CONTENT
2017 IEEE International Conference on INnovations in Intelligent SysTems and Applications (INISTA 2017)

Welcome to the IEEE International Conference on INnovations in Intelligent SysTems and Applications (INISTA 2017). The INISTA 2017 held in Gdynia, Poland, July 3-5, 2017, was organized by Gdynia Maritime University, Poland, in cooperation with Yildiz Technical University, Turkey, IEEE Systems, Man, and Cybernetics Society (SMC), IEEE Poland Section, Poland Section of IEEE Systems, Man, and Cybernetics Society Chapter, IEEE SMC Technical Committee on Computational Collective Intelligence and Gdynia Maritime University's Students and Alumni Foundation. Technical Support of the Conference has been provided by the Poland Section of IEEE Computer Society Chapter.

IEEE International Conference on INnovations in Intelligent SysTems and Applications has been organized since 2005. It aims to bring together the researchers from the entire spectrum of the multi-disciplinary fields of intelligent systems and establish effective means of communication between them. In particular, it focuses on all aspects of intelligent systems and the related applications, from the points of view of both theory and practice.

The main aim of the INISTA conference is to provide a premier international forum for researchers and practitioners to report the latest innovations, summarize the state-of-the-art, and exchange ideas and advances in all aspects of Innovations in Intelligent Systems. Apart of the main track it includes special sessions and plenary talks by invited eminent speakers.

Accepted and presented papers highlight the new trends and challenge of intelligent systems. Each paper was peer reviewed by at least two members of the International Program Committee and International Reviewer Board. Out of a large number of submissions, only 89 best papers have been selected for oral presentation and publication in the INISTA 2017 proceedings.

We would like to express our sincere thanks to the Honorary Patron of the Conference Mayor of Gdynia, Dr. Wojciech Szczurek. Our special gratitude goes to the IEEE SMC and to the IEEE Poland Section. We also would like to express our thanks to the Keynote Speakers – Prof. Kuo-Ming Chao, Coventry University, UK, Prof. Lech Madeyski, Wroclaw University of Science and Technology, Poland, Prof. Roman Słowiński, IEEE Fellow, Poznań University of Technology, and Polish Academy of Sciences, Poland, and Prof. Jacek M. Zurada, IEEE Life Fellow, University of Louisville, Kentucky, USA. We also thank co-organizer Gdynia Maritime University's Students and Alumni Foundation for helping to organize the event.

Our special thanks go to the Local Organizing Committee with the Local Arrangements Co-Chairs. Thanks are due to the Technical Program Chairs, Special Sessions Co-Chairs, Publicity Co-Chairs, all Program and Reviewer Committee members and all the additional reviewers 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 which essentially contribute to the success of the conference.

Finally, we cordially thank all the authors, presenters and delegates for their valuable contribution to this successful event. The conference would not have been possible without their support.

We hope and intend that INISTA 2017 significantly contributes to fulfillment of the academic excellence and leads to even greater successes of INISTA events in the future.

July, 2017

Piotr Jędrzejowicz
Tülay Yildirim
Ireneusz Czarnowski

Honorary Patronage

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IEEE Systems, Man, and Cybernetics Society

IEEE SMC TC on Computational Collective Intelligence

Gdynia Maritime University's Students and Alumni Foundation, Poland

Technical Support

Poland Section of IEEE Computer Society Chapter C16

ADMMLT 2017: Advanced Data Mining and Machine Learning Techniques
Chairs: Bay Vo, Tzung-Pei Hong and Loan T. T. Nguyen

AIA 2017: Artificial Intelligence and Applications
Chairs: Małgorzata Przybyła-Kasperek, Agnieszka Nowak-Brzezińska and Beata Zielosko

DADE 2017: Deployment Areas of Dynamic Environments
Chairs: Jolanta Mizera-Pietraszko, Grzegorz Kołaczek and Ronald R. Yager

IOD 2017: Innovative Outlier Detection
Chairs: Piotr S. Szczepaniak and Agnieszka Duraj

MLMAT 2017: Machine Learning: Methodologies, Applications and Trends
Chairs: Chung-Ming Ou and Chung-Ren Ou

NSLIS 2017: Neutrosophic Set and Logic in Intelligent Systems
Chair: Florentin Smarandache

PADL 2017: Practical Applications of Deep Learning
Chair: Ayşegül Uçar

SINTEL 2017: Semantic Intelligence
Chairs: Kambiz Badie and Maryam Tayefeh Mahmoudi

