## 17th International Conference Artificial Intelligence and Soft Computing

# **Preliminary Program**

Zakopane, Poland, June 3-7, 2018

## Program at a glance

International Conference Artificial Intelligence and Soft Computing Zakopane, Poland, June 3-7, 2018

## Program at a glance

Sunday, June 3	Monday, June 4	Tuesday, June 5	Wednesday, June 6	Thursday, June 7
	07:30-8:30	07:30-8:30	07:30-8:30	07:30-8:30
	Breakfast, Room: Zakopane	Breakfast, Room: Zakopane	Breakfast, Room: Zakopane	Breakfast, Room: Zakopane
	8:30 - 8:45	Invited Talks, Chair: J. Grzymala-Busse, Room: Tatry	Session 8 (Rysy)	
	Opening Ceremony, Room: Tatry	8:30 - 9:15	8:40-9:50	
	Invited Talks, Chair: L. Rutkowski, Room: Tatry	Andrzej Cichocki	Bioinformatics, Biometrics and Medical App.	
	8:45 - 9:15	9:15 - 10:00	Session 9 (Rysy)	
	Jacek Zurada	Andrzej Skowron	10:00-11:10	
	9:15 - 10:00	Session 4 (Rysy)	Computer Vision, Image and Speech Analysis	
	Plamen Angelov	10:20 - 11:30	Session 10 (Rysy)	
	Session 1 (Rysy)	Evolutionary Algorithms and their Applications 1	11:20-12:30	
	10:20 - 11:30	Session 5 (Rysy)	Data Mining	
	Neural Networks and Their Applications 1	11:40 - 12:50		
	Session 2 (Rysy)	Evolutionary Algorithms and their Applications 2		
	11:40 - 12:50	Session 11 (Oral, Room: Tatry)		
	Neural Networks and Their Applications 2	10:20-12:00		
		Various Problems of Artificial Intelligence		
	13:00 - 14:30	13:00 - 14:30	13:00 - 14:30	
	Lunch, Room: Zakopane	Lunch, Room: Zakopane	Lunch, Room: Zakopane	
	Invited Talk, Chair: M. Gavrilova, Room: Tatry	Session 6 (Rysy)	•	•
	14:45 - 15:30	15:00-16:10	Sightseeing trip	
	Włodzisław Duch	Artificial Intelligence in Modeling, Simul. and Contr.		
	Invited Talks, Chair: B. Wilamowski	Session 7 (Rysy)		
	15:30 - 16:15	16:20-17:30		
	Ngoc-Thanh Nguyen	Various Problems of Artificial Intelligence		
	Session 3 (Rysy)			
	16:30-17:40	_		
	Pattern Classification			
18:00	18:00	18:30	18:00 - 19:30	
Welcome party, Room: Zakopane	Social event, Venue: Outdoor bonfire	Social event (Banquet), Room: Tatry	Dinner, Room: Zakopane	
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## Detailed Program

## Sunday, June 3

### 18:00

We	lcome	party
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Room: Zakopane

## Monday, June 4

07:30 - 8:30

Breakfast, Room: Zakopane

8:30 - 8:45

**Opening Ceremony, Room: Tatry** 

Invited Talks, Chair: L. Rutkowski, Room: Tatry

8:45 - 9:15

Jacek Zurada - IEEE Initiatives in emerging technologies, large data bases and reproducible research

9:15 - 10:00

Plamen Angelov - Empirical Approach to Machine Learning

Session 1: Neural Networks and Their Applications 1 (poster session)

Date/Time: 10:20-11:30, Mon., June 4, 2018

Room: Rysy

Three-dimensional model of signal processing in the presynaptic bouton of the neuron

Andrzej Bielecki, Maciej Gierdziewicz, Piotr Kalita

The parallel modification to the Levenberg-Marquardt algorithm

Jarosław Bilski, Bartosz Kowalczyk, Konrad Grzanek

Modelling Speaker Variability using Covariance Learning

Moses Ekpenyong, Imeh Umoren

A Neural Network model with Bidirectional Whitening

Yuki Fujimoto, Toru Ohira

Block Matching based Obstacle Avoidance for Unmanned Aerial Vehicle

Adomas Ivanovas, Armantas Ostreika, Rytis Maskeliunas, Robertas Damaševičius, Dawid Połap, Marcin Wozniak

