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Intelligent Information and Database Systems

11th Asian Conference, ACIIDS 2019
Yogyakarta, Indonesia, April 8–11, 2019
Proceedings, Part I

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Preface

ACIIDS 2019 was the 11th event in a series of international scientific conferences on research and applications in the field of intelligent information and database systems. The aim of ACIIDS 2019 was to provide an international forum of research workers with scientific background on the technology of intelligent information and database systems and its various applications. The ACIIDS 2019 conference was co-organized by BINUS University (Indonesia) and Wrocław University of Science and Technology (Poland) in co-operation with the IEEE SMC Technical Committee on Computational Collective Intelligence, European Research Center for Information Systems (ERCIS), University of Newcastle (Australia), Yeungnam University (South Korea), Leiden University (The Netherlands), Universiti Teknologi Malaysia (Malaysia), Quang Binh University (Vietnam), Ton Duc Thang University (Vietnam), and Vietnam National University, Hanoi (Vietnam). It took place in Yogyakarta in Indonesia during April 8–11, 2019.

The ACIIDS conference series is already well established. The first two events, ACIIDS 2009 and ACIIDS 2010, took place in Dong Hoi City and Hue City in Vietnam, respectively. The third event, ACIIDS 2011, took place in Daegu (South Korea), followed by the fourth event, ACIIDS 2012, in Kaohsiung (Taiwan). The fifth event, ACIIDS 2013, was held in Kuala Lumpur in Malaysia while the sixth event, ACIIDS 2014, was held in Bangkok in Thailand. The seventh event, ACIIDS 2015, took place in Bali (Indonesia), followed by the eighth event, ACIIDS 2016, in Da Nang (Vietnam). The ninth event, ACIIDS 2017, was organized in Kanazawa (Japan). The 10th jubilee conference, ACIIDS 2018, was held in Dong Hoi City (Vietnam).

For this edition of the conference, we received more than 300 papers from 38 countries all over the world. Each paper was peer-reviewed by at least two members of the international Program Committee and the international reviewer board. Only 124 papers with the highest quality were selected for an oral presentation and publication in these two volumes of the ACIIDS 2019 proceedings.

Papers included in the proceedings cover the following topics: knowledge engineering and Semantic Web; text processing and information retrieval; machine learning and data mining; decision support and control systems; computer vision techniques; databases and intelligent information systems, collective intelligence for service innovation, technology management, e-learning and fuzzy intelligent systems, data structures modelling for knowledge representation, advanced data mining techniques and applications; intelligent information systems; intelligent methods and artificial intelligence for biomedical decision support systems, intelligent and contextual systems, intelligent systems and algorithms in information sciences, intelligent supply chains and e-commerce, sensor networks and internet of things, analysis of image, video, movements and brain intelligence in life sciences, computer vision and intelligent systems.

The accepted and presented papers focus on new trends and challenges facing the intelligent information and database systems community. The presenters showed in what way research work could stimulate novel and innovative applications. We hope you will find these results useful and inspiring for your future research work.

We would like to extend our heartfelt thanks to Jarosław Gowin, Deputy Prime Minister of the Republic of Poland and Minister of Science and Higher Education, for his support and honorary patronage of the conference.

We would like to express our sincere thanks to the CEO of Bina Nusantara Group, Ir Bernard Gunawan, honorary chairs, Prof. Harjanto Prabowo (Rector of BINUS University, Indonesia), and Prof. Cezary Madryas (Rector of Wrocław University of Science and Technology, Poland), for their support.

Our special thanks go to the program chairs, special session chairs, organizing chairs, publicity chairs, liaison chairs, and local Organizing Committee for their work for the conference. We sincerely thank all the members of the international Program Committee for their valuable efforts in the review process, which helped us to guarantee the highest quality of the selected papers for the conference. We cordially thank the organizers and chairs of special sessions, who contributed to the success of the conference.