Prof. **Kuo-Ming Chao**
Coventry University, UK

Speech Title*:* Big Open Linked Data

Prof. **Lech Madeyski**
Wroclaw University of Science and Technology, Poland

Speech Title: Towards More Credible Empirical Research

Prof. **Roman Słowiński**
IEEE Fellow
Poznań University of Technology and Polish Academy of Sciences, Poland

Speech Title: Constructive Preference Learning via Robust Ordinal Regression

Prof. **Jacek M. Zurada**
IEEE Life Fellow
University of Louisville, Kentucky, USA

Speech Title Towards Better Understanding of Data: Sparse Coding, Additive Features, Perceptrons and Constrained Autoencoders

Address:

Hotel Nadmorski
Ejsmonda Str., 2
81-409 Gdynia, Poland

The Hotel Nadmorski is located by the white beach of Gdańsk Bay and the Seaside Boulevard - walking and cycling route along the coast.

July 2, 2017 (Sunday)

17:00-19:00	Registration

July 3, 2017 (Monday)

	Room: Bursztynowa	Room: Rotariańska	Room: Perłowa
8:00 - 17:00	**Registration**		
9:00 – 9:30	**Opening ceremony – Room Bursztynowa**		
9:30 – 10:30	**Plenary session** **Constructive Preference Learning via Robust Ordinal Regression** **Prof. Roman Słowiński** **Chair: Prof. Piotr Jędrzejowicz** **Room: Bursztynowa**		
10:30 – 10:45	**Group photo session**		
10:45 – 11:15	**Coffee break**		
11:15 – 13:00	**General Track 1** **Collective Intelligence**	**General Track 2** **Soft Computing**	**AIA 2017: Artificial Intelligence and Applications Part 1**
13:00 – 14:00	**Lunch**		
14:00 – 15:00	**Plenary session** **Towards More Credible Empirical Research** **Prof. Lech Madeyski** **Chair: Prof. Ngoc Thanh Nguyen** **Room: Bursztynowa**		
15:00 – 15:30	**Coffee break**		
15:30 – 17:00	**DADE 2017: Deployment Areas of Dynamic Environments**	**ADMMLT 2017: Advanced Data Mining and Machine Learning Techniques**	**AIA 2017: Artificial Intelligence and Applications Part 2**
17:15 – 20:30	**Welcome reception** **Place: Emigration Museum in Gdynia**		

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July 4, 2017 (Tuesday)

	Room: Bursztynowa	Room: Rotariańska	Room: Perłowa
8:30 - 17:00	Registration		
9:00 – 10:00	**Plenary session** **Towards Better Understanding of Data: Sparse Coding, Additive Features, Perceptrons and Constrained Autoencoders** **Prof. Jacek M. Zurada** **Chair: Prof. Tülay Yildirim** **Room: Bursztynowa**		
10:00 – 10:30	Coffee break		
10:30 – 11:30	**General Track 3** **Soft Computing**	**General Track 4** **Smart Applications**	**MLMAT 2017: Machine Learning: Methodologies, Applications and Trends Part 1**
11:30 – 11:40	Short break		
11:40 – 13:00	**General Track 5** **Smart Applications**	**General Track 6** **Soft Computing**	**MLMAT 2017: Machine Learning: Methodologies, Applications and Trends Part 2**
13:00 – 14:00	Lunch		
14:00 15:00	**Plenary session** **Big Open Linked Data** **Prof. Kuo-Ming Chao** **Chair: Prof. Tzung-Pei Hong** **Room: Bursztynowa**		
15:00 – 15:30	Coffee break		
15:30 – 17:00	**PADL 2017: Practical Applications of Deep Learning**	**SINTEL 2017: Semantic Intelligence**	**IOD 2017: Innovative Outlier Detection**
19:00 – 22:00	**Conference dinner** **Place: Nadmorski Hotel, Gdynia**		

July 5, 2017 (Wednesday)

	Room: Bursztynowa	Room: Rotariańska	Room: Perłowa
8:00 - 13:00	Registration		
9:00 – 10:00	**NSLIS 2017: Neutrosophic Set and Logic in Intelligent Systems**	**General Track 7** **Machine Learning**	**MLMAT 2017: Machine Learning: Methodologies, Applications and Trends Part 3**
10:00 – 10:30	Coffee break		
10:30 – 12:00	**General Track 8** **Machine Learning**	**General Track 9** **Machine Learning**	**General Track 10** **Smart Applications**
12:00 – 12:30	Closing ceremony – Room Bursztynowa		
12:30 – 13:30	Lunch		
13:15 – 19:00	Excursion to Gdańsk		

