2019 IEEE International Symposium on INnovations in Intelligent SysTems and Applications (INISTA)

PRELIMINARY PROGRAM

July 3-5, 2019, Sofia, Bulgaria

Programme at a glance

Wednesday, 03.07.2019

Timetable	Room	Session
8:30 - 9:00		Registration
9:00 - 9:30	A	Openinig ceremony
9:30 - 10:30	A	Keynote Speech 1
10:30 - 11:00		Coffee Break
11:00 - 12:20	A	NLP 1
11:00 - 12:20	B	Image processing
12:30 - 13:30		Lunch
13:30 - 14:50	A	Special Session MLMAT 1
13:30 - 14:50	B	Smart agents
14:50 - 15:20		Coffee Break
15:20 - 16:40	A	Special Session MLMAT 2
15:20 - 16:40	B	Decision making
20.30-22:00		Welcome Reception

Thursday, 04.07.2019

Timetable	Room	Session
8:30 - 9:00		Registration
9:00 - 10:00	A	Keynote Speech 2
10:00 - 11:20	A	Workshop WASA
10:00 - 11:20	B	Special Session MLMAT 3
11:20 - 11:50		Coffee Break
11:50 - 13:10	A	Classification
11:50 - 13:10	B	NLP 2
13:10 - 14:10		Lunch
15:00		Excursion
21:00		Conference Dinner

Friday, 05.07.2019

Timetable	Room	Session
8:30 - 9:00		Registration
9:00 - 10:00	A	Keynote Speech 3
10:00 - 11:20	A	Special Session MT4BD
10:00 - 11:20	B	Intelligent process control
11:20 - 11:50		Coffee Break
11:50 - 12:50	A	Keynote Speech 4
12:50 - 13:50		Lunch
13:50 - 15:10	A	Special Session MT4BD
13:50 - 15:10	B	Intelligent transportation systems
15:10 - 15:40		Coffee Break
15:40 - 16:00	A	Closing Session

Wednesday, 03.07.2019

8:30-9:00   **Registration**

9:00-9:30   **Opening ceremony**

9:30-10:30   **Keynote Speech 1**

Prof. Yannis Manolopoulos, Where to? State-of-the-art POI Recommendations

Chair: Prof. Tülay Yıldırım

10:30-11:00   **Coffee Break**

11:00-12:20   **Natural language processing 1**

Chair: Prof. Banu Diri

Tomasz Boiński, Julian Szymański and Tymoteusz Cejrowski, Exact-match Based Wikipedia-WordNet Integration

Emre Salih Akın and Tuğba Yıldız, Sentiment Analysis through Transfer Learning for Turkish Language

Buse Buz and Tunga Güngör, Developing a Statistical Turkish Sign Language Translation System for Primary School Students

Kiril Simov, Petia Koprinkova-Hristova, Alexander Popov and Petya Osenova, Word Embeddings Improvement via Echo State Networks

11:00-12:20   **Image processing**

Chair: Prof. Kiril Alexiev

Murat Taşkıran, Mehmet Kıllıoğlu, Nihan Kahraman and Çiğdem Eroğlu Erdem, Face Recognition Using Dynamic Features Extracted from Smile Videos

Faezeh Yeganli and Kuldeep Singh, Finger-Print Image Super-Resolution via Gradient Operator based Clustered Coupled Sparse Dictionaries

Murat Taşkıran and Nihan Kahraman, Comparison of CNN Tolerances to Intra Class Variety in Food Recognition

12:30-13:30   **Lunch**

13:30-14:50   **Special Session MLMAT 1**

Chair: Prof. Chung-Ming Ou

Pelin Yildirim Taşer, Kökten Ulaş Birant and Derya Birant, Comparison of Ensemble-Based Multiple Instance Learning Approaches

Karwan Qader and Mo Adda, DOS and Brute Force attacks faults detection using An Optimised Fuzzy C-means

Jordan Todorov, Irina Krasteva, Vanya Ivanova and Emil Doychev, BLISS – A CPSS-like Application for Lifelong Learnin

13:30-14:50   **Smart agents**

Chair: Prof. Mattias Vahde

Biel Piero E Alvarado Vasquez and Fernando Matia, A social robot empowered with a new programming language and its performance in a laboratory

