
Editorial

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Biographical notes: Samee Ullah Khan received his BS from Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Topi, Pakistan, and PhD from the University of Texas, Arlington, TX, USA, in August 2007. He is currently an Assistant Professor of Electrical and Computer Engineering at the North Dakota State University, Fargo, ND, USA. He has extensively worked on the general topic of resource allocation in autonomous heterogeneous distributed computing systems. He is the Associate Editor of the *International Journal of Communication Systems*, and the *Security and Communication Networks Journal*. For more information, please visit: <http://sameekhan.org>.

Thanasis Loukopoulos received his Diploma in 1997 from the Computer Engineering Department of University of Patras, Greece and PhD in 2002 from the Computer Science Department of the Hong Kong University of Science and Technology (HKUST). He is currently an Assistant Professor at the Department of Informatics and Computer Technology of the Technological Educational Institute (TEI) of Lamia, Greece and a Cooperating Researcher for the Distributed and Ubiquitous Computing Systems Laboratory of the Center for Research and Technology-Thessaly (CERETETH). He has published 20 papers in the broad area of resource allocation and scheduling in parallel and distributed systems and received the best paper award in ICPP 2001. He is an IEEE member.

Hongxiang Li received his BS from Xi'an Jiaotong University, China in 2000, MS from Ohio University in 2004 and PhD from University of Washington, Seattle in 2008, all in Electrical Engineering. He is currently an Assistant Professor at the Department of Electrical and Computer Engineering, North Dakota State University, Fargo. His research interests include broadband mobile communications, cognitive radio and intelligent hybrid network. He has published over 20 articles. He received the Chinese Government Award for Outstanding Self-Financed Students Abroad and UWEE Outstanding Research Assistant Award in 2008.

Interconnection networks have just not facilitated sharing of information; they have reorganised our social existence. Over the last two decades we have witnessed a tremendous influx of new technology to facilitate internet accessibility. These technologies are in essence emerging because of the advancement in newer paradigms that encompass WiFi, ad hoc networks, and P2P technologies. Today, the internet no longer is confined to wired technologies. Therefore, we

must understand the latest advances in these technologies to pave the way for newer internet protocols, applications, and architectures.

This special issue primarily encompass theoretical and practical solutions that advance the research in internet protocols, applications, and architectures based on WiFi, mobile ad hoc, and P2P technologies. We received some very high quality submissions and in the end we selected the

following nine articles that encompass various trends in current state-of-the-art research domain.

‘Fast mobility control protocols with sink location protection in wireless sensor networks’ proposes a mobility control protocol that can direct mobile sensors

‘Interface aware distributed multicast packet replication in ad hoc network using multicast monitoring mobile agent’ proposes an agent-based methodology to evaluate the genuineness of downstream multicast router interface in the secure multicast distribution tree backed by Iolus framework.

‘DCCP video streaming over multiple connections in the wireless internet’ considers the potential delay at an uplink destination on the internet and extends this to a scheme for user-to-user mobile device via the wired internet.

‘Performance evaluation of routing protocols in vehicular ad hoc networks’ evaluates the performance of conventional ad hoc routing protocols in vehicular network environments to assess the applicability of such protocols in different vehicular scenarios.

‘Trust-based clustering for multicast key distribution scheme in ad hoc network (TBCMKS)’ addresses the key management issues in ad hoc networks.

‘Performance analysis of the CAC scheme CARETON under mixed cell environment in overlay networks’ proposes a call admission control scheme to offer best services to the users in the next generation heterogeneous networks.

‘A multipath routeless routing protocol with an efficient location update mechanism’ proposes a form of beaconless

geographic routing protocol and uses a simple location update mechanism to achieve high throughput with few retransmissions.

‘Vehicle assisted cross-layer handover scheme in NEMO-based VANETs (VANEMO)’ develops a combination of VANET and NEMO to assist in seamless NEMO handovers in vehicular scenario by utilising cross layer information.

‘WSMXDiscoCast: a P2P approach for a better automation of the discovery mechanism for web service execution environment’ presents a distributed discovery mechanism for web service execution environments based on P2P technologies that proved efficiency and robustness as in distributed systems.

We sincerely hope that the readers will enjoy the aforementioned articles and also find them extremely valuable. We also would strongly encourage the readers to contact the corresponding authors, if they need any further clarifications regarding their articles presented in this special issue.

The editors of this special issue are especially grateful to the reviewers who went through all of the submitted papers very thoroughly and helped us in selecting the final nine articles that are included in this special issue. We also are grateful for the support of the editors-in-chief of the *International Journal of Internet Protocol Technology*, Professors Chao, Chen, and Zeadally. Finally, Jim Corlett, the technical staff member of Inderscience, deserves a special thank you for his timely and valuable services to make this special issue a reality – thank you.