

Contents

Summaries.....	253
----------------	-----

IMAGE PROCESSING FOR MEDICAL AND INDUSTRIAL APPLICATIONS

Jacek Chodak, Tomasz Kryjak Calibration Methods of Eye Movement Acquisition Devices	267
--	-----

Sławomir Cichoń Inverse Quantization Implementation in Reprogrammable System for the Purpose of Intraframe Video Decoding	279
---	-----

Mirosław Jabłoński, Daniel Pociecha Automatic Annotation of Pin Markers in Tube Pilger Cold Rolling Process	289
---	-----

Łukasz Jopek, Laurent Babout, Marcin Janaszewski, Michał Postolski A New Method to Segment X-Ray Tomography Images of Lamellar Microstructure in Titanium Alloys Based on Gray Level Gradient.....	301
---	-----

Tomasz Kryjak, Jacek Chodak Exploitation of the Bright and Dark Pupil Effect in Video Oculography (VOG)	315
---	-----

Piotr Pawlik, Zbigniew Bubleński Fast Detection of Bronchial Tree Subdivisions	331
---	-----

Michał Postolski, Marcin Janaszewski, Łukasz Jopek, Laurent Babout 3D Skeletonization of Pulmonary Airway Tree Structures	337
--	-----

Dominik Sankowski, Sławomir Jeżewski, Piotr Duch, Zbigniew Stolarski, Sylwester Błaszczak Autofocus Algorithm in Vision System of Mobile Robot.....	353
---	-----

Joanna Sekulska-Nalewajko, Jarosław Gocławski, Ewa Gajewska, Marzena Wielanek An Algorithm to Extract First and Second Order Venation of Apple-Tree Leaves Stained for H ₂ O ₂ Detection	359
---	-----

Adam Sędziwy	
Agent Environment in Syntactic Pattern Recognition	373
Artur Sierszeń, Łukasz Sturgulewski, Michał Dubel, Tomasz Marciniak, Adam Wójciński	
Network Behavior-Analysis Systems with the Use of Learning Set and Decision Rules Based on Distance	383
 SIGNAL PROCESSING FOR IDENTIFICATION AND CONTROL SYSTEMS	
Marcin Bąkała, Krzysztof Strzecha, Tomasz Koszmider, Anna Fabijańska	
Automation of Vision and Transportation Modules, Implemented in the Thermo-Wet System	395
Lidia Byczkowska-Lipińska	
Biological Mechanisms as Data Transmission and Processing Systems	403
Anna Fabijańska, Krzysztof Strzecha, Tomasz Koszmider, Marcin Bąkała	
Refining Edges to Sub-Pixel Level in Images of Molten Metals and Alloys	411
Andrzej Frączyk, Piotr Urbanek, Jacek Kucharski	
Correction Algorithms in Computerized Power Control System for Induction Heating	423
Maciej Garbacz, Mieczysław Zaczek	
Fuzzy Logic Algorithms in Wheel Mobile Robot Navigation	429
Sławomir Jeżewski, Maciej Łaski, Robert Nowotniak	
Comparison of Algorithms for Simultaneous Localization and Mapping Problem for Mobile Robot	439
Daniel Pociecha, Mirosław Jabłoński	
Metal Deformation Trace Vision Station in Plastic Cold Forming Process	453

Andrzej Romanowski, Jakub Betiuk, Zbigniew Frątczak Method for Automatic Driver Notification about Detection of the Emergency Vehicles	467
Dominik Sankowski, Marcin Bąkała, Rafał Wojciechowski, Andrzej Albrecht Liquid Braze Surface Tension Determination Algorithms Implemented in Brazeability Analysing System.....	481
Dominik Sankowski, Sławomir Jeżewski, Piotr Duch, Sylwester Błaszczuk Detection of Moving Objects Base on Data Information from Distance Sensors in Mobile Robot	489
Dominik Sankowski, Sławomir Jeżewski, Maciej Łaski Real Time Mobile Robot Localization Based on Laser Rangefinder	501
Dominik Sankowski, Sławomir Jeżewski, Adam Wulkiewicz Generic Model of Distance Measuring Sensor for a Mobile Robot's Operating System	515
Krzysztof Strzecha, Marcin Bąkała, Anna Fabijańska, Tomasz Koszmider The Evolution of Thermo-Wet – the Computerized System for Measurements of Surface Properties	525
Piotr Urbanek, Andrzej Frączyk, Jacek Kucharski Algorithm for Movement Control in Multi-Inductor Heating System	537

IMAGE ANALYSIS AND RECOGNITION

Marta Chodyka, Włodzimierz Mosorow Identification of TV Programs Based on Provider's Logo Analysis	547
Szymon Grabowski, Cezary Draus, Wojciech Bieniecki Recognizing Non-Translatable Symbols in a Multi-Lingual Computer-Assisted Translation System for DTP Documents	555

Tomasz Jaworski, Jacek Kucharski The Use of Fuzzy Logic for Description of Spatial Relations between Objects	563
Jaromir Przybyło Hand Tracking Algorithm for Augmented Reality Systems	581
Sebastian Stoliński, Wojciech Bieniecki, Jacek Stańdo Automatic Detection and Evaluation of the Spline Function Plot	591
Jakub Swacha, Szymon Grabowski Self-Extracting Compressed HTML Documents	599
Marek Zachara, Cezary Piskor-Ignatowicz, Lidia Dutkiewicz, Katarzyna Grobler, Patryk Orzechowski, Dariusz Pałka Assessment of the Ergonomic of Polish Major News Portals Based on Analysis of People's Behaviour while They are Browsing for Information	609