We would like to express our thanks to the keynote speakers: Prof. Stephan Chalup from the University of Newcastle, Australia, Prof. Hamido Fujita from Iwate Prefectural University, Japan, Prof. Tokuro Matsuo from Advanced Institute of Industrial Technology, Japan, Prof. Michał Woźniak from Wrocław University of Science and Technology, Poland, and Dr. Alfred Budiman, CEO of Samsung R&D Indonesia (SRIN), for their world-class plenary speeches.

We cordially thank our main sponsors, BINUS University (Indonesia), Wrocław University of Science and Technology (Poland), IEEE SMC Technical Committee on Computational Collective Intelligence, European Research Center for Information Systems (ERCIS), University of Newcastle (Australia), Yeungnam University (South Korea), Leiden University (The Netherlands), Universiti Teknologi Malaysia (Malaysia), Quang Binh University (Vietnam), Ton Duc Thang University (Vietnam), and Vietnam National University, Hanoi (Vietnam). Our special thanks are due also to Springer for publishing the proceedings and sponsoring awards, and to all the other sponsors for their kind support.

We wish to thank the members of the Organizing Committee for their excellent work and the members of the local Organizing Committee for their considerable effort. We cordially thank all the authors, for their valuable contributions, and the other participants of this conference. The conference would not have been possible without their support. Thanks are also due to many experts who contributed to making the event a success.

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Contents – Part I

Knowledge Engineering and Semantic Web

Algorithms for Merging Probabilistic Knowledge Bases	3
<i>Van Tham Nguyen, Ngoc Thanh Nguyen, and Trong Hieu Tran</i>	
A Formal Framework for the Ontology Evolution	16
<i>Adrianna Kozierkiewicz and Marcin Pietranik</i>	
Logical Problem Solving Framework	28
<i>Kiyoshi Akama, Ekawit Nantajeewarawat, and Taketo Akama</i>	
Term Rewriting that Preserves Models in KR-Logic	41
<i>Kiyoshi Akama, Ekawit Nantajeewarawat, and Taketo Akama</i>	
Towards Knowledge Formalization and Sharing in a Cognitive Vision Platform for Hazard Control (CVP-HC)	53
<i>Caterine Silva de Oliveira, Cesar Sanin, and Edward Szczerbicki</i>	
Assessing Individuals Learning’s Impairments from a Social Entropic Perspective	62
<i>José Neves, Filipa Ferraz, Almeida Dias, António Capita, Liliana Ávidos, Nuno Maia, Joana Machado, Victor Alves, Jorge Ribeiro, and Henrique Vicente</i>	

Text Processing and Information Retrieval

Robust Web Data Extraction Based on Unsupervised Visual Validation	77
<i>Benoit Potvin and Roger Villemaire</i>	
A Character-Level Deep Lifelong Learning Model for Named Entity Recognition in Vietnamese Text	90
<i>Ngoc-Vu Nguyen, Thi-Lan Nguyen, Cam-Van Nguyen Thi, Mai-Vu Tran, and Quang-Thuy Ha</i>	
Identification of Conclusive Association Entities by Biomedical Association Mining	103
<i>Rey-Long Liu</i>	
A Data Preprocessing Method to Classify and Summarize Aspect-Based Opinions Using Deep Learning	115
<i>Duy Nguyen Ngoc, Tuoi Phan Thi, and Phuc Do</i>	

