

Contents

Scientific papers

Dalibor Biolek, Viera Biolková, Zdeněk Kolka

**MODELING THE QUANTIZATION EFFECTS IN DIGITAL FILTERS
VIA SPICE-FAMILY PROGRAMS.....5**

Ladislav Buřita

INTEROPERABILITY IN INFORMATION SYSTEMS.....11

Marcel Harakaľ, Ľubomír Dedera, Július Baráth

**NEW FILTERS FOR DISCRETE WAVELET TRANSFORM
IN THE JPEG2000 STANDARD..... 19**

Zdeněk Kolka, Dalibor Biolek, Viera Biolková

ACCURATE SIMULATION OF SWITCHED SYSTEMS USING VHDL-AMS.....25

Ján Kollár, Jaroslav Porubán, Peter Václavík, Jana Bandáková, Michal Forgáč

SOFTWARE EVOLUTION FROM A META-LEVEL COMPILER PERSPECTIVE.....29

Miroslav Líška, Miloš Očkay

**GENERAL-PURPOSE COMPUTING ON GRAPHICS PROCESSING UNITS:
NEW TRENDS FOR COMPUTATIONAL ACCELERATION.....33**

Igor Mokriš, Roman Krakovský

INFORMATION RETRIEVAL BY ART NEURAL NETWORKS.....37

Vladimír Pšenák, Vladimír Wieser

ANALYSIS OF MOBILE RADIO CHANNEL PREDICTION METHODS.....42

Radovan Ridzoň, Dušan Levický

DRM BASED ON THE ROBUST DIGITAL WATERMARKING.....46

Jozef Štulrajter, Milan Lehotský, Marcel Harakaľ

THE APPLICATION OF MORPHOLOGICAL FILTERS IN SUBBAND CODING.....51

Expert papers

Július Baráth, Ľubomír Dedera, Marcel Harakaľ

**NETWORK ACCESS CONTROL TECHNOLOGIES FOR SECURING
INTERNAL NETWORKS.....57**

Milan Gottstein

**QUALITY OF SERVICES IN THE IP NETWORKS FOR MULTIMEDIA
COMMUNICATIONS.....60**

Jaroslav Dočkal

CURRENT IP TELEPHONY SECURITY PROBLEMS.....64

Ján Haring, Norbert Majer, Peter Poloha, Rudolf Hronec

**A MICROSTRIP PHASE SHIFTER AS AN DRIVEN ELEMENT OF
DYNAMIC PHASED ARRAY.....68**

Marek Hovanec, Martin Marko

**RADIO WAVE PROPAGATION PREDICTION ALGORITHM BASED
ON ITU-R RECOMMENDATIONS SUITABLE FOR IMPLEMENTATION
IN INFORMATION SYSTEM.....72**

Pavel Mach, Robert Bestak

NETWORK ENTRY PROCEDURE IN WIMAX.....77

Aleš Prokeš

**PROPERTIES OF OPTICAL WAVELENGTHS 850 nm AND 1550 nm
FROM VIEW OF THEIR USE FOR WIRELESS OPTICAL LINKS.....81**

Andrej LÚČ, Juraj Hrabovský, Michal Haluza

**DEVELOPMENT OF MODERN RADIO FREQUENCY HOPPING SYSTEMS;
INTEGRATION OF RADIO NETWORKS AND ELECTRONIC WARFARE OF
FH SYSTEMS.....86**