

CONTENTS

Detection the Places of the Heat Energy Leak on the Underground Thermal Pipelines Using the Computer System

by Iryna Zhuravska, Dmytro Lematovych and Oleksandr Burenko

Logic Error Detection System based on Structure Pattern and Error Degree

by Yuto Yoshizawa and Yutaka Watanobe

Q2 YouTube: Quantitative and Qualitative Information Analysis based Influencer-aware YouTube Channel Ranking Scheme

by Ji Hyeon Lee and Hayoung Oh

Microstrip Patch Antenna for Ultra-Wideband Applications

by QADDI Mohamed Hamza, SRIFI Mohamed Nabil and MHARZI Hassan

Productify News Article Classification Model with Sagemaker

by Johannes Linden, Xutao Wang, Stefan Forsstrom and Tingting Zhang

Melanoma detection using color and texture features in computer vision systems

by Antonio Fuduli, Pierangelo Veltri, Eugenio Vocaturo and Ester Zumpano

Emulation of Bio-Inspired Networks

by Zdenek Kolka, Viera Biolkova, Dalibor Biolek and Zdenek Biolek

Application of Open-Source Optimization Library “Extremum” to the Synthesis of Feedback Control of a Satellite

by Andrei Panteleev and Valentin Panovskiy

Fully Homomorphic Encryption Scheme Based On Complex Numbers

by Khalil Hariss, Maroun Chamoun and Abed Ellatif Samhat

Low-Cost and Accurate Computational System for Efficiency Measures over Photovoltaic Arrays

by Héctor L. Núñez-Ramírez, Gloria G. Carvalho-Kassar, Freddy C. Brito-Maestre, Yaremi I. Gamboa-Maldonado, Luis A. Santos-Avenidaño, Carlelines Gavidia-Toro, Orlando Villarroel-Ramos and Dino Di Rosa-Ulloa

Detecting Malicious Assembly using Convolutional, Recurrent Neural Networks

by Michael Santacroce, Daniel Koranek and Rashmi Jha

The Study of PSi & PSo Algorithm for Reducing Power of the Mobile Communication Network

by Jongsin Kim, Yonggil Choi and Younghoon Oh

Walker Ergonomic Design for Visually Impaired Elderly

by Fang-Lin Chao

Frequency-Tunable Narrow-Band Ladder-Shape Microstrip Patch Antenna for TV Applications
by Maria Moussa, Mervat Madi and Karim Kabalan

Creating a Digital Twin: Simulation of a Business Model Design Tool
by Kira Rambow-Hoeschele, Nick Giani Rambow, Matthias Michael Hampel, David Keith Harrison and Bruce MacLeod Wood

Flame Distribution and Attenuation in Narrow Channels Using Mathematical Software
by Bayan Sapargaliyeva, Aigul Naukenova, Bakhyt Alipova and Javier Rodrigo Ilarri

An Expanded Derivation of Suppressing Anisotropic Birefringence in a Rectangular Waveguide
by Gregory Mitchell

Performance Analysis of Thyristors Switched Capacitors used for Reactive Power Compensation of Induction Motor
by Dmitry Ivanovich Panfilov, Ahmed Elsayed ELGebaly, Michael Georgievich Astashev and Alexander Nikolaevich Rozhkov

Fast Determination of Tsunami Source Parameters
by Mikhail Lavrentiev, Dmitry Kuzakov and Andrey Marchuk

Mechanical Testing Methods for Body-Powered Upper-Limb Prostheses: A Case Study
by Renato Mio, Midori Sanchez, Quino Valverde, José Lara and Francisco Rumiche

All-Pass RC-Filters Architecture with Independent Adjustment of the Main Parameters Based on Differential Difference Amplifiers
by Darya Denisenko, Nikolay Prokopenko and Nikolay Butyrlagin

Assessment of the Quality and Sustainability Implications of FIFO and LIFO Inventory Policies through System Dynamics
by Phoebe Lim Ching, Jose Edgar Mutuc and John Anthony Jose

Multi-Step Iteration Algorithm of Total Asymptotically Quasi-Nonexpansive Maps
by Salwa Salman Abed and Zahra Mahmood Mohamed Hasan

Intelligent Foundations for Knowledge Based Systems
by Mukundan Kandadai Agaram

Development of Smart Technology for Complex Objects Prediction and Control on the Basis of a Distributed Control System and an Artificial Immune Systems Approach
by Samigulina Galina and Samigulina Zarina