July 2, 2017 (Sunday)

17:00 - 19:00 - Registration

July 3, 2017 (Monday)

8:00 - 17:00 - Registration

9:00 - 9:30 – Opening ceremony – Room Bursztynowa

9:30 - 10:30   **Plenary session – Room: Bursztynowa**

Constructive Preference Learning via Robust Ordinal Regression
Prof. Roman Słowiński

Chair: Prof. Piotr Jędrzejowicz

10:30 - 10:45 – Group photo session

10:45 - 11:15 – Coffee break

11:15 - 13:00 – Parallel Sessions

General Track 1 – Room: Bursztynowa
Collective Intelligence
Chair: Prof. Ngoc Thanh Nguyen
1. Assessing the Quality of a Consensus Determined Using a Multi-level Approach
   Adrianna Kozierkiewicz-Hetmańska, Marcin Pietranik
2. Prediction Markets as a Vital Part of Collective Intelligence
   Rafał Palak, Ngoc Thanh Nguyen
3. Influence of Social Communication on Content-Based Recommendation
   Bernadetta Maleszka, Marcin Maleszka
4. The Impact of Diversity on the Quality of Collective Prediction
   Van Du Nguyen, Ngoc Thanh Nguyen
5. Evaluation of Agents' Management Impact on Performances in Coalition-Based Cooperation
   Kaouther Bouzouita, Wided Lejouad Chaari, Moncef Tagina

General Track 2 – Room: Rotariańska
Soft Computing
Chair: Prof. Dariusz Barbucha
1. The Stability Analysis of Bat Algorithm
   Janusz P. Paplinski, Miroslaw Lazoryszczak

2. Adapting Code Maintainability to Bat-inspired Test Case Prioritization
   Muhammed Maruf Öztürk
3. A Hybrid Optimization Method To Improve Driver's Comfort
   Kornel Warwas, Szymon Tengler
4. Multi-criteria Trajectory Base Path Planning Algorithm for a Moving Object in a Dynamic Environment
   Agnieszka Lazarowska
5. Solution of Fuzzy Differential Equations using Fuzzy Sumudu Transforms
   Raheleh Jafari, Sina Razvarz

Special Session – Room: Perłowa
AIA 2017: Artificial Intelligence and Applications (part 1)
Chairs: Prof. Małgorzata Przybyła-Kasperek, Prof. Agnieszka Nowak-Brzezińska, Prof. Beata Zielosko
1. Feature Selection Based on the Rough Set Theory and Dispersed System with Dynamically Generated Disjoint Clusters
   Małgorzata Przybyła-Kasperek
2. On Sequential Selection of Attributes to be Discretized for Authorship Attribution
   Grzegorz Baron
3. Comparison of Similarity Measures in Context of Rules Clustering
   Agnieszka Nowak-Brzezińska, Tomasz Rybotycki
4. Association ACDT as a Tool for Discovering the Financial Data Rules
   Jan Kozak, Przemysław Juszczuk
5. Human Gait Recognition Based on Ground Reaction Forces in Case of Sport Shoes and High Heels
   Derlatka Marcin

13:00 - 14:00 – Lunch

14:00 - 15:00	**Plenary session – Room: Bursztynowa**
	Towards More Credible Empirical Research
	Prof. Lech Madeyski
	Chair: Prof. Ngoc Thanh Nguyen

15:00 - 15:30 – Coffee break

15:30 - 17:00 – Parallel Sessions

Special Session – Room: Bursztynowa
DADE 2017: Deployment Areas of Dynamic Environments
Chairs: Prof. Jolanta Mizera-Pietraszko, Prof. Grzegorz Kołaczek,
         Prof. Ronald R. Yager
1. Analysis of Dynamic Service Oriented Systems for Security Related Problems Detection
   Grzegorz Kołaczek, Jolanta Mizera-Pietraszko
2. The Analysis Of The Low-Cost Flexibility Corridors
   Marek Dudek

3. Testing the Wide-Sense Stationarity of Bandpass Signals for Underwater Acoustic Communications
   Iwona Kochanska
4. Source-Target Mapping Model of Streaming Data Flow for Machine Translation
   Jolanta Mizera-Pietraszko, Grzegorz Kołaczek, Ricardo Rodriguez Jorge
5. Secure Integration of Multiprotocol Instant Messenger
   Sebastian Bala, Tomasz Wasilczyk