Prototype-based kernels for Extreme Learning Machines and Radial Basis Function Networks

Norbert Jankowski

Supervised Neural Network Learning with an Environment Adapted Supervision Based on Motivation Learning Factors

Maciej Janowski, Adrian Horzyk

Autoassociative Signature Authentication based on Recurrent Neural Network

Rokui Jun

American Sign Language Fingerspelling Recognition Using Wide Residual Networks

Kacper Kania, Urszula Markowska-Kaczmar

Neural Networks Saturation Reduction

Janusz Kolbusz, Pawel Rozycki, Oleksandr Lysenko, Bogdan M. Wilamowski

Learning and convergence of the normalized radial basis functions networks

Adam Krzyżak, Marian Partyka

Porous silica-based optoelectronic elements as interconnection weights in Molecular Neural Networks

Magdalena Laskowska, Łukasz Laskowski, Jerzy Jelonkiewicz, Henryk Piech, Zbigniew Filutowicz

Session 2: Neural Networks and Their Applications 2 (poster session)

Date/Time: 11:40-12:50, Mon., June 4, 2018

Room: Rysy

Data Dependent Adaptive Prediction and Classification of Video Sequences

Amrutha Machireddy, Shayan Srinivasa Garani

Multi-step time series forecasting of the electric load using machine learning models

Shamsul Masum, Ying Liu, John Chiverton

Deep Q-Network using Reward Distribution

Yuta Nakaya, Yuko Osana

Motivated Reinforcement Learning Using Self-Developed Knowledge in Autonomous Cognitive Agent

Piotr Papież, Adrian Horzyk

Company Bankruptcy Prediction with Neural Networks

Jolanta Pozorska and Magdalena Scherer

Soft Patterns Reduction for RBF network performance improvement

Pawel Rozycki, Janusz Kolbusz, Oleksandr Lysenko, Bogdan M. Wilamowski

An Embedded Classifier for Mobile Robot Localization using Support Vector Machines and Gray-Level Co-occurrence Matrix

Fausto Sampaio, Elias Silva Jr, Lucas Silva, Pedro Reboucas Filho

A New Method for Learning RBF Networks by Utilizing Singular Regions

Seiya Satoh, Ryohei Nakano

Cyclic Reservoir Computing with FPGA Devices for Efficient Channel Equalization

Erik S. Skibinksy-Gitlin, Miquel L. Alomar, Christiam F. Frasser, Vincent Canals, Eugeni Isern, Miquel Roca

Discrete Cosine Transform Spectral Pooling Layers for Convolutional Neural Networks

James Smith, Bogdan Wilamowski

Extreme Value Model for Volatility Measure in Machine Learning Ensemble

Ryszard Szupiluk, Paweł Rubach

Deep Networks with RBF Layers to Prevent Adversarial Examples

Petra Vidnerová, Roman Neruda

Application of Reinforcement Learning to Stacked Autoencoder Deep Network Architecture Optimization

Roman Zajdel, Maciej Kusy

#### 13:00 - 14:30

Lunch, Room: Zakopane

Invited Talk, Chair: M. Gavrilova, Room Tatry

14:45 - 15:30

Włodzisław Duch - Fingerprints of brain cognitive activity

Invited Talk, Chair: B. Wilamowski, Room Tatry

15:30 - 16:15

Ngoc-Thanh Nguyen - Modelling Diversity and Autonomy Aspects for Processing Collective Knowledge

Session 3: Pattern Classification (poster session) Date/Time: 16:30-17:40, Mon., June 4, 2018

