

2011 18th International Conference on Systems, Signals and Image Processing

(IWSSIP 2011)

**Sarajevo, Bosnia and Herzegovina
16 – 18 June 2011**



**IEEE Catalog Number: CFP1155E-PRT
ISBN: 978-1-4577-0074-3**

TABLE OF CONTENTS

METHOD OF REFERENCE TUNNEL FORMATION FOR IMPROVEMENT OF FORECAST RESULTS OF LASER BEAMS SPOT IMAGES BEHAVIOUR.....	1
OPTIMAL WEIGHT SELECTION IN MATCHING SCORE FUSION BASED FACE RECOGNITION	5
ROBUSTLY ADAPTIVE WAVELET FILTER BANK USING L1 NORM.....	9
DEFINITION OF VAD REFERENCE USING DIFFERENT HHM TOPOLOGIES AND FRAME DROPPING STRATEGY	13
A GUIDE TO DIGITAL IMAGE STABILIZATION PROCEDURE – AN OVERVIEW	17
SPEED SENSITIVE-ENERGY AWARE ADAPTIVE FUZZY LOGIC BASED VERTICAL HANDOFF DECISION ALGORITHM.....	21
BANDWIDTH EFFICIENT DATA-PARTITIONED VIDEO STREAMING FOR BROADBAND WIRELESS	25
RECEIVE ANTENNA SELECTION FOR POLARIZED ANTENNAS	29
SPECTRAL BASED SOLUTIONS FOR (NEAR) OPTIMUM CHANNEL/FREQUENCY ALLOCATION	35
COMPARISON OF BER CHARACTERISTICS OF OFDM AND SC-FDMA IN FREQUENCY SELECTIVE CHANNELS	39
LOW-COST DIGITAL CORRELATOR FOR FREQUENCY HOPPING RADIO	43
KUNCHENKO’S POLYNOMIALS FOR TEMPLATE MATCHING	47
STABILITY ISSUES IN DISCRETIZATION OF WAVE EQUATION.....	51
PULSE ACTIVE BIT (PAB) FEATURE EXTRACTOR FOR ECG BIOMETRIC AUTHENTICATION	55
LOCALIZATION OF OPTIC DISC IN FLUORESCEIN ANGIOGRAPHY IMAGES	59
ROAD SIGN RECOGNITION FOR AUTOMATIC INVENTORY SYSTEMS	63
INTERNET BASED SUBJECTIVE ASSESSMENT OF IMAGE QUALITY EXPERIMENT	67
FARSI FONT RECOGNITION BASED ON SPATIAL MATCHING	71
BESSEL TRANSFORM FOR IMAGE RESIZING.....	75
ANALYSIS OF THE IMPLEMENTATION OF THE INFORMATION SECURITY MANAGEMENT IN THE IPTV/VOIP SYSTEM OF THE TELECOM OPERATOR.....	79
COOPERATIVE WEB CACHE.....	85
PERFORMANCE OF ENHANCED ERROR CONCEALMENT TECHNIQUES IN MULTI-VIEW VIDEO CODING SYSTEMS	89
MULTIMEDIA TECHNIQUES IN VIRTUAL MUSEUM APPLICATIONS IN BOSNIA AND HERZEGOVINA	93

