

Contents

Editorial i

Research

EEG-based Emotion Recognition with Brain Network using Independent Components
Analysis and Granger Causality-
CHEN Dongwei, Wu Fang, Li Haifang, CHEN Junjie, Wang Zhen, Zhuo QiuSheng 1

Design and Implementation of a Computer Vision Tracking System-
Abdulrahman Nasereldin Bilal, Mohamed Siddig Altyeb, Sharief F. Babiker 9

Graph-Based Bit-Wise Soft Channel Estimation for Superposition Mapping-
Zhenyu Shi, Peter Adam Hoeher, Abdullah A. Saed 17

Reliable Transmission of Motion JPEG 2000 Codestream by using Motion Estimation-
Abdou Khadre DIOP, Sidi Mohamed FARSSI, Khaly TALL, Idy DIOP 23

Decision Support System for Histopathological Diagnosis of HER2 Breast Cancer
using Pawlak's Information System and Mamadani Type Fuzzy Control-
Martin Tabakov, Szymon Zarba, Marzenna Podhorska-OkoBów, Bartosz Puła, Jędrzej Grzegorzóka 30

Book Review 43

Conference Notification 45

- The Eighth International Conference on Digital Information Management (ICDIM 2013)
- The Fifth International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2013)
- The Third International Conference on Innovative Computing Technology (INTECH 2013)

Editorial

With this issue we begin the fourth volume of the Journal of Intelligent Computing. The first issue has excellent research pieces of papers. The brain network technology is potentially used clinically to provide functional information regarding network-based cognitive impairment. Through the first paper on **“EEG-based Emotion Recognition with Brain Network using Independent Components Analysis and Granger Causality”** the authors *CHEN Dongwei, Wu Fang, Li Haifang, CHEN Junjie, Wang Zhen* and *Zhuo QiuSheng* have constructed a causal connectivity brain network based on multivariate autoregressive modeling, independent component analysis and partial directed coherence. They were able to extract graphs which can sense three emotional states. They finally map the relation between EEG pattern and emotional states.

Abdulrahman Nasereldin Bilal, Mohamed Siddig Altyeb and *Sharief F. Babiker* in their paper on **“Design and Implementation of a Computer Vision Tracking System”** have introduced a two image-based visual serving strategies for driving a robot equipped with a camera. They are able to develop a complete control driver for the robot using embedded systems which have the characteristics of GUI for calibration purposes and manual control.

In the next paper on **“Graph-Based Bit-Wise Soft Channel Estimation for Superposition Mapping”**, the authors *Zhenyu Shi, Peter Adam Hoehner* and *Abdullah A. Saed* have proposed A novel channel estimator which performs channel estimation. They have demonstrated with the help of results which indicate that bit-wise soft channel estimation (BWSCE) is able to outperform symbol-wise soft channel estimation (SWSCE) even at lower computational cost.

The Motion JPEG 2000 (Part 3 of the JPEG 2000 standard) has limitations despite a higher performance compared to traditional video compression standards. *Abdou Khadre DIOP, Sidi Mohamed FARSSI, Khaly TALL* and *Idy DIOP* in their paper on **“Reliable Transmission of Motion JPEG 2000 Codestream by using Motion Estimation”** have proposed the use of the method based on the principle of motion estimation to reliably reconstruct the lost packets in the transmission of Motion JPEG2000 codestream with a lot of movement. Their results highlighted the transmission reliability of the Motion JPEG 2000 codestream by using motion estimation and motion compensation.

Martin Tabakov, Szymon Zarba, Marzenna Podhorska-Okobów, Bartosz Pula and *J’drzej GrzegorzóBka* in their paper on **“Decision Support System for Histopathological Diagnosis of HER2 Breast Cancer using Pawlak’s Information System and Mamadani Type Fuzzy Control”** have presented the Decision Support System for Histopathological Diagnosis of HER2 Breast Cancer using Pawlak’s Information System and Mamadani Type Fuzzy Control. They tested over real clinical data of HER-2/neu breast cancer histopathology images.

The papers published in this issue represent highly technical in-depth treatment of the themes addressed.

Editors