Room: Rysy

Integration Base Classifiers in Geometry Space by Harmonic Mean

Robert Burduk

Similarity of Mobile Users Based on Sparse Location History

Pasi Fränti, Radu Mariescu-Istodor, Karol Waga

Probabilistic Feature Selection in Machine Learning

Indrajit Ghosh

Boost Multi-class sLDA model for text classification

Maciej Jankowski

Multi-level Aggregation in Face Recognition

Adam Kiersztyn, Paweł Karczmarek, Witold Pedrycz

Direct Incorporation of \$L\_1\$-Regularization into Generalized Matrix Learning Vector Quantization

Falko Lischke, Thomas Neumann, Sven Hellbach, Thomas Villmann, Hans-Joachim Böhme

Classifiers for Matrix Normal Images: Derivation and Testing

Ewaryst Rafajłowicz

Modified Relational Mountain Clustering Method

Kristina P. Sinaga, June-Nan Hsieh, Josephine B.M. Benjamin, Miin-Shen Yang

Relative stability of random projection based image classification

Ewa Skubalska-Rafajłowicz

Cost Reduction in Mutation Testing with Bytecode-level Mutants Classification

Joanna Strug, Barbara Strug

Feature selection for 'orange skin' type surface defect in furniture elements

Bartosz Świderski, Michał Kruk, Grzegorz Wieczorek, Jarosław Kurek, Katarzyna Śmietańska, Leszek Chmielewski, Jarosław Górski, Arkadiusz Orłowski

Probabilistic Learning Vector Quantization with Cross-Entropy for Probabilistic Class Assignments in Classification Learning

Andrea Villmann, Marika Kaden, Sascha Saralajew, Thomas Villmann

Multi-class and Cluster Evaluation Measures based on Rényi and Tsallis Entropies and Mutual Information

Thomas Villmann, Tina Geweniger

Verification of results in the acquiring knowledge process based on IBL methodology

Łukasz Was, Piotr Milczarski, Żofia Stawska, Sławomir Wiak, Paweł Maślanka, Marek Kot

A Fuzzy Measure for Recognition of Handwritten Letter Strokes

Michał Wróbel, Katarzyna Nieszporek, Janusz Starczewski, Andrzej Cader

Stability of features describing the dynamic signature biometric attribute

Marcin Zalasiński, Krzysztof Cpałka, Konrad Grzanek

#### 18:00

Social event, Venue: Outdoor bonfire

### Tuesday, June 5

07:30 - 8:30

Breakfast, Room: Zakopane

Invited Talks, Chair: J. Grzymala-Busse, Room Tatry 8:30 - 9:15

Andrzej Cichocki - Deep learning and tensor networks

9:15 - 10:00

Andrzej Skowron - IGrC: Toward Computing Model for Data Science

Session 4: Evolutionary Algorithms and their Applications 1 (poster session)

Date/Time: 10:20-11:30, Tue., June 5, 2018

Room: Rysy

An Optimization Algorithm Based on Multi-Dynamic Schema of Chromosomes

Radhwan Al-Jawadi, Marcin Studniarski

Eight Bio-inspired Algorithms Evaluated for Solving Optimization Problems

Carlos Eduardo M. Barbosa, Germano C. Vasconcelos

Robotic flow shop scheduling with parallel machines and no-wait constraints in an aluminium anodising plant with the CMAES algorithm

Carina Behr, Jacomine Grobler

Migration Model of Adaptive Differential Evolution Applied to Real-World Problems

Petr Bujok

Comparative Analysis Between Particle Swarm Optimization Algorithms Applied to Price-Based Demand Response

Diego Cavalca, Guilherme Spavieri, Ricardo Fernandes

Visualizing the Optimization Process for Multi-Objective Optimization Problems

Bayanda Chakuma, Marde Helbig

Comparison of Constraint Handling Approaches in Multi-objective Optimization

Rohan Chhipa, Marde Helbig

Genetic Programming for the Classification of Levels of Mammographic Density

Daniel Fajardo-Delgado, María Guadalupe Sánchez, Raquel Ochoa-Ornelas, Ismael Edrein Espinosa-Curiel, Vicente Vidal

