

September 4, 2016

Schedule Graph

Break Type	Time of Beginning	Hemus Hall	Conferance Hall	Preslav Hall
	09 ⁰⁰ AM-	Opening		
	09 ³⁰ AM-	PL 1 J. Kacprzyk (Poland)		
Coffee Break	10 ¹⁰ AM- 10 ⁴⁰ AM			
	10 ⁴⁰ AM- 11 ²⁰ AM-	PL 1 G. Osipov (RU)		
	11 ³⁰ AM-	S6-1	S5	S9
Lunch	01 ¹⁰ PM- 01 ⁵⁰ PM			
	01 ⁵⁰ PM-	S8	IS2	IS1
	02 ⁵⁰ PM-	IS6&IS7	IS8	S10
Coffee Break	03 ⁵⁰ PM- 04 ¹⁰ PM			
	05 ⁵⁰ PM-	T-4 Huiyu Zhou (UK)		IS5
	06 ⁴⁵ PM- 07 ³⁰ PM-	<i>Discussion</i>		

09:00 AM-09:30 AM Opening Ceremony

Chair: Vassil Sgurev, Bulgaria

09:00 AM –

Hall “Hemus”

Plenary SESSION

Part I

Session: **PL 1**

Chair: Vassil Sgurev, Bulgaria

TIME: September 4, 09:30 AM-11:10 AM

Hall "Hemus"

9:30 AM-10:10 AM Multiagent decisions under fuzziness: getting out of the status quo bias towards innovative solutions

Janusz Kacprzyk, Poland

10:10 AM-10:40 AM Coffee Break

10:40-11:20 AM Sign-Based Model as a Basis for Model of the World of a Subject of Activity

Gennady Osipov, Russia

SESSION: Autonomous and other Artificial Intelligence Systems

Session: **S6-1**

Chair: Boris Stilman, USA

TIME: September 4, 11:30 AM-12:50 PM

Hall "Hemus"

11:30 AM-11:50 AM Role of Graphs for Multi-Agent Systems and Generalization of Euler's Formula

Qasim Ali, Sergio Montenegro, Germany

11:50 AM-12:10 AM A Model of Extended BDI Agent with Autonomous Entities. Integrating Autonomous Entities within BDI Agent

Lada Maleš, Slobodan Ribarić, Croatia

12:10 AM-12:30 AM Agent-Based Approach to Modelling, Analysing and Performance Evaluation of Discret-Event Systems

František Čapkovic, Slovakia

12:30 AM-12:50 PM Decomposition of Boolean Multi-Relational Data with Graded Relations

Martin Trnecka, Marketa Trneckova, Czech Republic

SESSION: Machine Learning

Session: **S5**

Chair: Alexander Gegov, United Kingdom

TIME: September 4, 11:30 AM-01:10 PM

Hall "Conferance"

11:30 AM-11:50 AM Wind Speed Prediction with Extreme Learning Machine

Elizabeta Lazarevska, F.Y.R. Macedonia

11:50 AM-12:10 AM A Framework for Automated Meta-Analysis: Dendritic Cell Therapy Case Study

A. A. Boyko, A. M. Kaidina, Y. C. Kim, A. Yu. Lupatov, A. I. Panov, R. E. Suvorov, A. V. Shvets, Russia

12:10 AM-12:30 AM Feature Selection Techniques for Scientific Projects Funding Criteria Analysis

D. Devyatkin, R. Suvorov, I. Tikhomirov, O. Grigoriev, Russia

12:30 AM-12:50 AM A Neuro-Fuzzy Model of the Residuary Resistance of Sailing Yachts
Elizabeta Lazarevska, F.Y.R. Macedonia

12:50 AM-13:10 AM Artificial Intelligence Technologies for Personnel Learning Management Systems

Nayden Nenkov, Bulgaria, Yuriy Dyachenko, Ukraine, George Dimitrov, Bulgaria, Katerina Koeva, Bulgaria

SESSION: Control Systems

Session: **S9**

Chair: Mincho Hadjiski, Bulgaria

TIME: September 4, 11:30 AM-01:10 PM

Hall "Preslav"

11:30 AM-11:50 AM Intelligent Arm Manipulation System in Life Science Labs Using H2O Mobile Robot and Kinect sensor