Word Mover's Distance for Agglomerative Short Text Clustering	128
<i>Nigel Franciscus, Xuguang Ren, Junhu Wang, and Bela Stantic</i>	
Improving Semantic Relation Extraction System with Compositional Dependency Unit on Enriched Shortest Dependency Path.	140
<i>Duy-Cat Can, Hoang-Quynh Le, and Quang-Thuy Ha</i>	
An Adversarial Learning and Canonical Correlation Analysis Based Cross-Modal Retrieval Model	153
<i>Thi-Hong Vuong, Thanh-Huyen Pham, Tri-Thanh Nguyen, and Quang-Thuy Ha</i>	
Event Prediction Based on Causality Reasoning	165
<i>Lei Lei, Xuguang Ren, Nigel Franciscus, Junhu Wang, and Bela Stantic</i>	
A Method for Detecting and Analyzing the Sentiment of Tweets Containing Conditional Sentences	177
<i>Huyen Trang Phan, Ngoc Thanh Nguyen, Van Cuong Tran, and Dosam Hwang</i>	
Aggregating Web Search Results	189
<i>Marek Kopel and Maksim Buben</i>	
Cross-Lingual Korean Speech-to-Text Summarization	198
<i>HyoJeon Yoon, Dinh Tuyen Hoang, Ngoc Thanh Nguyen, and Dosam Hwang</i>	
On Some Approach to Evaluation in Personalized Document Retrieval Systems	207
<i>Bernadetta Maleszka</i>	
Machine Learning and Data Mining	
A Class-Cluster k -Nearest Neighbors Method for Temporal In-Trouble Student Identification.	219
<i>Chau Vo and Hua Phung Nguyen</i>	
Multidimensional Permutation Entropy for Constrained Motif Discovery	231
<i>Yomna Rayan, Yasser Mohammad, and Samia A. Ali</i>	
A LSTM Approach for Sales Forecasting of Goods with Short-Term Demands in E-Commerce.	244
<i>Yu-Sen Shih and Min-Huei Lin</i>	
Detection of Rare Elements in Investigation of Medical Problems	257
<i>Piotr Kulczycki and Damian Kruszewski</i>	

Cardiac Murmur Effects on Automatic Segmentation of ECG Signals for Biometric Identification: Preliminary Study	269
<i>C. Duque-Mejía, M. A. Becerra, C. Zapata-Hernández, C. Mejía-Arboleda, A. E. Castro-Ospina, E. Delgado-Trejos, Diego H. Peluffo-Ordóñez, P. Rosero-Montalvo, and Javier Revelo-Fuelagán</i>	
An Approach to Estimation of Residential Housing Type Based on the Analysis of Parked Cars	280
<i>Marcin Kutrzyński, Zbigniew Telec, Bogdan Trawiński, and Hien Cao Dac</i>	
Household Electric Load Pattern Consumption Enhanced Simulation by Random Behavior.	290
<i>Alabbas Alhaj Ali, Doina Logofătu, Prachi Agrawal, and Sreshtha Roy</i>	
Anomaly Detection Procedures in a Real World Dataset by Using Deep-Learning Approaches.	303
<i>Alabbas Alhaj Ali, Abdul Rasheeq, Doina Logofătu, and Costin Bădică</i>	
Developing a General Video Game AI Controller Based on an Evolutionary Approach	315
<i>Kristiyan Balabanov and Doina Logofătu</i>	
Separable Data Aggregation by Layers of Binary Classifiers.	327
<i>Leon Bobrowski and Magdalena Topczewska</i>	
Adaptation and Recovery Stages for Case-Based Reasoning Systems Using Bayesian Estimation and Density Estimation with Nearest Neighbors.	339
<i>D. Bastidas Torres, C. Piñeros Rodriguez, Diego H. Peluffo-Ordóñez, X. Blanco Valencia, Javier Revelo-Fuelagán, M. A. Becerra, A. E. Castro-Ospina, and Leandro L. Lorente-Leyva</i>	
Feature Extraction Analysis for Emotion Recognition from ICEEMD of Multimodal Physiological Signals	351
<i>J. F. Gómez-Lara, O. A. Ordóñez-Bolaños, M. A. Becerra, A. E. Castro-Ospina, C. Mejía-Arboleda, C. Duque-Mejía, J. Rodriguez, Javier Revelo-Fuelagán, and Diego H. Peluffo-Ordóñez</i>	
Using Fourier Series to Improve the Prediction Accuracy of Nonlinear Grey Bernoulli Model	363
<i>Ngoc Thang Nguyen, Van Thanh Phan, and Zbigniew Malara</i>	
Learning Hierarchical Weather Data Representation for Short-Term Weather Forecasting Using Autoencoder and Long Short-Term Memory Models	373
<i>Yaya Heryadi</i>	