Feature Selection using Differential Evolution for Unsupervised Image Clustering

Matheus Gutoski, Manasses Ribeiro, Nelson Aquino, Leandro Hattori, Andre Lazzaretti, Heitor Lopes

A study on solving single stage batch process scheduling problems with an evolutionary algorithm featuring bacterial mutations *Máté Hegyháti, Olivér Ősz, Miklós Hatwágner* 

Observation of Unbounded Novelty in Evolutionary Algorithms is Unknowable

Eric Holloway, Robert Marks

Multi-Swarm Optimization Algorithm Based on Firefly and Particle Swarm Optimization Techniques

Tomas Kadavy, Michal Pluhacek, Adam Viktorin, Roman Senkerik

New Running Technique for the Bison Algorithm

Anezka Kazikova, Michal Pluhacek, Adam Viktorin, Roman Senkerik

Session 5: Evolutionary Algorithms and their Applications 2 (poster session)

Date/Time: 11:40-12:50, Tue., June 5, 2018

Room: Rysy

Evolutionary Design and Training of Artificial Neural Networks

Lumir Kojecky, Ivan Zelinka

Obtaining Pareto Front in Instance Selection with Ensembles and Populations

Mirosław Kordos, Marcin Wydrzyński, Krystian Łapa

Negative Space-based Population Initialization Algorithm (NSPIA)

Krystian Łapa, Krzysztof Cpałka, Andrzej Przybył, Konrad Grzanek

Deriving Functions for Pareto Optimal Fronts Using Genetic Programming

Armand Maree, Marius Riekert, Marde Helbig

Identifying an Emotional State from Body Movements using Genetic-based Algorithms

Yann Maret, Daniel Oberson, Marina Gavrilova

Particle Swarm Optimization with Single Particle Repulsivity for Multi-modal Optimization

Michal Pluhacek, Roman Senkerik, Adam Viktorin, Tomas Kadavy

Hybrid Evolutionary System to Solve Optimization Problems

Krzysztof Pytel

Horizontal gene transfer as a method of increasing variability in genetic algorithms

Wojciech Rafajłowicz

Evolutionary Induction of Classification Trees on Spark

Daniel Reska, Krzysztof Jurczuk, Marek Kretowski

How Unconventional Chaotic Pseudo-random Generators Influence Population Diversity in Differential Evolution

Roman Senkerik, Adam Viktorin, Michal Pluhacek, Tomas Kadavy, Ivan Zelinka

An Adaptive Individual Inertia Weight Based on Best, Worst and Individual Particle Performances for the PSO Algorithm *Guilherme Spavieri, Diego Cavalca, Ricardo Fernandes, Guilherme Lage* 

A Mathematical Model and a Firefly Algorithm for an Extended Flexible Job Shop Problem with Availability Constraints Willian Tessaro Lunardi, Luiz Henrique Cherri, Holger Voos

On the Prolonged Exploration of Distance Based Parameter Adaptation in SHADE Adam Viktorin, Roman Senkerik, Michal Pluhacek, Tomas Kadavy

Investigating the Impact of Road Roughness on Routing Performance: an Evolutionary Algorithm Approach *Hulda Viljoen, Jacomine Grobler* 

Session 11: Various Problems of Artificial Intelligence (oral session)

Date/Time: 10:20-12:00, Tue., June 5, 2018

Room: Tatry

On the use of Principal Component Analysis and Particle Swarm Optimization in Protein Tertiary Structure Prediction Óscar Álvarez, Juan Fernández-Martínez, Celia Fernández-Brillet, Ana Cernea, Zulima Fernández-Muniz, Andrzej Kloczkowski

Medoid-shift for noise removal to improve clustering

Pasi Fränti, Jiawei Yang

Dimensionally distributed density estimation

Pasi Fränti, Šami Sieranoja

Random projection for k-means clustering

Sami Sieranoja, Pasi Fränti

Automating Feature Extraction and Feature Selection in Big Data Security Analytics

Dimitrios Sisiaridis, Olivier Markowitch

#### 13:00 - 14:30

Lunch, Room: Zakopane

Session 6: Artificial Intelligence in Modeling, Simulation and Control 1 (poster session)