Mohammed M. Ali, Hui Liu, Norbert Stoll, Kerstin Thurow, Germany

11:50 AM-12:10 AM An intelligent model predictive control-based strategy for plantwide optimization of degrading plants

Mincho Hadjiski, Alexandra Grancharova, Valeria Petrova, Kosta Boshnakov, Bulgaria

12:10 AM-12:30 AM Intelligent Control of Uncertain Switched Nonlinear Plants: Output-feedback Control of Switched Fuzzy Time-delay Systems Revisited

Georgi M. Dimirovski, F.Y.R. Macedonia, Yi Liu, China Jun Zhao, China

12:30 AM-12:50 AM Models and methods for multicriteria situational flexible reassignment of control functions in man-machine systems

Alexsander Pavlov, Boris Sokolov, Anton Pashchenko, Anatoly Shalyto, Gennady Maklakov, Russia

12:50 AM-01:10 PM New Intelligent Control Systems Architectures based on Dynamic Intelligent Systems

Galina V. Rybina, Victor M. Rybin, Russia

01:10 PM - 01:50 PM Lunch

SESSION: Emergent and Future Technologies

Session: **S8**

Chair: Petia Georgieva, Portugal

TIME: September 4, 01:50 PM-02:50 PM
Hall “Hemus”

01:50 AM-02:10 AM Evaluation of the Freshness of Food Products by Predictive Models and Neural Networks – a Comparative Analysis
Mirosljub Mladenov, Martin Dejanov, Stanislav Penchev, Bulgaria

02:10 AM-02:30 AM Regression Approach for Automatic Detection of Attention Lapses
Krasimira Georgieva, Bulgaria, Petia Georgieva, Portugal, Olga Georgieva, Bulgaria, Maria J. Ribeiro, Portugal, Joana S. Paiva, Portugal

02:30 AM-02:50 AM Sequence analysis to predict microRNA chemotherapy resistance
Muratcan İğdeli, Atıf Yılmaz, Hasan Oğul, Turkey

**SESSION: Intelligent Pattern Recognition, Bio–
metrics, Computational Intelligence and Security**

Session: **IS2**

Chair: Patrick S. P. Wang, USA

TIME: September 4, 01:50 PM-03:10 PM

Hall “Conferance”

01:50 PM-02:10 PM Fuzzy collaborative clustering based ranking approach for factor granules
Xiaozhou Chen, China, Patrick S. P. Wang, USA

02:10 PM-02:30 PM Challenges and Possible Solutions to Density Based Clustering
Fatma Günseli Yaşar, Gözde Ulutagay, Turkey

02:30 PM-02:50 PM Optimal Component Selection for Image Segmentation via Parallel Analysis
Mehmet Cem Catalbas, Merve Yildirim, Arif Gulden, Hasan Kurum, Turkey

02:50 PM-03:10 PM Primi Speech Recognition Based on Deep Neural Network
Wenjun Hu, Meijun Fu, Wenlin Pan, China

SESSION: The Intelligent Systems of 2020: Theory and practice

Session: **IS1**

Chair: Ricardo Jardim-Gonçalves, Portugal

TIME: September 4, 01:50 PM-03:30 PM

Hall “Preslav”

01:50 PM-02:10 PM An architecture to support responsive production in manufacturing companies

Maria Marques, Portugal, Carlos Agostinho, Portugal, Gregory Zacharewicz, France, Raul Poler, Spain, Ricardo Jardim-Gonçalves, Portugal

02:10 PM-02:30 PM Search-space Sorting with Hidden Markov Models for Occluded Object Recognition

F. A. Guerrero-Peña, G. C. Vasconcelos, Brazil

02:30 PM-02:50 PM Multi-sensorial Support for Disabled Users a Case Study With AutoCAD
Fernando Luís-Ferreira, Joao Sarraipa, Ricardo Jardim-Goncalves, Portugal

02:50 PM-03:10 PM Smart Learning Environment for the Development of Smart City
Applications
Manuella Kadar, Romania