Logo and Brand Recognition from Imbalanced Dataset Using MiniGoogLeNet and MiniVGGNet Models	385
<i>Sarwo, Yaya Heryadi, Widodo Budiharto, and Edi Abdurachman</i>	

Decision Support and Control Systems

Selected Problems of Controllability of Semilinear Fractional Systems-A Survey.	397
<i>Artur Babiarz and Jerzy Klamka</i>	

A Data-Driven Approach to Modeling and Solving Academic Teachers' Competences Configuration Problem.	408
<i>Jarosław Wikarek and Paweł Sitek</i>	

PID Regulatory Control Design for a Double Tank System Based on Time-Scale Separation.	420
<i>Marian Blachuta, Robert Bieda, and Rafał Grygiel</i>	

Towards Formal, Graph-Based Spatial Data Processing: The Case of Lighting Segments for Pedestrian Crossings	431
<i>Sebastian Ernst and Leszek Kotulski</i>	

Multi-agent Support for Street Lighting Modernization Planning	442
<i>Adam Sędziwy, Leszek Kotulski, and Artur Basiura</i>	

An Application a Two-Level Determination Consensus Method in a Multi-agent Financial Decisions Support System.	453
<i>Adrianna Kozierkiewicz, Marcin Hernes, and Thanh Tung Nguyen</i>	

Implementing Smart Virtual Product Development (SVPD) to Support Product Manufacturing.	464
<i>Muhammad Bilal Ahmed, Cesar Sanin, and Edward Szczerbicki</i>	

PID Tuning with Neural Networks	476
<i>Antonio Marino and Filippo Neri</i>	

Repeatable Trust Game – Preliminary Experimental Results	488
<i>Anna Motylska-Kuzma, Jacek Mercik, and Aleksandra Sus</i>	

Modeling of Uncertainty with Petri Nets	499
<i>Michal Kuchárik and Zoltán Balogh</i>	

A Collaborative Approach Based on DCA and VNS for Solving Mixed Binary Linear Programs.	510
<i>Sara Samir and Hoai An Le Thi</i>	

Adoption of Cloud Business Intelligence in Indonesia's Financial Services Sector	520
<i>Elisa Indriasari, Suparta Wayan, Ford Lumban Gaol, Agung Trisetyarso, Bahtiar Saleh Abbas, and Chul Ho Kang</i>	
Stakeholder Impact on the Success and Risk of Failure of ICT Projects in Poland.	530
<i>Kazimierz Frączkowski and Barbara Gładysz</i>	
Analysis of the Influence of ICT and Public Recognition on University Credibility	541
<i>Irvan Santoso, Wayan Suparta, Agung Trisetyarso, Bahtiar Saleh Abbas, and Chul Ho Kang</i>	
Quantum Game-Based Recommender Systems for Disruptive Innovations . . .	552
<i>Agung Trisetyarso and Fithra Faisal Hastiadi</i>	
Computer Vision Techniques	
Matching Topological Structures for Handwritten Character Recognition . . .	565
<i>Daw-Ran Liou, Yang-En Chen, and Cheng-Yuan Liou</i>	
Enhancing the Resolution of Satellite Images Using the Best Matching Image Fragment	576
<i>Daniel Kostrzewa, Pawel Benecki, and Lukasz Jenczmyk</i>	
Multi-scale Autoencoders in Autoencoder for Semantic Image Segmentation	587
<i>John Paul T. Yusiong and Prospero C. Naval Jr.</i>	
Simultaneous Localization and Segmentation of Fish Objects Using Multi-task CNN and Dense CRF.	600
<i>Alfonso B. Labao and Prospero C. Naval Jr.</i>	
Violent Crowd Flow Detection Using Deep Learning	613
<i>Shakil Ahmed Sumon, MD. Tanzil Shahria, MD. Raihan Goni, Nazmul Hasan, A. M. Almarufuzzaman, and Rashedur M. Rahman</i>	
Drowsiness Detection in Drivers Through Real-Time Image Processing of the Human Eye.	626
<i>Erick P. Herrera-Granda, Jorge A. Caraguay-Procel, Pedro D. Granda-Gudiño, Israel D. Herrera-Granda, Leandro L. Lorente-Leyva, Diego H. Peluffo-Ordóñez, and Javier Revelo-Fuelagán</i>	
Software Techniques to Reduce Cybersickness Among Users of Immersive Virtual Reality Environments	638
<i>Kazimierz Choroś and Piotr Nippe</i>	