Date/Time: 15:00-16:10, Tue., June 5, 2018

Room: Rysy

Cascading Probability Distributions in Agent-based Models: An Application to Behavioural Energy Wastage

Fatima Abdallah, Shadi Basurra, Mohamed Medhat Gaber

The Hybrid Plan Controller Construction for Trajectories in Sobolev Space

Krystian Jobczyk, Antoni Ligęza

Temporal Traveling Salesman Problem -- in a Logic- and Graph Theory-based Depiction

Krystian Jobczyk, Piotr Wiśniewski, Antoni Ligęza

Modelling the affective power of locutions in a persuasive dialogue game

Magdalena Kacprzak, Anna Sawicka, Andrzej Zbrzezny

Determination of a matrix of the dependencies between features based on the expert knowledge

Adam Kiersztyn, Paweł Karczmarek, Zhadkovska Khrystyna, Witold Pedrycz

Dynamic Trust Scoring of Railway Sensor Information

Marcin Lenart, Andrzej Bielecki, Marie-Jeanne Lesot, Teodora Petrisor, Adrien Revault d'Allonnes

Linear Parameter-varying Two Rotor Aero-dynamical System Modelling with State-space Neural Network

Marcel Luzar, Józef Korbicz

Evolutionary Quick Artificial Bee Colony for Constrained Engineering Design Problems

Otavio Noura Teixeira, Mário Tasso Ribeiro Serra Neto, Demison Rolins de Souza Alves, Marco Antonio Florenzano Mollinetti, Fabio dos Santos Ferreira, Daniel Leal Souza, Rodrigo Lisbôa Pereira

Session 7: Various Problems of Artificial Intelligence (poster session)

Date/Time: 16:20-17:30, Tue., June 5, 2018

Room: Rysy

Patterns in Video Games Analysis. Application of Eye-Tracker and Electrodermal Activity (EDA) Sensor

Iwona Grabska-Gradzińska, Jan K. Argasiński

Improved Behavioral Analysis of Fuzzy Cognitive Map Models

Miklós F. Hatwagner, Gyula Vastag, Vesa A. Niskanen, László T. Kóczy

On Fuzzy Sheffer Stroke Operation

Piotr Helbin, Wanda Niemyska, Pedro Berruezo, Sebastia Massanet, Daniel Ruiz-Aguilera, Michal Baczynski

Building Knowledge Extraction from BIM/IFC Data for Analysis in Graph Databases

Ali Ismail, Barbara Strug, Grażyna Ślusarczyk

Multi-Agent Problem in a New Depiction

Krystian Jobczyk, Antoni Ligęza

Proposal of a smart gun system supporting police interventions

Radosław Klimek, Zuzanna Drwiła, Patrycja Dzienisik

Knowledge Representation in Model Driven Approach in terms of the Zachman Framework

Krzysztof Kluza, Piotr Wiśniewski, Antoni Ligęza, Anna Suchenia, Joanna Wyrobek

Rendezvous Consensus Algorithm Applied to the Location of Possible Victims in Disaster Zones

Jose Leon, Gustavo A. Cardona, Luis G. Jaimes, Juan M. Calderon, Pablo Ospina Rodriquez

Exploiting OSC Models by Using Neural Networks with an Innovative Pruning Algorithm

Grazia Lo Sciuto, Giacomo Capizzi, Christian Napoli, Raphael Shikler, Dawid Polap, Marcin Woźniak

Critical Analysis of Conversational Agent Technology for Intelligent Customer Support and Proposition of a New Solution

Mateusz Modrzejewski, Przemysław Rokita

Random Forests for Profiling Computer Network Users

Jakub Nowak, Marcin Korytkowski, Robert Nowicki, Rafał Scherer, Agnieszka Siwocha

Leader-follower formation for UAV robot swarm based on fuzzy logic theory

Wilson Quesada, Jonathan Rodriguez, Juan C. Murillo, Gustavo A. Cardona, David Yanguas-Rojas, Luis G. Jaimes, Juan M. Calder\'on