03:10 PM-03:30 PM An Architecture for Big Data Processing on Intelligent Transportation
Systems. An Application Scenario on Highway Traffic Flows
Guilherme Guerreiro, Paulo Figueiras, Ricardo Silva, Ruben Costa, Ricardo Jardim-Goncalves,
Portugal

SESSION: Intuitionistic Fuzzy Sets

Session: **IS6**

Chair: Krassimir Atanassov, Bulgaria

TIME: September 4, 02:50 PM-04:30 PM

Hall "Hemus"

02:50 PM-03:10 PM Multidimensional Intuitionistic Fuzzy Quantifiers
Krassimir Atanassov, Bulgaria, Ivan Georgiev, Bulgaria, Eulalia Szmidt, Poland, Janusz Kacprzyk,
Poland

03:10 PM-03:30 PM Intuitionistic Fuzzy Evaluations for Analysis of a Student's Knowledge of
Mathematics in University e-Learning Courses
Evdokia Sotirova, Bulgaria, Taekyun Kim, Korea, Krassimir Atanassov, Bulgaria, Maciej
Krawczak, Poland, Pedro Melo-Pinto, Portugal, Anthony Shannon, Australia, Beloslav Riečan,
Slovakia

03:30 PM-03:50 PM Partial Fuzzy Grid Models and Application to Condition Monitoring of
Photovoltaic Systems
Gancho Vachkov, Valentin Stoyanov, Nikolinka Christova, Bulgaria

03:50 PM-04:10 PM Coffee Break

04:10 PM-04:30 PM Directed Intuitionistic Fuzzy Neighbourhoods
Evgeniy Marinov, Bulgaria, Peter Vassilev, Bulgaria, Krassimir Atanassov, Bulgaria, Jun Su, China

SESSION: Intercriteria Analysis

Session: **IS7**

Chair: Krassimir Atanassov, Bulgaria

TIME: September 4, 04:30 PM-05:50 PM

Hall "Hemus"

04:30 PM-04:50 PM Value at Risk Backtesting Techniques: Intuitionistic Fuzzy Approach and
InterCriteria Analysis
Diana Tisheva, Nikolay Netov, Bulgaria

04:50 PM-05:10 PM Intercriteria analysis over public transport system data

Ivan Valkov, Deyan Mavrov, Evdokia Sotirova, Bulgaria

05:10 PM-05:30 PM Intercriteria Analysis over Normalized Data
Krassimir Atanassov, Bulgaria, Vassia Atanassova, Bulgaria, Panagiotis Chountas, United Kingdom, Magdalena Mitkova, Bulgaria, Evdokia Sotirova, Bulgaria, Sotir Sotirov, Bulgaria, Dicho Stratiev, Bulgaria

05:30 PM-05:50 PM Comparison of Different Algorithms for InterCriteria Relations Calculation
Olympia Roeva, Bulgaria, Peter Vassilev, Bulgaria, Maria Angelova, Bulgaria, Tania Pencheva, Bulgaria, Jun Su, China

SESSION: Generalized Nets

Session: **IS8**

Chair: Sotir Sotirov, Bulgaria

TIME: September 4, 03:10 PM-05:50 PM

Hall "Conference"

03:10 PM-03:30 PM A measurement process model implemented by generalized net
Nevena Radoeva, Rosen Iliev, Bulgaria

03:30 PM-03:50 PM Generalized Net Models of Basic Sequential Logic Circuits
Lenko Erbakanov, Krassimir Atanassov, Sotir Sotirov, Stanislav Simeonov, Bulgaria

03:50 PM-04:10 PM Coffee Break

04:10 PM-04:30 PM Encrypting message in a sound using Self Organizing Map Neural Network
Todor Petkov, Semran Ahmed, Evdokia Sotirova, Sotir Sotirov, Bulgaria

04:30 PM-04:50 PM Generalized Net Model of Cuckoo Search Algorithm
Olympia Roeva, Vassia Atanassova, Bulgaria

04:50 PM-05:10 PM Modeling of the MiMa-algorithm for Crossbar Switch by Means of
Generalized Nets
Tasho Tashev, Marin Marinov, Vladimir Monov, Radostina Tasheva, Bulgaria

05:10 PM-05:30 PM A model of the process of Big Data with Generalized Net
Daniela Orozova, Milena Georgieva, Bulgaria

