2015 Intelligent Systems and Computer Vision

(ISCV 2015)

Fez, Morocco
25-26 March 2015

IEEE Catalog Number: CFP15A23-POD
ISBN: 978-1-4799-7512-9

Table of Contents

Session 1: Machine learning and Optimization

New model for aircraft landing scheduling using real time algorithms scheduling…… 1
Sallami Chougdali, Asmaa Roudane, Khalifa Mansouri, Mohamed Youssfi and Mohammed Qbadou

**Swarm reinforcement learning for traffic signal control based on cooperative multi-agent framework…….. … … …

New Models of Visual Saliency: Contourlet Transform Based Model and Hybrid Model…….. 81
Ilyass Abouelaziz and Mohammed El Hassouni

Motion detection based on the combining of the background subtraction and spatial color information…… 86
Omar Elharrouss, DrissMoujahid and Hamid Tairi

Object tracking using particle filter based on Lyapunov stability... 90
Younes Dhassi, Abdellah Aarab and Mohammed Alfidi

Session 4: Big data and Information systems

Clustering of Large Data based on the Relational Analysis…….. 95
Saïd Chah Slaoui and Yasmine Lamari

A New Approach to build a Geographical Taxonomy of Adjacency Automatically Using the Latent Semantic Indexing Method…….... 102
Omar El Midaoui, Abderrahim El Qadi, Moulay Driss Rahmani and Driss Aboutajdine

Multi agent based incident management system according to ITIL…….. 108
Amal Latrache, El Habib Nfaoui and Jaouad Boumhidi

An Overview of Big Data Opportunities, Applications and Tools.....…….. 115
Fatima-Zahra Benjelloun, AyoubAitLahcen and Samir Belfkih

Optimization of Prediction approach for improving students orientation in University: case of Sidi Mohammed Ben Abdellah University (SMBAU)…….. 121
Imane Satauri and Omar Elbeqqali

Development of an adaptation and interface model, for the information systems interoperability…… 126
Bouchaîb Riyami and Khalifa Mansouri

Session 5: Intelligent networks and Telecommunication

Knowledge Discovery in WSN Using Mobile Agents…… 132
Amine Rais, Amine Kada, Khalid Bouragba, Elhoussaine Ziyati and Mohammed Ouzzif

New Radiolocation technique for intelligent antennas…….. 138
Youssef Khmou and Said Safi

Neural Best Fit Void Filling Scheduler in Fixed Time for Optical Burst Switching…….. 142
AbderrahimLarhlimi and Mohammed Mestari

Intelligent ocular artifacts removal in a non-invasive single channel EEG recording…….. 148
Amin Zammouri, Abdelaziz Ait Moussa, Sylvain Chevallier and Eric Monacelli

Performance Evaluation of Multi-Criteria Vertical Handover for Heterogeneous Wireless Networks…… 153
Maroua Drissi and Oumsis Mohammed.

A Thresholding Algorithm for Improved Split-Row Decoding Method of Irregular LDPC Codes…… 158
Rachid Elalami, Hassan Qjidaa, Youness Mehdaoui and Mrabti Mostafa

Session 6: Classification methods

Hyperspectral images classification and Dimensionality Reduction using Homogeneity feature and mutual information…… 163
Hasna Nhaila, Elkebir Sarhrouni, Ahmed Hammouch and Maria Merzouqi

Gene-Expression-Based Cancer Classification Through feature selection with KNN and SVM Classifiers…… 168
Sara Haddou Bouazza, N. Hamdi, A. Zeroual, M. M Hassani and Khalid Auhmani

Criteria and technique to choose a good ρ parameter for the D-index…….. 174
Youssef Hanyf, Hassan Silkan and Halima Labani

Improved Filter Algorithm Using Inequality Fano to Select Bands for HSI Classification……. 180
Maria Merzouqi, Elkbir Sarhrouni, Ahmed Hammouch and Hasna Nhaila

A comparison of supervised classification methods for a statistical set of features…….. 185
Nabil Aharrane, Karim El Moutaouakil and Khalid Satori

Session 7: Intelligent control and Systems

Intelligent Control in Photovoltaic systems by Neural Network……..…….. 193
Fayrouz Dkhichi and Benyounes Oukarfi