Towards Interpretability of the Movie Recommender Based on a Neuro-Fuzzy Approach

Tomasz Rutkowski, Jakub Romanowski, Piotr Woldan, Paweł Staszewski, Radosław Nielek

Dual-Heuristic Dynamic Programming in the three-wheeled mobile transport robot control

Marcin Szuster

Stylometry analysis of literary texts in Polish

Tomasz Walkowiak, Maciej Piasecki

Constraint-Based Identification of Complex Gateway Structures in Business Process Models

Piotr Wiśniewski, Antoni Ligęza

Developing a fuzzy knowledge base and filling it with knowledge extracted from various documents

Nadezhda Yarushkina, Vadim Moshkin, Aleksey Filippov, Gleb Guskov

#### 18:30

Social event (Banquet), Room: Tatry

## Wednesday, June 6

#### 07:30-8:30

Breakfast, Room: Zakopane

Session 8: Bioinformatics, Biometrics and Medical Applications (poster session)

Date/Time: 8:40-9:50, Wed., June 6, 2018

Room: Rysy

The shape language application to evaluation of the vertebra syndesmophytes development progress.

Marzena Bielecka, Rafał Obuchowicz, Mariusz Korkosz

Analytical Realization of the EM Algorithm for Emission Positron Tomography

Robert Cierniak, Piotr Dobosz, Piotr Pluta, Piotr Filutowicz

An Application of Graphic Tools and Analytic Hierarchy Process to the Description of Biometric Features

Paweł Karczmarek, Adam Kiersztyn, Witold Pedrycz

On Some Aspects of an Aggregation Mechanism in Face Recognition Problems

Paweł Karczmarek, Adam Kiersztyn, Witold Pedrycz

Nuclei detection in cytological images using Convolutional Neural Network and ellipse fitting algorithm

Marek Kowal, Michał Żejmo, Józef Korbicz

Towards the Development of Sensor Platform for Processing Physiological Data From Wearable Sensors

Krzysztof Kutt, Wojciech Binek, Piotr Misiak, Grzegorz J. Nalega, Szymon Bobek

Severity of Cellulite Classification Based on Tissue Thermal Imagining

Jacek Mazurkiewicz, Joanna Bauer, Michal Mosion, Agnieszka Migasiewicz, Halina Podbielska

Features selection for the most accurate SVM gender classifier based on geometrical features

Piotr Milczarski, Zofia Stawska, Shane Dowdall

Parallel Cache Efficient Algorithm and Implementation of Needleman-Wunsch Global Sequence Alignment

Marek Pałkowski, Krzysztof Siedlecki, Włodzimierz Bielecki

Using fuzzy numbers for modeling series of medical measurements in a diagnosis support based on the Dempster-Shafer theory

Sebastian Porebski, Ewa Straszecka

Averaged Hidden Markov Models in Kinect-Based Rehabilitation System

Aleksandra Postawka, Przemysław Śliwiński

Genome compression: an image-based approach

Kelvin Vieira Kredens, Juliano Vieira Martins, Osmar Betazzi Dordal, Edson Emilio Scalabrin, Roberto Hiroshi Herai, Bráulio Coelho Ávila

Stability of features describing the dynamic signature biometric attribute

Marcin Zalasiński, Krzysztof Cpałka, Konrad Grzanek

Session 9: Computer Vision, Image and Speech Analysis (poster session)

Date/Time: 10:00-11:10, Wed., June 6, 2018

Room: Rysy

Moving Object Detection and Tracking Based on Three-frame Difference and Background Subtraction with Laplace Filter Beibei Cui, Jean-Charles Creput

Robust lane Extraction using Two-Dimension Declivity

Mohamed Fakhfakh, Nizar Fakhfakh, Lotfi Chaari

Segmentation of the Proximal Femur by the Analysis of X-ray Imaging using Statistical Models of Shape and Appearance

Joel Gallegos Guillén, Laura Estacio Cerquín, Javier Delgado Obando, Eveling Castro-Gutierrez