Special Session – Room: Rotariańska
ADMMLT 2017: Advanced Data Mining and Machine Learning Techniques
Chairs: Prof. Bay Vo, Prof. Tzung-Pei Hong, Prof. Loan T. T. Nguyen
1. The Trust Value Calculating for Social Network Based on Machine Learning
   Wang Yuji
2. An Incremental Mining Algorithm for Erasable Itemsets
   Tzung-Pei Hong, Kun-Yi Lin ,Chun-Wei Lin, Bay Vo
3. Using Mutual Information for Feature Selection in Programmatic Advertising
   Michal Ciesielczyk
4. An Improved Algorithm for Mining Frequent Inter- Transaction Patterns
   Thanh-Ngo Nguyen, Loan T.T. Nguyen, Ngoc-Thanh Nguyen

Special Session – Room: Perłowa
AIA 2017: Artificial Intelligence and Applications (part 2)
Chairs: Prof. Małgorzata Przybyła-Kasperek, Prof. Agnieszka Nowak-Brzezińska, Prof. Beata Zielosko
1. Backward Chaining Inference as a Database Stored Procedure — the Experiments on Real-world Knowledge Bases
   Roman Simiński, Tomasz Xięski
2. Reasoning and Communicative Strategies in a Model of Argument-Based Negotiation
   Mare Koit
3. Modeling of Unified Process Metamodel Structure in Association-Oriented Database Metamodel: Flowing Resources and Transformation
   Marek Krótkiewicz, Marcin Jodłowiec, Wojciech Przemysław Hunek, Krystian Wojtkiewicz
4. Music Emotion Analysis Using Semantic Embedding Recurrent Neural Networks
   Jan Jakubik, Halina Kwaśnicka
5. A Novel Approach for People Counting and Tracking from Crowd Video
   M. Ayyüce Kizrak Sağun, Bülent Bolat

17:15 - 20:30 – Welcome Reception
        Place: Emigration Museum in Gdynia

July 4, 2017 (Tuesday)

8:30 - 17:00 - Registration

9:00 - 10:00   **Plenary session – Room: Bursztynowa**

Towards Better Understanding of Data: Sparse Coding, Additive Features, Perceptrons and Constrained Autoencoders
Prof. Jacek M. Zurada

Chair: Prof. Tülay Yildirim

10:00 - 10:30 – Coffee break

10:30 - 11:30 – Parallel Sessions

General Track 3 – Room: Bursztynowa
Soft Computing
Chair: Prof. Lech Madeyski

1. Chaotic Moth Swarm Algorithm
   Ugur Guvenc, Serhat Duman, Yunus Hinislioglu
2. Opposition-Based Initialization and a Modified Pattern for Inertia Weight (IW) in PSO
   Mehr Umer Farooq, Akhlaque Ahmad, Abdul Hameed
3. A Combinatorial Approach to Construct Core and Generic Gene Co-Expression Networks of Colon Cancer
   Mustafa Özgür Cingiz, Göksel Biricik, Banu Diri

General Track 4 – Room: Rotariańska
Smart Applications
Chair: Dr. Tomasz Xięski

1. Processing Occlusions Using Elastic-net Hierarchical MAX Model of The Visual Cortex
   Ali Alameer, Patrick Degenaar, Kianoush Nazarpour
2. Grade Analysis for Households Segmentation Based on Energy Usage Patterns
   Tomasz Ząbkowski, Krzysztof Gajowniczek
3. Mastering Strategies in a Board Game of Imperfect Information for Different Search Techniques
   Michał Przybylski, Dariusz Król

Special Session – Room: Perłowa
MLMAT 2017: Machine Learning: Methodologies, Applications and Trends (part 1)
Chairs: Prof. Chung-Ming Ou, Prof. Chung-Ren Ou

1. Performance Comparision of Different Momentum Techniques on Deep Reinforcement Learning
   Mehmet Sarigül, Mutlu Avci
2. The Evaluation of Heterogeneous Classifier Ensembles for Turkish Texts
   Zeynep Hilal Kilimci, Selim Akyokus, Sevinç İlhan Omurca
3. A Hybrid Latent Dirichlet Allocation Approach for Topic Classification
   Chi-I Hsu, Chaochang Chiu