Semi-supervised Learning with Bidirectional GANs.	649
<i>Maciej Zamorski and Maciej Zięba</i>	
Sharp Images Detection for Microscope Pollen Slides Observation	661
<i>Aysha Kadaikar, Maria Trocan, Frédéric Amiel, Patricia Conde-Cespedes, Benjamin Guinot, Roland Sarda Estève, Dominique Baisnée, and Gilles Oliver</i>	
Databases and Intelligent Information Systems	
Slowly Changing Dimension Handling in Data Warehouses Using Temporal Database Features	675
<i>Thanapol Phungtua-Eng and Suphamit Chittayasothorn</i>	
Tackling Complex Queries to Relational Databases	688
<i>Octavian Popescu, Ngoc Phuoc An Vo, Vadim Sheinin, Elahe Khorashani, and Hangu Yeo</i>	
Approximate Outputs of Accelerated Turing Machines Closest to Their Halting Point	702
<i>Sebastien Mambou, Ondrej Krejcar, and Ali Selamat</i>	
Development of Seawater Temperature Announcement System for Improving Productivity of Fishery Industry	714
<i>Yu Agusa, Takuya Fujihashi, Keiichi Endo, Hisayasu Kuroda, and Shinya Kobayashi</i>	
Big5 Tool for Tracking Personality Traits	726
<i>Binh Thanh Nguyen and Dang Ngoc Dung</i>	
Comparative Analysis of Usability of Data Entry Design Patterns for Mobile Applications.	737
<i>Jakub Myka, Agnieszka Indyka-Piasecka, Zbigniew Telec, Bogdan Trawiński, and Hien Cao Dac</i>	
Author Index	751

Contents – Part II

Collective Intelligence for Service Innovation, Technology Management, E-learning, and Fuzzy Intelligent

Increasing the Quality of Multi-step Consensus.	3
<i>Dai Tho Dang, Ngoc Thanh Nguyen, and Dosam Hwang</i>	
An Independence Measure for Expert Collections Based on Social Media Profiles	15
<i>Rafał Palak and Ngoc Thanh Nguyen</i>	
A Pattern Recognition Based FMEA for Safety-Critical SCADA Systems . . .	26
<i>Kuo-Sui Lin</i>	
Interactive Genetic Algorithm Joining Recommender System	40
<i>Po-Kai Wang, Chao-Fu Hong, and Min-Huei Lin</i>	
Maturity Level Evaluation of Information Technology Governance in Payment Gateway Service Company Using COBIT	49
<i>Nilo Legowo and Azda Firmansyah</i>	

Data Structures Modelling for Knowledge Representation

A Framework for Merging Possibilistic Knowledge Bases	65
<i>Thi Thanh Luu Le</i>	
Conceptual Modeling of Team Development	77
<i>Marcin Jodłowiec and Julia Piecuch</i>	
Ontological Information as Part of Continuous Monitoring Software for Production Fault Detection	89
<i>Marek Krótkiewicz, Krystian Wojtkiewicz, Marcin Jodłowiec, Jan Skowroński, and Maciej Zaręba</i>	
Social Media Influence as an Enabler of a Sustainable Knowledge Management System Inside PT. ABC Organization	103
<i>Benhard Hutajulu and Harisno</i>	