IMPROVED SIDE INFORMATION GENERATION USING ADAPTIVE OVERLAPPED BLOCK MOTION COMPENSATION AND HIGHER-ORDER INTERPOLATION.....	97
TOPOLOGY ANALYSIS OF SCANNING MICROSCOPE IMAGES WITH STRUCTURAL ENTROPY AND DISCRETE WAVELET TRANSFORM	101
DESCRIPTOR DIMENSIONALITY REDUCTION FOR AERIAL IMAGE CLASSIFICATION	105
COMPLEX 2D MATCHED FILTERING WITHOUT HALO ARTIFACTS.....	109
SEMI-AUTOMATIC SEGMENTATION OF MR AND CT IMAGE SEQUENCES USING A SELF-ORGANIZING MAP AND TEXTURE DESCRIPTORS"	B#5
REAL TIME PRECISE POSITION MEASUREMENT BASED ON LOW-COST CMOS IMAGE SENSOR	119
AN IMPROVED IMAGE DE-NOSING METHOD USING A WAVELET BASED NEURAL NETWORK FILTER	123
ANISOTROPIC DIFFUSION FILTERING OF INFRARED MEDICAL IMAGES.....	127
ROBUST BACKGROUND SUBTRACTION ON TRAFFIC VIDEOS.....	131
MODELING OF A "WHAT YOU HEAR IS WHAT YOU SPEAK" (WYHIWYS) DEVICE	135
BESSEL FEATURES FOR DETECTION OF VOICE ONSET TIME USING AM-FM SIGNAL	139
DETECTION OF GLOTTAL CLOSURE INSTANTS FROM BESSEL FEATURES USING AM-FM SIGNAL.....	143
BESSEL FEATURES FOR ESTIMATING NUMBER OF SPEAKERS FROM MULTISPEAKER SPEECH SIGNALS.....	147
MUSIC GENRE RECOGNITION USING SPECTROGRAMS	151
SPEECH ENHANCEMENT USING ICA WITH BESSEL FEATURES	155
BALANCED MINIMAL LATENCY RNS ADDITION FOR MODULI SET $\{2N - 1, 2N, 2N + 1\}$	159
IMPROVED IMAGE QUALITY MEASURE THROUGH PARTICLE SWARM OPTIMIZATION....	167
SPEECH ENHANCEMENT BASED ON A SIMPLIFIED GENERALIZED SIDELobe CANCELLER STRUCTURE	173
ADAPTIVE SAMPLING ALGORITHM APPLIED TO SCADA DATALOG DATABASE SHRINKAGE	177
A NEW EVOLUTIONARY ALGORITHM FOR BLIND LINEAR CHANNEL INVERSION	181
SIMULATION OF PROSODY CONTOURS WITH EMBEDDED SIGNAL GENERATOR.....	185
WORD-LEVEL SEGMENTATION IN PRINTED AND HANDWRITTEN DOCUMENTS	189
PROTEIN SURFACE ATOM NEIGHBORHOODS FUNCTIONAL IMAGING	193
MAXIMUM LIKELIHOOD ESTIMATION FOR THE GENERATION OF SIDE INFORMATION IN DISTRIBUTED VIDEO CODING.....	197

A REAL-TIME PROJECTION SYSTEM BASED ON OBJECT MOTION DETECTION AND TRACKING USING OPTICAL CAMERA.....	201
E-LEARNING AS A TOOL FOR STUDENT RESEARCH	205
AN EDUCATIONAL MULTIMEDIA IP TELEPHONY PLATFORM	209
IS BURST LOSS WORSE THAN RANDOM LOSS FOR VIDEO TRANSMISSION?.....	213
EXPERIMENTS ON IMPROVING LOSSLESS COMPRESSION OF BIOMETRIC IRIS SAMPLE DATA	217
MULTIDIMENZIONAL DECISSION FUNCTION ON ACCESS TECHNOLOGY.....	221
METHODOLOGY FOR BREAST SURGERY SIMULATION USING FINITE ELEMENTS METHOD AND MODELS RECONSTRUCTED FROM MAMMOGRAPHIC IMAGES	229
APPLICATION OF NON-ITERATIVE METHOD IN DIGITAL IMAGE RESTORATION	235
TRAFFIC SIGNS RECOGNITION WITH USING OPTICAL CORRELATOR	239
FACE DETECTION USING SHANNON DIVERSITY INDEX.....	243
SHAPE ANALYSIS AND CLASSIFICATION OF MASSES IN MAMMOGRAPHIC IMAGES USING NEURAL NETWORKS	247
BACKGROUND OBJECT EXTRACTION FROM MULTIVIEW IMAGES WITH LAYER QUANTIZATION AND BOUNDARY REFINEMENT	253
RECONSTRUCTION OF OCCLUDED FACIAL IMAGES USING ASYMMETRICAL PRINCIPAL COMPONENT ANALYSIS	257
SURVEY OF IMAGE COMPRESSION ALGORITHMS FOR ESMO MISSION.....	261
A GENERALIZATION OF QUAD-TREES APPLIED TO SHAPE CODING.....	265
A NEW DECODER SIDE VIDEO STABILIZATION USING PARTICLE FILTER.....	269
UNSUPERVISED CARDIAC PET IMAGE SEGMENTATION	273
ON THE REDUCTION OF CLOUD INFLUENCE IN NATURAL AND AERIAL IMAGES.....	279
SPEAKER'S GENDER CLASSIFICATION AND SEGMENTATION USING SPECTRAL AND CEPSTRAL FEATURE AVERAGING.....	283
A DECODER FOR LARGE VOCABULARY SPEECH RECOGNITION	287
TIME AND SAMPLING FREQUENCY OFFSET CORRECTION IN AUDIO WATERMARKING ..	291
SPEAKER IDENTIFICATION BY K-NEAREST NEIGHBORS.....	295
PAC-MFCC FEATURE WITH SUB-BAND CLASSIFIER FOR ROBUST SPEAKER RECOGNITION	299
RESTRICTED MODULI SYMMETRICAL QUATERNARY SIGNED - DIGIT ADDITION: A DESIGN IMPLEMENTATION OVERVIEW	303
UNIVERSAL BIOMETRIC EVALUATION SYSTEM	307