Optimal perturb and observe control for MPPT based on least square support vector machines algorithm…… 198
Omar Dahhani, Abdessalam El Jouni, Bouchra Sefriti and Ismail Boumhidi

Maximum power point tracking for a photovoltaic water pumping system with sliding mode control and fuzzy wavelet network…….. 205
Bouchra Sefriti, Omar Dahhani and Ismail Boumhidi

Integrated 60-V Class-D Power Output Stage with 95% Efficiency in a 0.13µm SOI BCD Process…… 212
Karim El Khadiri, Hassan Qjidaa

Embedded Web Server for Real-time Remote Control and Monitoring of an FPGA-based On-Board Computer System…… 218
Ahmed Hanafi and Mohammed Karim

Session 8: Intelligent systems and energy management

A Type-1 fuzzy logic algorithm to manage the flow of energy in a stand-alone PV/Wind/Battery hybrid system…….. 224
Sanaa Faquir, Ali Yahyaouy, Hamid Tairi and Jalal Sabor

MAS energy management of a microgrid based on fuzzy logic control…….. 230
Maria Serraji, Jaouad Boumhdi and El Habib Nfaoui

An Interval Type-2 Fuzzy Logic PSS with the optimal H∞ tracking control for multi-machine power system…… 237
Khaddouj Ben Meziane and Boumhidi Ismail

A Design of Power management for Passive UHF RFID Tag in 90nm CMOS process…….. 245
Smail Hassouni and Hassan Qjidaa

Preprocessing Phase for Initializing the PRSOM Architecture…….. 249
FidaeHarchli, Zakariae En-Naimani, Abdelatif Es-Safi and Mohamed Ettaouil

Session 9: Image processing

Adaptive kernel for triangular meshes smoothing…… 253
Ahmed Fouad El Ouafdi and Hassan El Houari

Securing the Architecture of the JPEG Compression by a Dynamic Encryption…….. 260
Faiq Gmira, Said Hraoui, Abderahim Saaidi, Abderrahmane Jarrar Oulidi and Khalid Satori

Image Restoration by Applying the Genetic Approach to the Iterative Wiener Filter…….. 266
Fouad Aouinti, M'Barek Nasri, Mimoun Moussaoui and Bouchta Bouali

Comparative study between different bases of transformation for Compressive Sensing of images…… 271
Youssef Mourchid and Mohammed El Hassouni

Detection of Moroccan Coastal Upwelling in SST images using the Expectation-Maximization…… 278
Ayoub Tamim, Khalid Minaoui, Khalid Daoudi, Abderrahman Atillah and Driss Aboutajdine

Session 10: Optimization and control

Optimal Design of Second Generation Current Conveyors by the Artificial Bee Colony Technique…… 283
Bachir Benhala, Hamid Bouyghf, Abdeslam Lachhab and Benachir Bouchikhi

Optimal H∞ Control without Reaching Phase with the Differential Evolution PID Based on PSS for Multi-machine Power System…… 288
Dib Faiza and Boumhidi Ismail

A robust intelligent control for a variable speed wind turbine based on general regression neural network…… 296
El-Mahjoub Boufounas, Youssef Berrada, MiloudKoumir and Ismail Boumhidi

A Low Power 6-bit Current-steering DAC in 0.18-µm CMOS Process…… 302
Mostafa Chakir, Hicham Akhamal and Hassan Qjidaa

Session 11: 3D vision and recognition

Hand Gesture Recognition for Automatic Tap System…… 307
Sadiq Ullah, Gule Saman and Farid Khan

Translation and Scale Invariants of Three-Dimensional Tchebichef Moments…… 312
Mostafa El Mallahi, Abderrahim Mesbah, Hassan Qjidaa, Hakim El Fadili and Khalid Zenkouar

A Gender Classification Approach Based on 3D Depth-Radial Curves and Fuzzy Similarity based Classification…… 317
Soufiane Ezghari, Naouar Belghini, Azeddine Zahi and Arsalane Zarghili

Comparative study and improvement of acoustic vectors extractors: Multiple streams applied to the recognition of Arabic numerals…… 323
Abdel majid Lamkadam and Mohamed Karim

Enhancement of 3D reconstruction process in terms of beautification and efficiency using geometric constraints…… 332
Afaf Annich, Abdellatif El Abderrahmani and Khalid Satori