Advanced Data Mining Techniques and Applications

Content-Based Music Classification by Advanced Features and Progressive Learning	117
<i>Ja-Hwang Su, Chu-Yu Chin, Tzung-Pei Hong, and Jung-Jui Su</i>	

Appliance of Social Network Analysis and Data Visualization Techniques in Analysis of Information Propagation	131
<i>Leo Mrsic, Srecko Zajec, and Robert Kopal</i>	
A Temporal Approach for Air Quality Forecast	144
<i>Eric Hsueh-Chan Lu and Chia-Yu Liu</i>	
Quad-Partitioning-Based Robotic Arm Guidance Based on Image Data Processing with Single Inexpensive Camera For Precisely Picking Bean Defects in Coffee Industry	152
<i>Chen-Ju Kuo, Ding-Chau Wang, Pin-Xin Lee, Tzu-Ting Chen, Gwo-Jiun Horng, Tz-Heng Hsu, Zhi-Jing Tsai, Mao-Yuan Pai, Gen-Ming Guo, Yu-Chuan Lin, Min-Hsiung Hung, and Chao-Chun Chen</i>	
On the Analysis of Kelly Criterion and Its Application	165
<i>Mu-En Wu, Wei-Ho Chung, and Chia-Jung Lee</i>	
Single Image Super-Resolution with Vision Loss Function	173
<i>Yi-Zhen Song, Wen-Yen Liu, Ju-Chin Chen, and Kawuu W. Lin</i>	
Content-Based Motorcycle Counting for Traffic Management by Image Recognition	180
<i>Tzung-Pei Hong, Yu-Chiao Yang, Ja-Hwung Su, and Chun-Hao Chen</i>	
Intelligent Information Systems	
Use of Blockchain in Education: A Systematic Literature Review	191
<i>Hafiza Yumna, Muhammad Murad Khan, Maria Ikram, and Sabahat Ilyas</i>	
A Comparative Study of Techniques for Avoiding Premature Convergence in Harmony Search Algorithm	203
<i>Krzysztof Szwarc and Urszula Boryczka</i>	
Analysis of Different Approaches to Designing the Parallel Harmony Search Algorithm for ATSP	215
<i>Krzysztof Szwarc and Urszula Boryczka</i>	
Differential Evolution in Agent-Based Computing	228
<i>Mateusz Godzik, Bartłomiej Grochal, Jakub Piekarz, Mikolaj Sieniawski, Aleksander Byrski, and Marek Kisiel-Dorohinicki</i>	
Verifying Usefulness of Ant Colony Community for Solving Dynamic TSP	242
<i>Andrzej Siemiński</i>	

Physical Layer Security Cognitive Decode-and-Forward Relay Beamforming Network with Multiple Eavesdroppers	254
<i>Nguyen Nhu Tuan and Tran Thi Thuy</i>	
Co-exploring a Search Space in a Group Recommender System	264
<i>Dai Yodogawa and Kazuhiro Kuwabara</i>	
Differential Cryptanalysis of Symmetric Block Ciphers Using Memetic Algorithms	275
<i>Kamil Dworak and Urszula Boryczka</i>	
Intelligent Methods and Artificial Intelligence for Biomedical Decision Support Systems	
Modeling of Articular Cartilage with Goal of Early Osteoarthritis Extraction Based on Local Fuzzy Thresholding Driven by Fuzzy C-Means Clustering	289
<i>Jan Kubicek, Alice Krestanova, Marek Penhaker, Martin Augustynek, Martin Cerny, and David Oczka</i>	
Modeling and Features Extraction of Heel Bone Fracture Repairation Dynamical Process from X-Ray Images Based on Time Iteration Segmentation Model Driven by Gaussian Energy	300
<i>Jan Kubicek, Alice Krestanova, Iveta Bryjova, Marek Penhaker, Martin Cerny, Martin Augustynek, David Oczka, and Jan Vanus</i>	
A Semi-Supervised Learning Approach for Automatic Segmentation of Retinal Lesions Using SURF Blob Detector and Locally Adaptive Binarization	311
<i>Tathagata Bandyopadhyay, Jan Kubicek, Marek Penhaker, Juraj Timkovic, David Oczka, and Ondrej Krejcar</i>	
Autonomous Segmentation and Modeling of Brain Pathological Findings Based on Iterative Segmentation from MR Images	324
<i>Jan Kubicek, Alice Krestanova, Tereza Muchova, David Oczka, Marek Penhaker, Martin Cerny, Martin Augustynek, and Ondrej Krejcar</i>	
Design and Analysis of LMMSE Filter for MR Image Data	336
<i>Jan Kubicek, Alice Krestanova, Martina Polachova, David Oczka, Marek Penhaker, Martin Cerny, Martin Augustynek, and Ondrej Krejcar</i>	
A Nearest Neighbour-Based Analysis to Identify Patients from Continuous Glucose Monitor Data	349
<i>Michael Mayo and Vithya Yogarajan</i>	