11:30 - 11:40 – Short break

11:40 - 13:00 – Parallel Sessions

General Track 5 – Room: Bursztynowa
Smart Applications
Chair: Dr. Adrianna Kozierkiewicz-Hetmańska
1. Atanassov's Intuitionistic Fuzzy Risk Estimation of the Ship System Failures Based on the Expert Judgments
   Hoang Nguyen
2. Interactive 7-DOF Motion Controller Of The Operator Arm (ExoArm 7-DOF)
   Paweł Herbin, Mirosław Pajor
3. A Framework for Improving Process Robustness with Quantification of Uncertainties in Industry 4.0
   Cinzia Giannetti
4. Modelling Marshall Stability of Fiber Reinforced Asphalt Mixtures with ANFIS
   Nihat Morova, Ekinhan Eriskin, Serdal Terzi, Sebnem Karahancer, Sercan Serin, Mehmet Saltan, Pınar Usta

General Track 6 – Room: Rotariańska
Soft Computing
Chair: Prof. Danuta Zakrzewska
1. The Fuzzy Properties of the Ship Control in Collision Situations
   Mostefa Mohamed-Seghir
2. Thermal Based Exploration for Search and Rescue Robots/Furkan Çakmak, Erkan Uslu, M. Fatih Amasyali, Sirma Yavuz
3. SDP Algorithm for Network Reliability Evaluation
   Petru Caşcaval, Sabina-Adriana Floria
4. Learning l^1-Penalized Logistic Regressions with Smooth Approximation
   Jacek Klimaszewski, Michał Sklyar, Marcin Korzeń

Special Session – Room: Perłowa
MLMAT 2017: Machine Learning: Methodologies, Applications and Trends (part 2)
Chairs: Prof. Chung-Ming Ou, Prof. Chung-Ren Ou
1. The Effects of Different Wavelet Degrees on Epileptic Seizure Detection from EEG Signals
   Gunes Ekim, Nuri Ikizler, Ayten Atasoy
2. A Methodology for Improving Complex Sales Success in CRM Systems
   Doru Rotovei, Viorel Negru
3. Stereotyped Gesture Recognition: An Analysis between HMM and SVM
   Marcos Y. O. Camada, Jés J. F. Cerqueira, Antonio Marcus N. Lima

13:00 - 14:00 – Lunch

14:00 - 15:00   Plenary session – Room: Bursztynowa

Big Open Linked Data
Prof. Kuo-Ming Chao
Chair: Prof. Tzung-Pei Hong

15:00-15:30 – Coffee break

15:30-17:00 – Parallel Sessions

Special Session – Room: Bursztynowa
PADL 2017: Practical Applications of Deep Learning
Chair: Prof. Ayşegül Uçar

1. Comparison of Convolutional Neural Network Models for Food Image Classification
   Gözde Özsert Yiğit, Buse Melis Özyildirim
2. Operational Data Augmentation in Classifying Single Aerial Images of Animals
   Emmanuel Okafor, Rik Smit, Lambert Schomaker, Marco Wiering
3. A Multi-Biometric Recognition System Based On Deep Features of Face and Gesture Energy Image
   Onur Can Kurban, Tülay Yildrim, Ahmet Bilgiç
4. Deep Convolutional Encoder-Decoder Network with Model Uncertainty for Semantic Segmentation
   Shuya Isobe, Shuichi Arai
5. Deep Convolutional Neural Networks for Facial Expression Recognition
   Ayşegül Uçar

Special Session – Room: Rotariańska
SINTEL 2017: Semantic Intelligence
Chairs: Prof. Kambiz Badie, Prof. Maryam Tayefeh Mahmoudi

1. A New Approach to Zone Identification Based on Considering Features with High Semantic Richness
   Kambiz Badie, Nasrin Asadi, Maryam Tayefeh Mahmoudi
2. Compositional Adaptation in Case – Based Reasoning based on the Semantic Relations between the Components in the Cases
   Kambiz Badie, Maryam Tayefeh Mahmoudi
3. Under Question Cultural Boundaries: A Semiospheric Perspective based on Enabling Aspects of Mythical Characters
   Emilia Nercissians
4. Social Semiotic Aspects of Instagram Social Network
   Mohammadreza Mirsarraf, Hamidreza Shairi, Abotorab Ahmadpanah
5. Ranking Nodes By Silentness
   Soheil Ghanbari, Hasan Heydari, Ali Moeini

Special Session – Room: Perłowa
IOD 2017: Innovative Outlier Detection
Chairs: Prof. Piotr S. Szczepaniak, Prof. Agnieszka Duraj