Dagmawi Neway Mekuria, Paolo Sernani, Nicola Falcionelli and Aldo Franco Dragoni, A Probabilistic Multi-Agent System Architecture for Reasoning in Smart Homes

Ayşegül Uçar, Yakup Demir and Cüneyt Güzeliş, An Implementation of Vision Based Deep Reinforcement Learning for Humanoid Robot Locomotion

14:50-15:20   **Coffee Break**

15:20-16:40   **Special Session MLMAT 2**

Chair: Prof. Jordan Todorov

Cinzia Giannetti and Aniekan Essien, A Deep Learning Framework for Univariate Time Series Prediction Using Convolutional LSTM Stacked Autoencoders

Zirak Allaf, Mo Adda and Alexander Gegov, Malicious Loop Detection Using Support Vector Machine

Dilara Gumusbas and Tülay Yildirim, Offline Signature Identification and Verification using Capsule Network

Chung-Ming Ou, Host-based Intrusion Detection Systems inspired by Machine Learning of Agent-based Artificial Immune Systems

15:20-16:40   **Decision making**

Chair: Prof. Albena Tchamova

Stefka Fidanova, Jean Dezert and Albena Tchamova, Inter-Criteria Analysis Based on Belief Functions for GPS Surveying Problems

Yihuai Liang, Jiwan Lee, Bonghee Hong and Woochan Kim, Design and Implementation of Rule-based CEP for Threat Detection and Defense

Mare Koit, Modelling Negotiation Strategies

20:30-22:00   **Welcome Reception**

Thursday, 04.07.2019

8:30-9:00   **Registration**

9:00-10:00   **Keynote Speech 2**

Prof. Virginio Cantoni, Technological innovation and its enhancement of cultural heritage

Chair: Prof. Kiril Alexiev

10:00-11:20   **Workshop WASA**

Chairs: Prof. Costin Badica and Prof. Mirjana Ivanovic

Mihaela Ilie, Sorin Ilie and Ionut Muraretu, A Semiautomated Human Resource Management System

Mattias Wahde, A dialogue manager for task-oriented agents based on dialogue building-blocks and generic cognitive processing

Angela Ramirez and Solomon Reinman, PokerBot: Hand Strength Reinforcement Learning

Amelia Badica, Costin Badica, Ion Buligiu, Liviu Ciora, Maria Ganzha, Mirjana Ivanovic and Marcin Paprzycki, Optimizing Nash Social Welfare in Semi-Competitive Intermediation Networks

10:00-11:20   **Special Session MLMAT 3**

Chair: Prof. Mo Adda

Zakaria Charouh, Mounir Ghogho and Zouhair Guennoun, Improved Background Subtraction-based Moving Vehicle Detection by Optimizing Morphological Operations using Machine Learning

Youness Moukafih, Hakim Hafidi and Mounir Ghogho, Aggressive Driving Detection Using Deep Learning-based Time Series Classification

Daghan Dogan and Seta Bogosyan, Performance Analysis of SVM, ANN and KNN Methods for Acoustic Road-Type Classification

Onur Can Koyun and Tülay Yıldırım, Adversarial Nuclei Segmentation on H&E Stained Histopathology Images

11:20-11:50   **Coffee Break**

11:50-13:10   **Classification**

Chair: Prof. Sorin Ilie

Jacek Grekow, Finding Musical Pieces with a Similar Emotional Distribution throughout the Same Composition

Iris Figalist, Andreas Biesdorf, Christoph Brand, Sebastian Feld and Marie Kiermeier, Supporting the DevOps Feedback Loop using Unsupervised Machine Learning

Zoltan Geler, Vladimir Kurbalija, Mirjana Ivanovic, Milos Radovanovic and Weihui Dai, Dynamic Time Warping: Itakura vs Sakoe-Chiba

Kiril Alexiev, Teodor Toshkov and Dimiter Prodanov, Self-similar decomposition of digital signals

11:50-13:10   **Natural language processing 2**

Chair: Dr. Murat Can Ganiz

Zeynep Hilal Kilimci and Selim Akyokuş, The Analysis of Text Categorization Represented With Word Embeddings Using Homogeneous Classifier Ensembles