FUZZY COGNITIVE MAP FOR DECISION SUPPORT IN IMAGE POST-PROCESSING	311
A MODULAR CONCEPT OF E-VOTING SYSTEM THAT PROTECTS USER PRIVACY USING RANDOM PASSWORD DISTRIBUTION.....	315
AN EFFICIENT VQ-BASED METHOD FOR MONAURAL SPEECH SEPARATION.....	321
6=CA 98=75@I G9'C: '=B: F 5F 98 '=A 5; 9G.....	325
VOICE-DRIVEN APPLICATIONS: ARCHITECTURE PROPOSAL AND PERFORMANCE EVALUATION.....	329
COMBINED BLOCK SPARSE PNLMS/NLMS ALGORITHMS.....	333
EXPERIMENTAL NODE FAILURE ANALYSIS IN WSNS	339
SOFT-OUTPUT SPHERE DECODING: SINGLE TREE SEARCH VS. IMPROVED K-BEST	345
RADIO ACCESS TECHNOLOGY SELECTION IN HETEROGENEOUS WIRELESS NETWORKS BASED ON SERVICE TYPE AND USER MOBILITY	349
ADC LIMITATION ANALYSIS FOR FPGA BASED DIGITAL $\pi/4$ DQPSK MODEM	353
A NOVEL APPROACH FOR EVALUATING APPLICABILITY OF EXISTING EMPIRICAL PROPAGATION MODELS TO COVERAGE PLANNING IN 3.5 GHZ WIMAX SYSTEMS	357
LUMINANCE COMPONENT IN SKIN COLOR DETECTION.....	367
PROTOTYPE OF BINOCULAR HEAD-MOUNTED DEVICE FOR STEADY STATE VISUAL EVOKED POTENTIAL STIMULI.....	371
SINGULAR SPECTRUM ANALYSIS FOR DETECTION OF ABNORMALITIES IN PERIODIC BIOSIGNALS	375
MONITORING DROWSINESS OF MOTOR VEHICLES DRIVERS BY ANALYSIS OF EYE IMAGES	379
ADJUSTMENT OF FUZZY REASONING FOR IMPLEMENTATION ON MICROCONTROLLER	383
SERIES COMPENSATED LINES – FAST DETECTION OF ENERGY FLOW DIRECTION	387
AUTOMATIC REGISTRATION OF PRINTED ANALOG SCREEN-FILM MAMMOGRAMS	391
B9K 'A I @H=A 98=5'5DD@=75H=CBG'65G98'CB '=A G'B; B 5F 7< #H97HI F 9.....	395
FOVEATION-BASED CONTENT ADAPTIVE STRUCTURAL SIMILARITY INDEX.....	401
DWT-DCT (QCD) BASED COPY-MOVE IMAGE FORGERY DETECTION.....	405
A PKI STUDY WITHIN THE EDUCATIONAL ENVIRONMENT	409
DESIGNING A WEB APPLICATION FRAMEWORK	413
FACTS ABOUT SOLUTION BASED AND CARTRIDGE BASED DEVICES FOR BLOOD GAS ANALYSIS.....	417
'5I HCA 5H98 '99; !65G98 '8=5; BCG=G'C: 'H< 9'B9I FC@C; =75@8=GCF 89FG..... (&&	