PCA Kernel Based Extreme Learning Machine Model for Detection of NS1 from Salivary SERS Spectra	361
<i>Nur Hainani Othman, Khuan Y. Lee, Afaf Rozan Mohd Radzol, Wahidah Mansor, and N. A. Z. M. Zulkimi</i>	

Improving the Robustness of the Glycemic Variability Percentage Metric to Sensor Dropouts in Continuous Glucose Monitor Data	373
<i>Michael Mayo</i>	

GenPress: A Novel Dictionary Based Method to Compress DNA Data of Various Species	385
<i>Péter Lehotay-Kéry and Attila Kiss</i>	

Utilizing Pretrained Deep Learning Models for Automated Pulmonary Tuberculosis Detection Using Chest Radiography	395
<i>Thi Kieu Khanh Ho, Jeonghwan Gwak, Om Prakash, Jong-In Song, and Chang Min Park</i>	

Intelligent and Contextual Systems

Advanced Neural Network Approach, Its Explanation with LIME for Credit Scoring Application	407
<i>Lkhagvadorj Munkhdalai, Ling Wang, Hyun Woo Park, and Keun Ho Ryu</i>	

Non-uniform Initialization of Inputs Groupings in Contextual Neural Networks	420
<i>Maciej Huk</i>	

Implementation and Analysis of Contextual Neural Networks in H2O Framework	429
<i>Krzysztof Wolk and Erik Burnell</i>	

Low-Level Greyscale Image Descriptors Applied for Intelligent and Contextual Approaches	441
<i>Dariusz Frejlichowski</i>	

Intelligent Systems and Algorithms in Information Sciences

Motion Controlling Using Finite-State Automata	455
<i>Michal Jaluvka, Eva Volna, and Martin Kotyrba</i>	

Automatic Recognition of Kazakh Speech Using Deep Neural Networks	465
<i>Orken Mamyrbayev, Mussa Turdalyuly, Nurbapa Mekebayev, Keylan Alimhan, Aizat Kydyrbekova, and Tolganay Turdalykzy</i>	

Feedback Shift Registers Evolutionary Design Using Reverse Polish Notation	475
<i>Miłosław Chodacki</i>	

Intelligent Supply Chains and e-Commerce

IT Value for Customer: Its Influence on Satisfaction and Loyalty in E-commerce	489
<i>Arkadiusz Kawa and Justyna Światowiec-Szczepańska</i>	

Multicriteria Selection of Online Advertising Content for the Habituation Effect Reduction	499
<i>Anna Lewandowska, Jarosław Jankowski, Wojciech Sałabun, and Jarosław Wątróbski</i>	

Dark Side of Digital Transformation in Tourism	510
<i>Meghdad Abbasian Fereidouni and Arkadiusz Kawa</i>	