1. Scattering of Acoustical Waves by a Hard Strip and Outlier Phenomenon
   V. F. Emets, Jan Rogowski
2. Multiobjective Genetic Algorithm for Outliers Detection
   Lukasz Chomatek, Agnieszka Duraj
3. Outlier Detection in Medical Data Using Linguistic Summaries
   Agnieszka Duraj
4. Outlier Mining in Rule-Based Knowledge Bases
   Agnieszka Nowak - Brzezińska

5. Resolving Classical Concurrency Problems Using Adaptive Conflictless Scheduling
Mateusz Smolinski

19:00 - 22:00 – Conference dinner
Place: Nadmorski Hotel, Gdynia

July 5, 2017 (Wednesday)

8:30 - 13:00 – Registration

9:00 - 10:00 – Parallel Sessions

Special Session – Room: Bursztynowa
NSLIS 2017: Neutrosophic Set and Logic in Intelligent Systems
Chair: Dr. Aleksander Skakovski
Special Session on Neutrosophic Set and Logic in Intelligent Systems - Introduction to Neutrosophic theory and its Applications by *Prof. Florentin Smarandache*

General Track 7- Room: Rotariańska
Machine Learning
Chair: Prof. Ireneusz Czarnowski
1. Evaluating the Effect of Voting Methods on Ensemble-Based Classification
Florin Leon, Sabina-Adriana Floria, Costin Bădică
2. Ensemble Approach for Time Series Analysis in Demand Forecasting - Ensemble Learning
A. Okay Akyuz, Mitat Uysal, Berna Atak Bulbul, M. Ozan Uysal
3. Stacking and Rotation-based Technique for Machine Learning Classification with Data Reduction
Ireneusz Czarnowski, Piotr Jędrzejowicz

Special Session – Room: Perłowa
MLMAT 2017: Machine Learning: Methodologies, Applications and Trends (part 3)
Chairs: Prof. Chung-Ming Ou, Prof. Chung-Ren Ou
1. A New Approach to Recognize Activities in Smart Environments Based on Cooperative Game Theory
Elaheh Ordoni, Ali Moeini, Kambiz Badie
2. Associative Memory based on Network Dynamics
Chung-Ming Ou
3. Monthly Car Sales Prediction using Internet Word-of- Mouth (eWOM)
Chaochang Chiu, Chia-Houng Shu

10:00 - 10:30 – Coffee break

10:30 - 12:00 – Parallel Sessions

General Track 8 – Room: Bursztynowa
Machine Learning
Chair: Dr. Ewa Ratajczak-Ropel
1. Audio Features Dedicated to the Detection of Arousal and Valence in Music Recordings
   Jacek Grekow
2. Distributed Image Retrieval with Color and Keypoint Features
   Michał Łągiewka, Marcin Korytkowski, Rafal Scherer
3. Comparison of Expert Algorithms with Machine Learning Models for Real Estate Appraisal
   Bogdan Trawiński, Zbigniew Telec, Jacek Krasnoborski, Mateusz Piwowarczyk, Michał Talaga, Tedeusz Lasota, Edward Sawiłow
4. Modeling and Querying Trajectories using Neo4j Spatial and TimeTree for Carpool Matching
   Fuat Bakkal, Süleyman Eken, Nurullah Samed Savaş, Ahmet Sayar

General Track 9 – Room: Rotariańska
Machine Learning
Chair: Dr. Dariusz Król
1. Towards Facts Extraction from Text in Polish Language
   Tomasz Boiński, Adam Chojnowski
2. Unsupervised Feature Selection Using Reversed Correlation for Improved Medical Diagnosis
   Agnieszka Wosiak, Danuta Zakrzewska
3. A Deep Spiking Machine-Hearing System for the case of Invasive Fish Species
   Konstantinos Demertzis, Lazaros Iliadis, Vardis-Dimitris Anezakis
4. Applying Map-Reduce to Imbalanced Data Classification
   Joanna Jędrzejowicz, Jakub Neumann, Piotr Synowczyk, Magdalena Zakrzewska

General Track 10 – Room: Perłowa
Smart Applications
Chair: Dr. Mostefa Mohamed-Seghir
1. Basic Clustering Algorithms Used for Monitoring the Processes of the ATM's OS
   Michal Maliszewski, Urszula Boryczka
2. A Robust Genetic Programming Model for a Dynamic Portfolio Insurance Strategy
   Siamak Dehghanpour, Akbar Esfahanipour
3. Real-time Ground Filtration Method for a Loader Crane Environment Monitoring System Using Sparse LIDAR Data
   Karol Miądlicki, Mirosław Pajor, Mateusz Saków
4. Adaptive Phasor Estimation Technique During Off-Nominal Frequency
   Omar Sami Thiab, Łukasz Nogal, Ryszard Kowalik

12:00 - 12:30 – Closing ceremony – Room Bursztynowa

12:30 - 13:30 – Lunch

13:15 - 19:00 – Excursion to Gdańsk

Group Photo Session

All participants of the INISTA 2017 conference are invited for a group photo session.

