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Networking of computing devices has been continuing to be an ever expanding area of importance in recent years. Different technologies, protocols, services and usage patterns have contributed to the major research interests in this area of computer science. This special issue is an effort to bring forward some of these interesting developments that are currently being pursued by researchers in different parts of the globe. Our objective is to provide the readership with the latest and novel in computer networking through this.

This Special Issue presents selected papers from the IEEE International Conference on Computer and Information Technology (ICCIT 2008) held on December 25-27, 2008 at Khulna University of Engineering and Technology, Bangladesh. ICCIT 2008 was the eleventh annual conference in the series, the first one was held in Dhaka, Bangladesh, in 1998. Since then the conference has grown to one of the largest conferences in the South Asian region, focusing on computer technologies, IT and relevant areas, with participation of academics and researchers from many countries. A double blind review process is followed whereby each paper submitted to the conference is reviewed by at least two independent reviewers of high international standing. The acceptance rate of papers in recent years has been less than 30%, indicative of the quality of work the papers need to demonstrate to be accepted for presentation at the conference. The proceedings of ICCIT 2008 were included in IEEEExplore.

In 2008, a total of 538 full papers were submitted to the conference of which 138 were accepted for the conference after reviews conducted by an international program committee comprising 77 members from 12 countries with assistance from 83 reviewers. Among those 138, 33 papers were dealt with topics in the networking area. From those 11 highly ranked papers were invited for this Special Issue. The authors were invited to enhance their papers significantly and submit the same for review. Of those, six papers survived the review process and have been selected for inclusion in this Special Issue. The authors of these papers represent academic and/or research institutions from Bangladesh, Iran, Japan, and Sweden.

The first paper titled "A Fuzzy Logic-Based Adaptive Handoff Management Protocol for Next-Generation Wireless Systems" deals with the issue of seamless handoff in next-generation wireless networks. The authors propose a fuzzy logic based adaptive handoff protocol that when combined with an existing cross-layer handoff mechanism, yields better performance than existing solutions. Next, the manuscript "Dynamic Communication Performance of the TESH Network under Nonuniform Traffic Patterns" deals with performance issues of Tori-connected mESH network. The authors focus on the conditions and proof for TESH networks to be deadlock free and through simulations, show that the dynamic communication performance of TESH network is better than mesh and torus networks.

Author of the third paper titled, "Distributed Control Routing Algorithms for Rearrangeably Nonblocking Optical Banyan Networks", deals with a special type of optical banyan networks called Vertically Stacked Optical Banyan networks. The author shows that it is practically impossible to implement N-completely connected processors to take routing decisions for large values of N. The author therefore considers loosely connected processors scenario and has proposed two algorithms that are significantly fast.

The fourth paper "Performance Evaluation of Different QoS Models for Connecting Telephone Exchange Centers over Metro Ethernet Networks" studies the performance of connecting telephone exchange centers over a metro Ethernet network using MPLS and DiffServ QoS model. The authors evaluate the system through simulation of various scenarios. Next, in the article "An Analysis of the Robustness and Stability of the Network Stack in Symbian-based Smartphones", the authors describe research outcome on security issues of Symbian OS based smart phones. Interestingly enough, the authors have reported a couple of cases where their systematic attacks on the phones have driven the phone sets non-functional. This would be a useful read for the end-user as well as OS developers for the smart phones.

Optimal resource allocation is important in ensuring appropriate quality of service to devices and applications. Due to limited bandwidth, this becomes an even bigger concern over wireless networks. The final manuscript "Prediction of State of Wireless Network Using Markov and Hidden Markov Model" proposes mechanisms using Markov Model and hidden Markov Model to predict the number of devices connected to a specific AP at a given instance of time.

Finally, we express our sincerest gratitude to both George J. Sun, the founding editor of the journal, and Niki Pissinou, the editor-in-chief, for this opportunity and our colleagues in the discipline who have kindly volunteered in the review process of this special issue. Without timely contributions by the reviewers, this initiative would not have been realizable.
Guest Editors

Salim Zabir
Orange Lab/France Telecom R&D, Japan
Keio Shinjuku Oiwake Building 9F, 3-1-13 Shinjuku, Shinjuku-ku, Tokyo 160-0022, Japan

J. H. Abbawajy
Deakin University, School of Engineering and Information Technology, Geelong, VIC 3072, Australia

Farid Ahmed
Applied Information Sciences Department, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723, USA

Mohammad A. Karim
Office of Research, Old Dominion University, 4111 Monarch Way #203, Norfolk, VA 23508, USA

Salim Zabir is a senior researcher and leader of e-health related R&D at Orange Lab/France Telecom, Japan. He received his PhD and an MS in information science from Tohoku University, Japan, and MSc Engineering and BSc Engineering degrees in Computer Science and Engineering from the Bangladesh University of Engineering and Technology. Prior to his current appointment, he served at Tohoku University, Japan, Kyushu University, Japan, and University of Engineering and Technology. He also worked with Panasonic R&D headquarters in Osaka, Japan. His research interests include computer networks, networking protocols, performance evaluations, ubiquitous computing, applications of ICT for development etc. Dr. Zabir has been serving in the program/technical committees of various international conferences and is guest editing special issues of scholarly journals. He is a member of the IEEE and BCS.

Dr. Jemal H. Abawajy is a faculty member at Deakin University, Australia. His portfolios at Deakin University includes the Director of the IT Security Stream, the director of the Pervasive Computing and Networks Research Group, the research seminar series coordinator, honours degree coordinator and acting head of the school (Research). Prof. Abawajy has published more than 150 articles in refereed journals and conferences. He is serving on the editorial board of several international journals and has guest edited more than 10 international journals. He is a regular speaker at scholarly events and conferences and has been a member of the organizing committee for over 200 international/national conferences and workshops serving in various capacity including general-chair, best paper award chair, general co-chair, publication chair, vice-chair, and publicity chair.

Dr. Farid Ahmed is currently with the Applied Information Sciences Department at Johns Hopkins University Applied Physics Laboratory at Laurel, MD. Prior to this position, he had been associate professor of electrical engineering and computer science at the Catholic University of America, Washington, DC. Dr. Ahmed’s professional background includes signal/image processing, computer networks, information security, digital watermarking, cryptography, and optical information processing. He has published 20 peer-reviewed journal articles, 27 conference papers, 4 book chapters, and edited books in these areas and holds 5 US patents. Dr. Ahmed is an associate editor of the EURASIP Journal of Wireless Communications and Networking. He has also been serving on the technical program committee of SPIE conference, ICSIT, IFIP N2S, IEEE NAECON, and ICCIT etc. Dr. Ahmed is a member of SPIE and Computer Security Institute, and a senior member of IEEE.

Mohammad Ataul Karim is Vice President for Research of Old Dominion University in Norfolk, Virginia. Previously, he served as dean of engineering at the City College of New York of the City University of New York. His research areas include information processing, pattern recognition, computing, displays, and electro-optical systems. Dr. Karim is author of 15 books, 6 book chapters, and over 350 articles. He is North American Editor of Optics & Laser Technology and an Associate Editor of the IEEE Transactions on Education. He has served as guest editor for fifteen journal special issues. Professor Karim is an elected fellow of the Optical Society of America, Society of Photo-Instrumentation Engineers, the Institute of Physics, the Institution of Engineering & Technology, and Bangladesh Academy of Sciences. He received his BS in physics in 1976 from the University of Dacca, Bangladesh, and MS degrees in both physics and electrical engineering, and a Ph.D. in electrical engineering from the University of Alabama respectively in 1978, 1979, and 1981.

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