Shadi A. Aljawarneh*

Faculty of Computer and Information Technology,
Jordan University of Science and Technology,
P.O. Box 3030 Irbid 22110, Jordan
Email: shadi.jawarneh@yahoo.com
*Corresponding author

Biographical notes: Arun Kumar Sangaiah is currently working as an Associate Professor in School of Computer Science and Engineering, VIT University, India. He has authored more than 100 publications in different journals and conferences. Moreover, he has carried out number of funded research projects for Indian Government agencies. Also, he has registered an Indian patent in the area of computational intelligence. Furthermore, he made outstanding efforts and contributions on the technical programme committees of various reputed international/national conferences.

Shadi A. Aljawarneh is an Associate Professor in Software Engineering at the Jordan University of Science and Technology, Jordan. He holds a BSc degree in Computer Science from Jordan Yarmouk University, an MSc degree in Information Technology from Western Sydney University and a PhD in Software Engineering from Northumbria University-England. He worked as an Associate Professor in Faculty of IT in Isra University, Jordan since 2008. His research is centred in software engineering, web and network security, e-learning, bioinformatics, Cloud computing and ICT fields. He presented and been on the organising committees for a number of international conferences and is a board member of the International Community for ACM, Jordan ACM Chapter, ACS, and IEEE. A number of his papers have been selected as best paper in conferences and journals.

Embedded systems are increasingly becoming a key technological component of all kinds of complex technical systems, ranging from vehicles, telephones, audio-video equipment, aircraft, toys, security systems, medical diagnostics, pacemakers, climate control systems, manufacturing systems, intelligent power systems, etc. The state-of-the-art of all aspects of embedded computing systems with emphasis on algorithms, systems, models, compilers, architectures, tools, design methodologies, test and applications. In many cases, signal processing algorithms for embedded systems are developed and verified theoretically sound for embedded systems applications. The investigation of embedded systems applying advanced signal processing techniques can improve system

performance. Therefore, embedded systems with real-time signal processing are becoming more and more important for multimedia applications for both academia and industry. Although embedded systems play an important role, many challenging issues remain to be resolved. Research on embedded systems with real-time signal processing demands an essentially multi-disciplinary approach, exploiting ideas from areas as diverse as signal processing techniques, computational intelligence and embedded system design. To accomplish its real-time performance, trade-off analysis the business aspects is needed during the embedded applications in real-time implementation.

In this special issue, we intended to bring together researchers in the related fields to demonstrate the latest developments and solutions regarding various business aspects of real-time signal processing tools in embedded systems. This special issue was destined to solve the embedded system issues between the business and the practice of signal processing to real-time applications.

Also, we discussed a number of topics in this SI (embedded systems in business advantage) including:

- embedded access technologies
- integration with business logic
- business process models for real-time embedded systems
- integration with service-oriented architecture
- networked embedded systems
- complex homogeneous and heterogeneous embedded systems
- modelling and verification techniques using agile process
- new design flows in embedded-based business models
- design methodologies and synthesis methods
- platform-based design
- component-based design
- rapid prototyping
- soft computing approaches for embedded multimedia systems
- software optimisation and compiler techniques
- real-time signal processing and vision
- software engineering for embedded systems
- effects privacy and security issues on business aspects in embedded systems.