A Study on Development of Evaluation Metrics for Learners in Physical Computing
by Woochun Jun

Analysis of Fuzzy Data for the Selection of Ingredients of the Polymer Composition by Technical Functions in Quality Management
by Ilya Vasilyevich Germashev, Tatyana Petrovna Mashihina, Evgeniya Vyacheslavovna Derbisher, Vyacheslav Evgenyevich Derbisher and Mikhail Alexeevich Kharitonov

A Systematic Mapping Study of Cloud, Fog, and Edge/Mobile Devices Management, Hierarchy Models and Business Models

by Isaac Odun-Ayo, Rowland Goddy-Worlu, Victor Geteloma and Emanuel Grant

An Extension of Throughput Drop Estimation Model for Three-Link Concurrent Communications under Partially Overlapping Channels and Channel Bonding in IEEE 802.11n WLAN

by Kwenga Ismael Munene, Nobuo Funabiki, Md. Manowarul Islam, Minoru Kuribayashi, Md. Selim Al Mamun and Wen-Chung Kao

Toward a Smart Campus Using IoT: Framework for Safety and Security System on a University Campus

by Alghamdi Abdullah, Mohammed Thanoon and Anwar Alsulami

Multimedia Application Development With Islamic Critical Reflection Through 3-2-1 Technique for Novice Teacher Internship Program

by Evi Fatimatur Rusydiyah, Rakhmawati Rakhmawati, Eni Purwati, Moh. Hafiyusholeh and Ahmad Hanif Asyhar

pH Neutralization Process Control based on Active Disturbance Rejection Control

by Mohanad Hamad Eljack Elameen, Mona Bahaeldin Musa Hago and Wen Tan

Deep Feature Representation for Face Sketch Recognition

by Weiguo Wan and Hyo Jong Lee

Forecasting Bio-economic Effects in the Milk Production based on the Potential of Animals for Productivity and Viability

by Gennadii Georgievich Cherepanov, Anatolii Ivanovich Mikhalskii and Zhanna Anatolievna Novosriltseva

Survey on Semantic Similarity Based on Document Clustering

by Rowaida Khalil Ibrahim, Subhi Rafeeq Mohammed Zeebaree and Karwan Fahmi Sami Jacksi

Aggrandized Random Forest to Detect the Credit Card Frauds

by Jisha. Mulanjur Vadakara and Dhanasekaran Vimal Kumar

Automatic Stitching of Medical Images Using Feature Based Approach

by Kyi Pyar Win, Yuttana Kitjaidure and Kazuhiko Hamamoto

Experimental Evaluation of Transmission between Two XBee Modules Using Radio-over-Fiber Technique

by Luis Alejandro González Mondragón, Leidy Johana Quintero Rodríguez, Ana Gabriela Correa Mena, Jorge Rodríguez Asomoza, Alejandro García Juárez and Ignacio Enrique Zaldívar Huerta

Sensor Based on-the-go Detection of Macro Nutrients for Agricultural Crops

by Shraddha Balayya Hiremath, Raghavendra Shet, Nikita Patil and Nalini Iyer

Optimization Method of Wideband Multilayer Meander-Line Polarizer using Semi-Analytical approach and Application to 6-18GHz Polarizer including test with Horn Antenna
by Wafa Abdouni-Abdallah, Muhammad Saeed Khan, Athanasios Konstantinidis, Anne-Claude Tarot and Aziz Ouacha

Effects of Using Fuzzy Material Handling Inputs in the Genetic Algorithm for Machine Layout
by Wanwanut Boongsod and Chiranuwat Jadram

Development of Teaching Aids Selection Standards in Maker Education
by Woochun Jun

Educational Domain Management Knowledge Content Identification and Knowledge Updating Method, Based on Enterprise Management Information Interactions
by Jurij Tekutov, Saulius Gudas, Vitalijus Denisovas and Julija Smirnova

Optimal Discrete-time Sliding Mode Control for Nonlinear Systems Subject to Input Constraints
by Olfa Jedda and Ali Douik

Multi-Restricted Area Avoidance Scenario Using Hybrid Dynamical Model and Its Predictive Controller
by Sutrisno, Widowati, R. Heru Tjahjana, Sunarsih and Kartono

Inference Rule of Collision Risk Index based on Ship Near-Collision via Adaptive Neuro Fuzzy Inference System
by Ho Namgung