Architecture of Database Index for Content-Based Image Retrieval Systems

Rafał Grycuk, Patryk Najgebauer, Rafał Scherer, Agnieszka Siwocha

Symmetry of Hue Distribution in the Images

Piotr Milczarski

Image Completion with Smooth Nonnegative Matrix Factorization

Tomasz Sadowski, Rafał Zdunek

A Fuzzy SOM for Understanding of Uncomplete 3D Faces

Janusz Starczewski, Katarzyna Nieszporek, Michał Wróbel, Konrad Grzanek

Image Retrieval by use of Linguistic Description in Databases

Krzysztof Wiaderek, Danuta Rutkowska, Elisabeth Rakus-Andersson

Session 10: Data Mining (poster session)

Date/Time: 11:20 - 12:30, Wed., June 6, 2018

Room: Rysy

Text Categorization Improvement via User Interaction

Jakub Atroszko, Julian Szymanski, David Gil, Higinio Mora

Uncertain decision tree classifier for mobile context-aware computing

Szymon Bobek, Piotr Misiak

An efficient prototype selection algorithm based on dense spatial partitions

Joel Carbonera, Mara Abel

Complexity of Rule Sets Induced by Characteristic Sets and Generalized Maximal Consistent Blocks

Patrick G Clark, Cheng Gao, Jerzy W Grzymala-Busse, Teresa Mroczek, Rafał Niemiec

On Ensemble Components Selection in Data Streams Scenario with Gradual Concept-Drift *Piotr Duda* 

An empirical study of strategies boosts performance of Mutual Information similarity

Ole Kristian Ekseth, Svein-Olaf Hvasshovd

Distributed Nonnegative Matrix Factorization with HALS Algorithm on Apache Spark

Krzysztof Fonał, Rafał Zdunek

Application of Perspective-based Observational Tunnels Method to Visualization of Multidimensional Fractals

Dariusz Jamróz

Estimation of probability density function, differential entropy and other relative quantities for data streams with concept drift

Maciej Jaworski, Patryk Najgebauer, Piotr Goetzen

System for building and analyzing preference models based on social networking data and SAT solvers

Radosław Klimek

On asymmetric problems of objects' comparison

Maciej Krawczak, Grażyna Szkatuła

Recommendation Algorithm Based on User Trust and Interest with Probability Matrix Factorization

Chuanmin Mi, Peng Peng, Rafał Mierzwiak

Feature Extraction in Subject Classification of Text Documents in Polish

Tomasz Walkowiak, Szymon Datko, Henryk Maciejewski

Efficiency of Random Decision Forest Technique in Polish Companies' Bankruptcy Prediction

Joanna Wyrobek, Krzysztof Kluza

TUP-RS: Temporal User Profile based Recommender System

Wanling Zeng, Yang Du, Dingqian Zhang, Zhili Ye, Zhumei Dou

Feature Extraction of Surround Sound Recordings for Acoustic Scene Classification

Sławomir Zieliński

#### 13:00 - 14:30

Lunch, Room: Zakopane

## Sightseeing trip

## 18:00 - 19:30

Dinner, Room: Zakopane

## Thursday, June 7

07:30-8:30

Breakfast, Room: Zakopane

### Conference site

The ICAISC Conference is held in:

Mercure Kasprowy Hotel ul. Szymaszkowa 34-500 Zakopane, POLAND tel. (+48) 18 202 40 00

## **Useful phone numbers:**

taxi in Zakopane: +48 18 196 25, Radio Taxi Giewont +48 18 196 26

Radio Taxi 919: +48 18 20 12 560 INTER Radio Taxi: +48 18 201 42 32

Zakopane tourist information: +48 18 20-122-11

Ambulance: 999, Police: 997 (or 112 from your mobile phone)

Mountain Rescue Team TOPR: 985, (+48) 601 100 300 or (+48) 18 206 34 44 Krakow tourist information: +48 12 422 60 91, +48 12 421 77 06, +48 12 433 73 10

taxi in Krakow: (+48 12) 19919, 19191, 19621, 19623, 19625