Date: Monday, 3 July 2017
Time: 10:30 – 10:45 (10:30 am – 10:45 am)
Place: the lawn in front of the Hotel Nadmorski

Welcome Reception

At the close of the first day of the conference all participants are invited for light snacks. The welcome reception will be held in the hall of the Emigration Museum in Gdynia. The museum exhibition will be available for viewing.

Date: Monday, 3 July 2017
Time: 17:15 – 20:30 (05:15 pm – 8:30 pm)
Place: Emigration Museum in Gdynia

Address
Emigration Museum in Gdynia
Polska 1 St.
Gdynia 81-339
http://www.polska1.pl/en/

Special buses will be available from the Nadmorski Hotel to the Museum (departure at 17:15 (5:15 pm) from the front of the hotel).

Conference Dinner

On Tuesday at the Hotel Nadmorski will be held a gala dinner.

Date: Tuesday, 4 July 2017
Time: 19:00 – 22:00 (07:00 pm – 10:00 pm)
Place: Restaurant at Hotel Nadmorski

Address
Hotel Nadmorski
81-409 Gdynia
ul. Ejsmonda 2

Excursion to Gdańsk

After the conference a tour to the European Solidarity Centre and the Old Town in Gdansk will be organized (with an English tour guide) for the conference participants.

European Solidarity Centre (ECS) is located on Solidarity Square with the historical Gate of Gdansk Shipyard, where the Solidarity movement was born. Its main mission is to commemorate, maintain and popularize the heritage and message of the Solidarity movement and the anti-communist democratic opposition in Poland and throughout the world. The center popularizes and inspires to new cultural, civic, trade union, local government, national and European initiatives with a universal dimension.

In Gdansk - Hanseatic thousand-year-old town - we will show you the most famous Gdansk monuments located near the heart of its Old Town district, around the Long Street and the quayside. You will walk the Long Street and the Market Square and admire the Main Town Hall, the famous Neptune Fountain, the Golden House, the Court of Artus and the beautiful XVI – XVII century houses. At the end of the Market Square you will find the Green Gate. Next, you will see the picturesque old quayside by the Motlava River. Then you will have a chance to see another great monument – the Crane. Later, we will take you to the charming Mariacka Street with the largest red-brick gothic church in Europe – St. Mary's Church. The Mariacka Street hosts also the famous Gdansk amber manufacturers with their gorgeous handicraft.

On our way back to Gdynia, we will stop in Sopot to see the longest wooden pier in Europe.

Date: Wednesday, 5 July 2017
Time: 13:15 – 19:00 (01:15 pm – 07:00 pm)
Meeting place: at the entrance to Hotel Nadmorski

We hope that you will enjoy this trip!

Please contact the Conference help desk on July 2, 3 or 4, if you are interested in participation.

Conference help desk

Opening hours:

2 July 2017 (Sunday)	17:00 – 19:00 (05:00 pm – 07:00 pm)
3 July 2017 (Monday)	08:00 – 17:00 (08:00 am – 05:00 pm)
4 July 2017 (Tuesday)	08:30 – 17:00 (08:30 pm – 05:00 pm)
5 July 2017 (Wednesday)	08:30 – 13:00 (08:30 pm – 01:00 pm)

Moving around the city of Gdynia and the Tricity area

Bus/trolley-bus

One paper ticket on standard bus line costs 3,20 PLN (about 0.75 EUR). The tickets can be bought at some newsstands or directly from the bus driver. The drivers sell sets of 5 half-price tickets and you can pay only in PLN. For other ticket fares use link given on INISTA website (http://inista.org/travel.php).

Commuter Train (SKM)

A commuter train, known as SKM (Fast City Train), runs constantly between Gdynia, Sopot and Gdansk stopping at a dozen intermediate stations. The trains run every 5 to 10 minutes (not so frequently in the evening) and the trip to Gdańsk takes about 35-40 minutes. You buy tickets at ticket offices in the stations or some newsstands and validate them in the yellow machines at the platform entrance. The fare depends on the distance and may vary from 3,20 PLN to about 8,50 PLN (Gdynia – Gdańsk). When buying a ticket, say the name of station you want to go to.

