Foreword

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Our journal is continuing with the practice of publishing English issues regularly, at present twice a year, in July and in January. As before, most part of the present issue contains English versions of reviewed research papers, selected from the preceeding five Hungarian issues. We included also one research paper from open call. The editors would like to encourage prospective authors to submit their results specifically for the English issues.

Being a selection, the papers' topics span a wide range of issues of current interest: content protection techniques, speech technology, testing methodology, pervasive communications, aspect oriented programming and Fuzzy-based network supervision methods.

Eberhart et al deal with copyright protection through software watermarking and obfuscation. They propose a scheme which combines obfuscating and software-watermarking techniques in order to provide a solution to overcome the problems concerning software copy protection.

Gál et al analyze the properties of multimedia applications (video, streaming, IP phone) operated over IEEE 802.11b/g/a WiFi systems thus helping to choose among 802.11b or 802.11g and/or 802.11a systems.

Precise formant tracking has been a challenge for researchers in speech processing for long. It is an efficient tool for analyzing and altering the spectral content of speech, furthermore it provides an opportunity to modify timbre and voice quality. *Böhm and Németh* present a method to track and modify formants in speech signals. The method proposed by the authors is based on the linear prediction model.

In order to analyse the fine structure of speech signals, methods for determining nonlinear and non-stationary characteristics of speech are necessary. *Pintér* in his paper presents the Teager-operator and the Hilbert-Huang Transform (HHT) as speech processing methods suitable for the estimation of instantaneous amplitude and instantaneous frequency.

Szabó and Csöndes deal with TTCN-3 (Testing and Test Control Notation), a language which was standardized by ETSI. The paper presents the TTCN-3 test execution environment of Ericsson called TITAN. As a result of the authors' development, TTCN-3 and TITAN became a widely used test solution within Ericsson and it became also possible to contribute to the TTCN-3 standardization work within ETSI.

The design of energy efficient routing protocols for wireless sensor networks is a challenging task, which has been in the focus of the sensor network research community in the recent past. This effort resulted in a huge number of sensor network routing protocols. *Ács and Buttyán* in their paper, propose a taxonomy of sensor network routing protocols, and classify the mainstream protocols proposed in the literature using this taxonomy.

Benkő et al summarize the main objectives of and innovations in CASCADAS, one of the four 6th Framework IST-FET projects, that aim at providing both theoretical and practical background for a new generation of complex, distributed, pervasive services.

In mobile telecommunication networks the transmission level is affected by objects located between transmitter and receiver stations in the so-called Fresnel-zone. *Kóczy and Botzheim* propose the use of intelligent decision making subsystems which can decide from the degree of attenuation and from its time dependent behaviour what the reason of the attenuation could be. The paper demonstrates the intelligent module of a network supervision system based on fuzzy logics.

The transformation of existing software to a fault tolerant one typically requires redesign and heavy modifications in the original source code. *Fajta et al* analyze how to use aspect-oriented programming (AOP), an emerging programming paradigm for this purpose.

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