05:30 PM-05:50 PM Generalized Net Model of Asymptomatic Osteoporosis Diagnosing
Simeon Ribagin, Russia, Olympia Roeva, Bulgaria, Tania Pencheva, Bulgaria

SESSION: Clustering and Recognition

Session: **S10**

Chair: Miroljub Mladenov, Bulgaria

TIME: September 4, 03:30 PM-05:50 PM

Hall "Preslav"

03:30 PM-03:50 PM Automated Aircraft Instrument Reading Using Real Time Video Analysis

Wasiq Khan, Darren Ansell, Kaya Kuru, Mahdi Amina, United Kingdom

03:50 PM-04:10 PM Coffee Break

04:10 PM-04:30 PM Advanced Linguistic Explanations of Classifier Decisions for Users' Annotation Support

Edwin Lughofer, Roland Richter, Thomas Radauer, Austria

04:30 PM-04:50 PM Enhancing Texture Characteristics with Synthesis and Noise for Image Retrieval

Tuan D. Pham, Sweden

04:50 PM-05:10 PM Measures of Spatial Distortion using Kriging

Tuan D. Pham, Sweden

05:10 PM-05:30 PM Fuzzy Density Based Clustering Method: Soft DBSCAN-GM

Abir Smiti, Zied Elouedi, Tunisia

05:30 PM-05:50 PM Computer vision guidance system for indoor navigation of visually impaired people

Kabalan Chaccour, Georges Badr, Lebanon

05:50 PM-06:10 PM Guidelines for Developers of Smart Systems

Vasily Moshnyaga, Japan

TUTORIAL: T-4

Session: T-4

Chair: Huiyu Zhou, United Kingdom

TIME: September 4, 05:50 PM-06:40 PM

Hall "Hemus"

05:40 PM-06:40 PM Event Reasoning for Transport Video Surveillance

Huiyu Zhou, United Kingdom

SESSION: Hybrid Intelligent Systems

Session: IS5

Chair: Oscar Castillo, Mexico

TIME: September 4, 06:10 PM-08:30 PM

Hall "Preslav"

06:10 PM-06:30 PM Interval type-2 fuzzy logic for dynamic parameter adaptation in the Harmony search algorithm

Cinthia Peraza, Fevrier Valdez, Oscar Castillo, México

06:30 PM-06:50 PM Fuzzy differential evolution method with dynamic parameter adaptation using type-2 fuzzy logic

Patricia Ochoa, Oscar Castillo, José Soria, México

- 06:50 PM-07:10 PM Bat Algorithm with Parameter Adaptation using Interval Type-2 Fuzzy Logic for Benchmark Mathematical Functions
Jonathan Perez, México, Fevrier Valdez, México, Oscar Castillo, México, Olympia Roeva, Bulgaria
- 07:10 PM-07:30 PM An Improved Particle Swarm Optimization Algorithm applied to Benchmark Functions
Alfonso Uriarte, Patricia Melin, Fevrier Valdez, México
- 07:30 PM-07:50 PM Bidding Strategies based on Type-1 and Interval Type-2 Fuzzy Inference Systems for Google Adwords Advertising Campaigns
Quetzali Madera, Oscar Castillo, Mario Garcia-Valdez, Alejandra Mancilla, México
- 07:50 PM-08:10 PM Genetic Algorithm and Particle Swarm Optimization of Ensemble Neural Networks with Type-1 and Type-2 Fuzzy Integration for Prediction of the Taiwan Stock Exchange
Martha Pulido, Patricia Melin, México
- 08:10 PM-08:30 PM A Fuzzy System for Dynamic Parameter Adaptation in Gravitational Search Algorithm
Frumen Olivas, Fevrier Valdez, Oscar Castillo, México

September 5, 2016

Schedule Graph

Break Type	Time of Beginning	Preslav Hall	Conference Hall	Poster Tutorial
	09 ⁰⁰ AM-	PL 2		
	09 ⁴⁰ AM-	R .Yager (USA)		
		V. Piuri (Italy)		
Coffee Break	10 ²⁰ AM- 10 ⁴⁰ AM			
	10 ⁴⁰ AM-	IS4	IS9	
	12 ⁰⁰ PM-	IS3		
Lunch	01 ⁰⁰ PM- 02 ¹⁰ PM			P1 { 01 ⁴⁰ PM 02 ¹⁰ PM
	02 ¹⁰ PM-	T-2 Han Liu & Alexander Gegov (UK)	T-1 Petia Georgieva (Portugal)	
Coffee Break	03 ¹⁰ PM- 03 ³⁰ PM			
	03 ³⁰ PM-	S6-2	S3	
	05 ¹⁰ PM-	S6-3	S7	

