
Editorial

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Biographical notes: Sudip Misra is a Visiting Fellow in the Department of Computer Science at Yale University, in New Haven, Connecticut, USA and an Adjunct Professor at Ryerson University. He received a PhD in Computer Science from Carleton University, in Ottawa, Canada and the Masters and Bachelors degrees, respectively from the University of New Brunswick, in Fredericton, Canada and the Indian Institute of Technology, in Kharagpur, India. His current research interests include algorithm design and engineering for telecommunication networks, software engineering for telecommunication applications and computational intelligence and soft computing applications in telecommunications.

Isaac Woungang received an MASc and a PhD both in Applied Mathematics from the Université du Sud, Toulon-Var, France, in 1990 and 1994, respectively. In 1999, he received another MASc from INRS-Materials and Telecommunications at the University of Quebec, Canada. From 1999 to 2002, he worked as a Software Engineer at Nortel. Since 2002, he has been with Ryerson University, where he is now an Assistant Professor of Computer Science. In 2004, he founded the Distributed Applications and Broadband Networks Laboratory (*DABNEL*) R&D group. His research interests are telecommunications network design, control and management, network security and distributed systems.

The last two decades have witnessed a rapid growth in research on communication networks and distributed systems. The *International Journal of Communication Networks and Distributed Systems* (IJCNDS) has been launched to provide a medium for researchers in these areas to publish state-of-the-art research results. The objective is to enable the international research community to help learn the research advancements in this area from each other's work.

IJCNDS is initially planned to be released at the rate of four issues per year. We are pleased to launch this issue as the *inaugural issue* of the journal. In this issue, there are seven papers.

The first of these papers is entitled ‘Profiling distributed connection chains’, and is authored by Almulhem and Traoré. Almulhem and Traoré investigated the problem of connection chains, which are used by attackers with a goal to defeat the network forensic activities. The authors use the technique of hacker profiling to address the problem. They propose a hacker model that includes information about a hacker’s linguistic, operating system and time of activity. They use simulation to establish the effectiveness of their solution.

Singh et al. studied the effect of background scan, which is used by nodes to discover other neighbouring access points and their available channels, on the performance of neighbouring channels in IEEE 802.11 networks. However, background scanning introduces a signalling overhead on the traffic of the neighbouring channels. This has been established through experimentation.

In one paper, Krishna and Iyengar propose an optimal channel allocation scheme with efficient channel reservation for cellular networks. They claim that their scheme works for both the originating calls and the handoff calls. They also propose a mechanism for improving the Quality of Service (QoS) further. They establish the superiority of their proposed scheme over existing schemes through simulation. The two performance metrics they primarily considered are the call blocking probability and the dropping probability.

In another paper, Krishna and Iyengar propose a sequencing technique, which enhances the IEEE 802.11 Medium Access Control (MAC), thereby improving the performance of the wireless networks. They show that their technique improves the overall network throughput.

Stojmenovic et al. propose a quorum-based location service protocol. They proposed the protocol considering the limitations of the previously proposed location service protocols such as partial flooding overhead, and/or location failure in group movement scenarios. They have established the superiority of their proposed protocol through simulations.

Zhiyan et al. propose a supporting service differentiation multichannel MAC protocol for wireless ad hoc networks. The authors maintain that using multichannel technology one can improve QoS by increasing the network capacity and reducing chances of contention and collision of data transmission. Their service differentiation multichannel MAC protocol uses two interfaces – one is responsible for assigning data channel and another is responsible for dynamically switching a channel for data transmission. The authors establish through simulations the superiority of their proposed protocol over an existing protocol.

In the last paper in this issue, the authors, Allard and Bonnin, present a Context-Transfer Protocol (CXTTP)-based solution for IPv6 mobility environments that can transfer the IPSec context between different access routers. The paper provides an application of the Context Transfer Protocol for IPSec. The proposed mechanism is capable of offering performance improvements while guaranteeing a certain level of security.

We hope that readers will enjoy reading these papers and find them valuable. The readers are encouraged to contact the authors, if they need any further clarification regarding their works presented.

Finally, we take this opportunity to express a few words of our thankfulness. First, we would like to thank all the authors for considering *IJCNDS* as a medium for publishing their work. We are also very much thankful to the members of the Editorial Board for their support in planning the Journal and reviewing several papers. Last, but not the least, we would like to thank the staff at Inderscience, including but not limited to, Dr. Mohammed Dorgham and Mr. Jim Corlett, for the continuous support and assistance they have provided us in the prepublication process.