Huyen Trang Phan, Van Cuong Tran, Ngoc-Thanh Nguyen and Dosam Hwang, A Method for Detecting and Analyzing the Sentiment of Tweets Containing Fuzzy Sentiment Phrases

Ramazan Esmeli, Mohamed Bader and Alaa Mohasseb, Context and Short Term User Intention Aware Session Based Recommender System

Dilek Kayahan and Tunga Güngör, A Hybrid Translation System from Turkish Spoken Language to Turkish Sign Language

13:10-14:10   **Lunch**

15:00   **Excursion**

21:00   **Conference Dinner**

Friday, 05.07.2019

8:30-9:00   **Registration**

9:00-10:00   **Keynote Speech 3**

Prof. Plamen Angelov, Explainable AI through Interpretable Deep Rule-based Learning

Chair: Prof. Petia Koprinkova-Hristova

10:00-11:20   **Special Session MT4BD 1**

Chair: Prof. Spiros Likothanassis

Nikolaos Kolokas, Thanasis Vafeiadis, Dimosthenis Ioannidis and Dimitrios Tzovaras, Anomaly Detection in Aluminium Production with Unsupervised Machine Learning Classifiers

Gökhan Kocaman, Bilge Şipal, Aydın Gerek, Berna Altınel and Murat Ganiz, Diffused Label Propagation based Transductive Classification Algorithm for Word Sense Disambiguation

Dimitrios Koutsomitropoulos, Andreas Andriopoulos and Spiros Likothanassis, Subject Classification of Learning Resources Using Word Embeddings and Semantic Thesauri

10:00-11:20   **Intelligent process control**

Chair: Dr. Revna Acar Vural

Banu Ataslar-Ayyildiz and Oguzhan Karahan, Trajectory Tracking for The Magnetic Ball Levitation System via Fuzzy PID Control Based on CS Algorithm

Alexandra Grancharova and Ivana Valkova, Contractive Model Predictive Control for Insulin Delivery for Type 1 Diabetics

Jiannan Zhai, Chancey Kelley and Jason Hallstrom, An Efficient and Affordable Web-based Prototyping and Testing Platform for Analog Sensors

Zehra Gulru Cam Taskiran and Murat Taskiran, A New Fractional Order Memristance Simulator Circuit Design

11:20-11:50   **Coffee Break**

11:50-12:50   **Keynote Speech 4**

Prof. Ireneusz Czarnowski, Machine Learning and Multiagent Systems

Chair: Prof. Dosam Hwang

12:50-13:50   **Lunch**

13:50-15:10   **Special Session MT4BD 2**

Chair: Prof. Dimitrios Koutsomitropoulos

Georgios Drakopoulos, Phivos Mylonas and Spyros Sioutas, A Case Of Adaptive Nonlinear System Identification With Third Order Tensors In TensorFlow

Thanasis Vafeiadis, Alexandros Nizamis, Konstantinos Apostolou, Vasiliki Charisi, Ifigeneia Metaxa, Theofilos Mastos, Dimosthenis Ioannidis, Angelos Papadopoulos and Dimitrios Tzovaras, Intelligent Information Management System for Decision Support: Application in a lift manufacturer's shop floor

Aydın Gerek, Mehmet Can Yüney, Erencan Erkaya and Murat Can Ganiz, Effects of Positivization on the Paragraph Vector Model

Andrinandrasana David Rasamoelina, Fouzia Adjailia and Peter Sincak, Deep Convolutional neural network for robust Facial Emotion Recognition

13:50-15:10   **Intelligent transportation systems**

Chair: Prof. Alexandra Grancharova

Muhammet Ali Karabulut, A. F. M. Shahen Shah and Haci Ilhan, CoMACAV: Cooperative MAC Protocol for Autonomous Vehicles

A. F. M. Shahen Shah, Haci Ilhan and Ufuk Tureli, Modeling and Performance Analysis of the IEEE 802.11 MAC for VANETs under Channel Fading and Capture Effect

Ömür Yildirim, Klaus Diepold and Revna Acar Vural, Decision Process of Autonomous Drones for Environmental Monitoring

15:10-15:40   **Coffee Break**

15:40-16:00   **Closing Session**

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