JOURNAL OF TELECOMMUNICATIONS AND INFORMATION TECHNOLOGY

Preface

The current issue of the *Journal of Telecommunications and Information Technology* contains twelve papers. In their articles, the authors consider important problems related to modern telecommunications.

The first paper entitled *Call-level Analysis of a Two-Link Multirate Loss Model based on a Convolution Algorithm* by Sagkriotis *et al*. presents a multirate teletraffic loss model of a two-link system that accommodates Poisson arriving calls from different service-classes. The model was worked out under assumption that each link has two thresholds and based on a convolution algorithm.

The next two papers deal with Elastic Optical Networks. The paper by Kabaciński, Rajewski, and Al-Tameemi *Rearrangeability of* 2×2 *W-S-W Elastic Switching Fabrics with Two Connection Rates*, considers rearreangeable conditions for the 2×2 three-stage switching fabric of a W-S-W (Wavelength-Space-Wavelength) architecture for elastic optical switches. The authors present rearrangeable conditions and an appropriate control algorithm.

The next paper by Rajewski, titled *Defragmentation in W-S-W Elastic Optical Networks*, discusses defragmentation in an elastic optical network's node. The author bases his considerations on the assumption that the W-S-W (Wavelength-Space-Wavelength) switching architecture has been used as a node.

The paper *SMM Clos-Network Switches under SD Algorithm* by Kleban and Warczyński is devoted to evaluating the performance of Space-Memory-Memory (SMM) Clos-network switches under a packet dispatching scheme employing static connection patterns, referred to as Static Dispatching (SD).

The paper entitled *Ganging of Resources via Fuzzy Manhattan Distance Similarity with Priority Tasks Scheduling in Cloud Computing* by Priya, Mehata, and Banu, proposes a fuzzy Manhattan distance-based similarity for gang formation of resources (FMDSGR) method with priority task scheduling in cloud computing.

Other papers deal with issues related to various problems occurring in wireless communication. The article titled *Observation of WiMAX Radio Parameters to Enhance Spectrum Utilization in Mixed Environment* by Kowalik *et al*. presents statistical characteristics of

actual, IEEE 802.11e compliant WiMAX signals, as seen from the point of view of improving spectrum utilization by means of simultaneous use of given frequency bands by two wireless systems.

In the paper titled *Performance of Hybrid Sensing Method in Environment with Noise Uncertainty*, Kustra, Kosmowski, and Suchański present a novel hybrid spectrum sensing method used in cognitive radio and present a hybrid detector (HD), which improves the sensing performance.

In *Performance Analysis of SPSK with Dual Polarized Transmit Antennas over Rayleigh Fading Channel*, Subramani, Neduncheran and Ponnusamy study the Space Polarization Shift Keying (SPSK) system, which is an extended version of Space Shift Keying (SSK) and includes both space and polarization dimensions with dual polarized antennas.

The article *Outage Performance of Bidirectional Full-Duplex Amplify-and-Forward Relay Network with Transmit Antenna Selection and Maximal Ratio Combining* by Rajesh *et al*. proposes a bidirectional full-duplex amplify-and-forward (AF) relay network with multiple antennas at source nodes.

Another paper entitled *Miniaturized Spectacles Shaped Tapered Slotted Patch Antenna for UWB Applications* by Tarikul Islam *et al*. presents a compact planner patch ultra-wideband (UWB) antenna.

In *Protocols for Wireless Sensor Networks: A Survey*, Kochhar, Kaur, Preeti and Sharma present a review of the MAC and network layer of Wireless Sensor Networks. Performance requirements of the MAC layer are explored too.

In *Underwater Acoustic Sensor Node Scheduling using an Evolutionary Memetic Algorithm*, Sivakumar and Rekha show how to optimize the utilization of acoustic sensor node bandwidth by maximizing the possible node transmissions in the TDMA frame and by minimizing the node's turnaround wait time for its subsequent transmissions by using an evolutionary memetic algorithm (MA).

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Guest Editor

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