Increasing User Engagement and Virtual Goods Life Span Through Products Diversity and Intensity of Content Updates	519
<i>Kamil Bortko, Piotr Bartków, Patryk Pazura, and Jarosław Jankowski</i>	

Sensor Networks and Internet of Things

Analysis of the Error Rate in Electrometers for Smart Grid Metering.	533
<i>Josef Horalek and Vladimir Sobeslav</i>	

Multi-cell Based UWB Indoor Positioning System	543
<i>JaeMin Hong, ShinHeon Kim, KyuJin Kim, and ChongGun Kim</i>	

An Improved Resampling Scheme for Particle Filtering in Inertial Navigation System	555
<i>Wan Mohd Yaakob Wan Bejuri, Mohd Murtadha Mohamad, Raja Zahilah Raja Mohd Radzi, and Sheikh Hussain Shaikh Salleh</i>	

Analysis of Image, Video, Movements and Brain Intelligence in Life Sciences

Quaternion Watershed Transform in Segmentation of Motion Capture Data	567
<i>Adam Świtoński, Agnieszka Michalczuk, Henryk Josiński, and Konrad Wojciechowski</i>	

How Does State Space Definition Influence the Measure of Chaotic Behavior?	579
<i>Henryk Josiński, Adam Świtoński, Agnieszka Michalczuk, Marzena Wojciechowska, and Konrad Wojciechowski</i>	

Granular Computing (GC) Demonstrates Interactions Between Depression and Symptoms Development in Parkinson's Disease Patients	591
<i>Andrzej W. Przybyszewski, Jerzy Paweł Nowacki, Aldona Drabik, Stanisław Szlufik, Piotr Habela, and Dariusz M. Kozirowski</i>	
Measurements of Antisaccades Parameters Can Improve the Prediction of Parkinson's Disease Progression	602
<i>Albert Sledzianowski, Artur Szymanski, Aldona Drabik, Stanisław Szlufik, Dariusz M. Kozirowski, and Andrzej W. Przybyszewski</i>	
DTI Helps to Predict Parkinson's Patient's Symptoms Using Data Mining Techniques	615
<i>Artur Chudzik, Artur Szymański, Jerzy Paweł Nowacki, and Andrzej W. Przybyszewski</i>	
Fractional Calculus in Human Arm Modeling	624
<i>Tomasz Grzejszczak, Piotr Jurgaś, Adrian Łęgowski, Michał Niezabitowski, and Justyna Orwat</i>	
Computer Vision and Intelligent Systems	
Real-Time Multiple Faces Tracking with Moving Camera for Support Service Robot.	639
<i>Muhamad Dwisnanto Putro and Kang-Hyun Jo</i>	
Modified Stacked Hourglass Networks for Facial Landmarks Detection	648
<i>Van-Thanh Hoang and Kang-Hyun Jo</i>	
Ensemble of Predictions from Augmented Input as Adversarial Defense for Face Verification System	658
<i>Laksono Kurnianggoro and Kang-Hyun Jo</i>	
Vehicle Categorical Recognition for Traffic Monitoring in Intelligent Transportation Systems	670
<i>Diem-Phuc Tran and Van-Dung Hoang</i>	
Video-Based Vietnamese Sign Language Recognition Using Local Descriptors	680
<i>Anh H. Vo, Nhu T. Q. Nguyen, Ngan T. B. Nguyen, Van-Huy Pham, Ta Van Giap, and Bao T. Nguyen</i>	
Mathematical Variable Detection in PDF Scientific Documents.	694
<i>Bui Hai Phong, Thang Manh Hoang, Thi-Lan Le, and Akiko Aizawa</i>	

Predicting Cardiovascular Risk Level Based on Biochemical Risk Factor Indicators Using Machine Learning: A Case Study in Indonesia	707
<i>Yaya Heryadi, Raymond Kosala, Raymond Bahana, and Indrajani Suteja</i>	
Author Index	719