TAXI

City Taxi Plus, phone: + 48 58 668 00 00
Auto-Taxi-Nord, phone: + 48 58 629 11 11
Euroschool Taxi, phone: + 48 58 629 80 00
Halo Express Taxi, phone: + 48 58 623 18 18
Non-Stop Taxi-Radio, phone: + 48 58 625 01 01
Merc Taxi, phone: + 48 58 624 17 17

The cost of taxi within a city is about 2 PLN per 1 kilometer.

Make sure that the taxi driver can confirm the price before you start the journey.

Useful telephone numbers

The country area code for Poland: +48

Emergency services:

112 – the access number for all emergency services: police, ambulance and fire department (a mobile phone connection)
997 – Police
998 – Fire department
999 – Ambulance

ABOUT TRICITY
2017 IEEE International Conference on INnovations in Intelligent SysTems and Applications (INISTA 2017)

The cities of Gdynia, Sopot and Gdansk are called "Tricity Complex" and are seldom visited apart from each other. Although each bears its own distinct identity they have become identified together. Those enjoying long walks may try to reach Gdansk (starting from Gdynia through Sopot) along the beach.

GDYNIA

Having received its city rights in 1926, Gdynia is one of the youngest Polish cities and has about 251,000 inhabitants. With its very big and famous harbour, Gdynia is the sea capital of Poland. No other Polish town and only few European cities have such a long seafront and easy access to the sea. It is 12.5 km long, excluding the port area. Gdynia offers a great variety of tourist attractions. Its Music Theatre attracts culture friends from all over Poland. The Municipal Theatre is perhaps a little more "sepias", although also involved in music since it houses jazz events. Every summer at Gdynia, theatre lovers may watch the shows without leaving the beach since there are theatre performances on the so-called "Summer Stage". Fascinating items from the time when Gdynia was a little village are displayed in the "Museum of Gdynia". Visiting this museum, it is hard to believe that this forgotten village became "the Polish New York" (National Geographic) after only 13 years of development. Luxury shops, located next to large markets such as the famous Market Place (Hala Targowa), offer an excellent selection of goods. Open-air-events, such as New Year's Eve, street basketball, may picnic, sea days, regatta and motor-cross tournaments attract thousands of inhabitants and visitors from other places. Politicians, social and business activists often choose Gdynia as place of their meetings.

SOPOT

Neighbouring Sopot is a seaside health resort with unusual microclimate. Beautiful wide beaches, a breezy boardwalk, elegant hotels with full amenities and a rich cultural program attract visitors from Poland and Europe.

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GDAŃSK

Gdańsk had a tumultuous history, with citizens from Germany, Poland and other countries contributing to its cosmopolitan air. After being overrun by the Teutonic Knights, Gdansk joined the Hanseatic League in the 14th century. In the 17th century, it was one of the few Polish cities to withstand the Swedish invasion. After World War I, it was declared the Free City of Gdańsk/Danzig. On September 1, 1939, the first shots of World War II were fired at Westerplatte, a Polish garrison outside the city. The city was nearly levelled during the war and meticulously rebuilt for the next twenty years. In 1970, a massive demonstration against the Communist regime originated in the Gdańsk Shipyard. Ten years later, another shipyard protest led to the creation of the Solidarity Labour Union. In 1990, former shipyard worker and Solidarity leader Lech Wałęsa was elected Preside of newly Democratic Poland.

In the Old Town, visitors can once again be impressed by the authentically restored city hall, the Neptune Fountain, the Arthur's Court, the Golden Gate, Green Gate and the gothic church of the Holy Virgin Mary. Along the waterfront the Old Crane, today a maritime museum, dominates the skyline. Westerplatte obelisk just outside the city, where the World War II began, and the Monument of Murdered Shipyard Workers, dedicated to the workers who died during anti-Communist demonstrations, are mementoes of the city's modern history. Also in the north of Gdańsk is the district of Gdańsk-Oliwa, the site of an immense cathedral whose impeccable acoustics capture the magnificent sounds of the great organ during public recitals.

The city's most famous citizens include astronomer Johannes Hevelius, physicist Gabriel Fahrenheit, philosopher Arthur Schopenhauer, writer Gunter Grass and, most recently, Lech Wałęsa.