Linearity Improvement of VCSELs based Radio over Fiber Systems utilizing Digital Predistortion
by Muhammad Usman Hadi, Jacopo Nanni, Olivier Venard, Geneviève Baudoin, Jean-Luc Polleux, Pier Andrea Traverso and Giovanni Tartarini

Smart Meter Data Analysis for Electricity Theft Detection using Neural Networks
by Priyamvada Chandel and Tripta Thakur

Feature Selection for Musical Genre Classification Using a Genetic Algorithm
by Abba Suganda Girsang, Andi Setiadi Manalu and Ko-Wei Huang

An Adaptive Fuzzy-Sliding Mode Controller for The Bridge Crane
by Trinh Luong Mien
An Efficient Automotive Paint Defect Detection System
by Sohail Akhtar, Adarsh Tandiya, Medhat Moussa and Cole Tarry

Model-Driven Engineering Infrastructure and Tool Support for Petrochemical Industry Automation
by Thaise Poerschke Damo, Leandro Buss Becker and Fabio Paulo Basso

Effects of Educational Support Robots using Sympathy Expression Method with Body Movement and Facial Expression on the Learners in Short and Long-term Experiments

by Yuhei Tanizaki, Felix Jimenez, Tomohiro Yoshikawa, Takeshi Furuhashi and Masayoshi Kanoh

*Quantitative Traffic Congestion Analysis Approach in Ahmedabad
by Tsutomu Tsuboi*

*The Impact of Using Upgraded Biogas on Generator Performance
by Wilson Babu Musinguzi and Ibrahim Luqman Mpungu*

*Well Balanced Multi-value Sequence and its Properties Over Odd Characteristic Field
by Md. Arshad Ali, Yuta Kodera, Md. Fazle Rabbi, Takuya Kusaka, Yasuyuki Nogami, Satoshi Uehara and Robert H. Morelos-Zaragoza*

*Photoluminescence Investigation of Inhomogeneous Porous P-type Si
by Róbert Brunner, Pavel Vojtek, Zuzana Zábudlá and Emil Pinčík*

*Prediction of Non-Communicable Diseases Using Class Comparison Data Mining
by Ammar Al-Dallal and Amina Al-Moosa*

*Dysphoria Detection using EEG Signals
by Norhaslinda Kamaruddin, Mohd Hafiz Mohd Nasir and Abdul Wahab*

*Integrating Diacritics Restoration and Question Classification into Vietnamese Question Answering System
by Bui Thanh Hung*

*Study of Performance of Bio- Inspired Strategies Applied to Pursuit Evasion Game Under Feedback Laws
by Lairenjam Obiroy Singh and Rajagopalan Devanathan*

*Eye Feature Extraction with Calibration Model using Viola-Jones and Neural Network Algorithms
by Farah Nadia Ibrahim, Zalhan Mohd Zin and Norazlin Ibrahim*

*A Critical Analysis of Topics in Software Architecture and Design
by Janet Bishung, Ooreofe Koyejo, Adaugo Okezie, Boma Edosomwan, Sylvester Ani, Abisola Ibrahim, Austin Olushola and Isaac Odun-Ayo*

*Providing Underlying Process Mining in Gamified Applications – An Intelligent Knowledge Tool for Analyzing Game Player's Actions
by Anna Tatsiopoulou, Christos Tatsiopoulos and Basillis Boutsinas*

*Improvement opportunities of a Simulation/Expert System Approach for Manufacturing System Sizing: A review and proposal
by Lajmi Imen, Masmoudi Wassim, Elleuch Mounir and Chtourou Hedi*

*Brain-inspired IoT Controlled Walking Robot – Big-Foot
by Anna Lekova, Ivan Chavdarov, Bozhidar Naydenov, Aleksandar Krastev and Snezhanka Kostova*

Optical Braille Recognition Software Prototype for the Sinhala Language
by Shanmuganathan Vasanthapriyan and Malith De Silva

Virtualization in Cloud Environment: Bandwidth Management
by Isaac Odun-Ayo, Blessing Idoko and Temidayo Abayomi-Zannu

Fuzzy Simulation of Historical Associative Thesaurus
by Olena Basalkevych and Olexandr Basalkevych

Multi-Band Hand of God Antenna with Functionality Variation with Use of Slots and Feed Position
by Mervat Akram Madi and Karim Youssef Kaban

Cloud Service Level Agreements and Resource Management
by Isaac Odun-Ayo, Blessing Udemezue and Abiodun Kilanko