07³⁰ PM Cocktail

Plenary SESSION Part II

Session: **PL 2**

Chair: Mincho Hadjiski, Bulgaria

TIME: September 5, 09:00 AM-10:20 AM

Hall "Preslav"

9:00 AM-09:40 AM Multi-Criteria Decision Making with Uncertainty

Ronald R. Yager, USA

9:40 AM-10:20 AM Computational Intelligence for Industrial and Environmental Applications

Vincenzo Piuri, Italy

10:20 AM-10:40 AM Coffee Break

SESSION: Intelligent Systems for Industrial and Environmental Applications

Session: **IS4**

Chair: Vincenzo Piuri, Italy

TIME: September 5, 10:40 AM-12:00 AM

Hall "Preslav"

- 10:40-11:00 AM Examining Nominal and Ordinal Classifiers for Forecasting Wind Speed
George Georgoulas, Petros Karvelis, Stavros Kolios, Chrysostomos Stylios, Greece
- 11:00-11:20 AM Intelligent Control of Uncertain Switched Nonlinear Plants: NFG Optimum
Control of Switched Fuzzy Time-Delay Systems Revisited
Georgi M. Dimirovski, Jinming Luo, China, Huakua Li, China, Jun Zhao, China
- 11:20-11:40 AM Automatic Detection of Subsurface Defects in Composite Materials using
Thermography and Unsupervised Machine Learning
Roberto Marani, Davide Palumbo, Umberto Galietti, Ettore Stella, Tiziana D’Orazio, Italy
- 11:40-12:00 AM Adaptive Controller using Fuzzy Modeling and Sigmoid Generated Fixed
Point Transformation
Adrienn Dineva, Hungary, József K. Tary, Hungary, Annamária Várkonyi-Kóczy, Slovakia,
Vincenzo Piuri, Italy

SESSION: Data-driven Decision Making: Methodology and Applications

Session: **IS3**

Chair: Veselka Boeva, Bulgaria

TIME: September 5, 12:00 AM-01:00 PM

Hall “Preslav”

- 12:00-12:20 AM Identifying a Group of Subject Experts Using Formal Concept Analysis
Veselka Boeva, Bulgaria, Milena Angelova, Bulgaria, Lilyana Boneva, Bulgaria, Elena Tsiporkova,
Belgium
- 12:20-12:40 AM Energy consumption profiling using Gaussian Processes
Christiaan Leysen, Mathias Verbekey, Pierre Dagnely, Wannes Meert, Belgium
- 12:40-01:00 PM Pattern Frequency Representation for Time Series Classification
Sergey Milanov, Olga Georgieva, Bulgaria

SESSION: Intelligent Control and Optimization

Part I

Session: **IS9**

Chair: Yancho Todorov, Bulgaria

TIME: September 5, 10:40 AM-12:00 AM

Hall “Conferance”

- 10:40-11:00 AM Decoupling Neuro-Fuzzy Model Predictive Controllers Applied to Quadruple
Tanks
Sevil Ahmed, Ivan Ganchev, Albena Taneva, Michail Petrov, Bulgaria
- 11:00-11:20 AM Intuitionistic Neo-Fuzzy Network for Modeling of Nonlinear Systems
Dynamics
Margarita Terziyska, Yancho Todorov, Bulgaria
- 11:20-11:40 AM Control of the Flight of a Small Quadrotor using Gestural Interface

Vasil L. Popov, Kostadin B. Shiev, Andon V. Topalov, Nikola G. Shakev, Sevil A. Ahmed,
Bulgaria

11:40-12:00 AM Industrial Implementation of a Fuzzy Logic Controller for Brushless DC
Motor Drives using the PicoMotion Control Framework