Transformation of Solar Energy to Electricity with Photovoltaic Systems, Reduction of Electrical Consumption and Installation of LED Lamps in the ITSAO
by Jeremias Bravo Tapia, Juan José Rivera Toledo, Francisco Ramos Guzmán and Yoxkin Estévez Martínez

Application of The Half-Sweep Egsor Iteration for Two-Point Boundary Value Problems of Fractional Order
by Rostang Rahman, Nur Afza Mat Ali, Jumat Sulaiman and Fatihah Anas Muhiddin

Automatic Service Orchestration for e-Health Application
by Anatolii Petrenko and Bogdan Bulakh

Exchange Rate Modeling: Medium-Term Equilibrium Dynamics
by Anton Kuzmin

Event Monitoring using Distributed Pattern Recognition Approach on Integrated IoT-Blockchain Network
by Anang Hudaya Muhamad Amin, Nazrul Muhaimin Ahmad and Subarmaniam Kannan

Effects of Different Activation Functions for Unsupervised Convolutional LSTM Spatiotemporal Learning
by Nelly Elsayed, Anthony Maida and Magdy Bayoumi

A Novel Strategy For Prompt Small Cell Deployment In Heterogeneous Networks
by Dorathy Abonyi

Localization of Emerging Leakages in Water Distribution Systems: A Complex Networks Approach
by Matteo Nicolini

DSTATCOM-Fuel Cell System on Radial Low-voltage Distribution Network for Mitigating Voltage Rise Caused by High Penetration of Photovoltaic Systems

by Dylon Hao Cheng Lam, Jianhui Wong, Yun Seng Lim and Jimmy Chin Yong Hee

*Conversion of 2D to 3D Technique for Monocular Images using Papilio One
by Priya Arokia and Anupama Patil*

*Investigating The Detection of Intention Signal During Different Exercise Protocols in Robot-Assisted Hand Movement of Stroke Patients and Healthy Subjects Using EEG-BCI System
by Maryam Butt, Golshah Naghdy, Fazel Naghdy, Geoffrey Murray and Haiping Du*

*Resonator Influence Simulation of Designed Close-Open Standing Wave Thermoacoustic Engine
by Sugiyanto, Samsul Kamal, Joko Waluyo and Adhika Widyaparaga*

*Noise Cancellation Algorithm Based on Air- and Bone-Conducted Speech Signals by Considering an Unscented Transformation Method
by Hisako Orimoto and Akira Ikuta*

*The Role of Information Technology Human Capability in the Implementation of Information Technology Governance (ITG): A Systematic Literature Review on Malaysian Organizations
by Nor Aziati Abdul Hamid, Chin Wei Liew, Nor Hazana Abdullah and Siti Sarah Omar*

*Estimating Academic results from Trainees' Activities in Programming Exercises Using Four Types of Machine Learning
by Toshiyasu Kato, Yuki Terawaki, Yasushi Kodama, Teruhiko Unoki and Yasushi Kambayashi*

*Improving the Performance of Hadoop Framework Using Optimization Process in the Information Management
by Ramachandran Ravi Sowmyasree, Nachimuthu Maheswari and Manickam Sivagami*

*Overview on 5G Radio Frequency Energy Harvesting
by Sanae El Hassani, Hind El Hassani and Nouredine Boutammachte*

*A Modular Multipurpose, Parameter Centered Electronic Health Record Architecture
by Norbert Maggi, Luca Douglas Magnoni, Carmelina Ruggiero, Roberta Gazzarata and Mauro Giacomini*

*Hybrid Technique for Enhancing Underwater Image in blurry conditions
by Chrispin Jiji and Nagaraj Ramrao*

*Using Privacy Enhancing and Fine-Grained Access Controlled eKYC to implement Privacy Aware eSign
by Puneet Bakshi and Sukumar Nandi*

*Location Prediction based on Variable-order Markov Model with Time Feature and User's Spatio-temporal Rule
by Ying Xia, Yu Gong, Xu Zhang and Hae-young Bae*

*Computer Security as an Engineering Practice: A System Engineering Discussion
by Robert M. Beswick*

Hidden Surface Removal for Interaction between Hand and Virtual Objects in Augmented Reality

by Takahiro Ishizu, Makoto Sakamoto, Masamichi Hori, Takahiro Shinoda, Takaaki Toyota, Amane Takei and Takao Ito

Evaluation of the Effects of Bidding Strategy with Customized Pricing on the Individual Prosumer in a Local Energy Market

by Borislava Spasova, Daisuke Kawamoto and Yoshiyasu Takefuji

Distribution of Bit Patterns in Binary Sequence Generated Over Sub Extension Field

by Md. Arshad Ali, Yuta Koderu, Takuya Kusaka, Yasuyuki Nogami, Satoshi Uehara and Robert H. Morelos-Zaragoza

An Analysis of Social Media Usage in Winery Businesses

by Constantina Costopoulou, Maria Ntaliani and Filotheos Ntalianis

A Formal Ontology-based Framework Towards an Intelligent Temporal Scheduler

by Patience Usoro Usip, Udoinyang Godwin Inyang, Daniel Ekpenyong Asuquo and Enobong Umoren

A Proposal of Control Method Considering the Path Switching Time of SDN and Its Evaluation

by Kosuke Gotani, Hiroyuki Takahira, Misumi Hata, Luis Guillen, Satoru Izumi, Toru Abe and Takuo Suganuma

Transmission Line Restoration Using ERS Structure

by Sushri Mukherjee, Sumana Chattaraj, Md. Irfan Khan, Dharmbir Prasad, Pradip Barua and Harish Agarwal

Supporting Better Physical Activity in a Smart City: a Framework for Suggesting and Supervising Walking Paths

by Mário Rodrigues, Rita Santos, Alexandra Queirós, Anabela Silva, João Amaral, Patrícia Simões, Jorge Gonçalves, Ciro Martins, António Pereira and Nelson Pacheco da Rocha

Development of Wavelet-Based Tools for Event Related Potentials' N400 Detection: Application to Visual and Auditory Vowelling and Semantic Priming in Arabic Language

by Nadia Mountaj, El-Mehdi Hamzaoui, Mohamed Majid Himmi and Mireille Besson

A Balanced RF Power Amplifier using the Improvement 3-dB Quadrature Hybrid Couplers for Mitigation of the Reverse Intermodulation in FM Broadcasting Systems

by Panya Hantula and Rangan Tongta

Effectiveness and Comparison of Digital Substations Over Conventional Substations

by Aashir Waleed, Umar Siddique Virk, Muhammad Tanveer Riaz, Shaikh Bilal Mehmood, Saeed Ahmad, Muhammad Rameez Javed and Ali Raza

Optimized Design of PM Halbach Array Linear Generator for Sea Wave Energy Converters Operate at Maximum Power Transfer

by Ahmed Elsayed ELGebaly and Mohamed Kamal El-Nemr

A Fuzzy-Based Approach and Adaptive Genetic Algorithm in Multi-Criteria Recommender Systems

by Mohamed Hamada, Abdulsalam Latifat Ometere, Odu Nkiruka Bridget, Mohammed Hassan and Saratu Yusuf Ilu

Marginalizing Last Mile Logistics Cost through 4th Party Milk Run

by Robert de Souza, Linda William and Cher Kian Lee

Estimation of Target Maneuvers from Tracked Behavior Using Fuzzy Evidence Accrual

by Stephen Craig Stubberud, Kathleen Ann Kramer and Allen Roger Stubberud

Conceptual Architecture for the Continuity of Workflow in Activities on Multi-Devices: Case Study Co-Kitchen

by Mirian Janeth Avalos-Viveros, Luis Gerardo Montané-Jiménez, Gabriela Sánchez Morales, Carmen Mezura-Godoy and Edgard Benítez-Guerrero

Material, Structural Optimization and Analysis of Visible-Range Back-Illuminated OPFET photodetector

by Jaya V. Gaitonde and Rajesh B. Lohani

The Fusing Framework Between Lifting Carrier and Tractor-Trailer for Modern Transportation

by Ha Quang Thinh Ngo, Thanh Phuong Nguyen and Hung Nguyen

Study and Implementation of Various Image De-Noising Methods for Traffic Sign Board Recognition

by M. Monica Subashini, Abhinav Deshpande and Ramani Kannan

A Lightweight, Hardware-Based Support for Isolation in Mixed-Criticality Network-on-Chip Architectures

by Giacomo Valente, Paolo Giammatteo, Vittoriano Mutillo, Luigi Pomante and Tania Di Mascio

Multiple-Optimization based-design of RF Integrated Inductors

by Houcine Marouani, Amin Sallem, Mondher Chaoui, Pedro Pereira and Nouri Masmoudi