Sevil Ahmed, Bulgaria, Andon Topalov, Bulgaria, Nikolay Dimitrov, Bulgaria, Eugene Bonev,
USA

01:00 PM - 02:10 PM Lunch

Poster SESSION

Part I

Session: **P 1**

Chair: Kosta Boshnakov, Bulgaria

TIME: September 5, 01:40 PM-02:10 PM

Room: Poster*

Data Science Applications to Improve Accuracy of Thermocouples

Hu Zhengbing, China, Su Jun, China, Vladimir Jotsov, Bulgaria, Orest Kochan, Ukraine, Mykola
Mykyichuk, Ukraine, Roman Kochan, Ukraine, Taras Sasiuk, Ukraine

A Data-Driven Approach Based on LDA for Identifying Duplicate Bug Report

Chen Jingliang, Ming Zhe, Su Jun, China

A Dictionary Based Approach to JPEG Anti-Forensics

Nasser Afshin, Farbod Razzazi, Mohammad-Shahram Moin, Iran

On the Optimization of Material Usage in Power Transformer Manufacturing

Georgios Chasparis, Werner Zellinger, Verena Haunschmid, Markus Riedenbauer, Reinhard
Stumptner, Austria

Application of Firefly Algorithm to Train Operation

Kemal Keskin, Abdurrahman Karamancioglu, Turkey

ECG as Biometric Using Autocorrelation of normalized R-R interval

Hafiza Saira Javaid, Shahzad Amin Sheikh, Pakistan

Tourism Demand Forecasting using Ensembles of Regression Trees

Selcuk Cankurt, Iraq

Intelligent Automated Intrusion Response System based on Fuzzy Decision Making and Risk
Assessment

Samaneh Berenjjan, Mehdi Shajari, Nadieh Farshidy, Majid Hatamian, Iran

Heart Arrhythmias Classification via a Sequential Classifier Using Neural Network, Principal
Component Analysis and Heart Rate Variation

Seyed Saleh Mohseni, Matiar Mohamadyari, Iran

A Fragile Watermarking Algorithm for Image Tamper Detection Based on Chaotic Maps

Nikodim Lazarov, Zlatoliliya Ilcheva, Bulgaria

TUTORIAL: T-2

Session: **T-2**

Chairs: Han Liu, Alexander Gegov, United Kingdom

TIME: September 5, 02:10 PM-03:10 PM

Hall "Preslav"

02:10 PM-03:10 PM Rule Based Systems and Networks: Deterministic and Fuzzy Approaches
Han Liu, Alexander Gegov, United Kingdom

TUTORIAL: T-1

Session: **T-1**

Chair: Petia Georgieva, Portugal

TIME: September 5, 02:10 PM-03:10 PM

Hall "Conferance"

02:10 PM-03:10 PM Tutorial on Noninvasive Brain Computer Interfaces
Petia Georgieva, Portugal

03:10 PM-03:30 PM Coffee Break

SESSION: Autonomous and other Artificial Intelligence Systems

Session: **S6-2**

Chair: Andon Topalov, Bulgaria

TIME: September 5, 03:30 PM-05:10 PM

Hall "Preslav"

03:30 PM-03:50 PM How to assess quality of BMF algorithms?
Radim Belohlavek, Jan Outrata, Martin Trnecka, Czech Republic

03:50 PM-04:10 PM The Effect Of A Semi-Autonomous Robot On Children
M. de Haas, Netherlands, A. Mois Aroyo, Italy, E. Barakova, Netherlands, W. Haselager,
Netherlands, I. Smeekens, Netherlands

04:10 PM-04:30 PM Curious Cat. Conversational Crowd based and Context Aware Knowledge
Acquisition Chat Bot
Luka Bradeško, Slovenia, Janez Starc, Slovenia, Michael Witbrock, USA

04:30 PM-04:50 PM Modeling of Computational Systemic Mind Under Uncertainty
Ben Khayut, Lina Fabri, Maya Avikhana, Israel

04:50 PM-05:10 PM A New Cognitive Model for Autonomous Ontology Learning
Dehai Zhang, Bin Wang, Naiyao Wang, Zhonghao Yang, Hang Zhao, China

SESSION: Neural Networks

Session: **S3**

Chair: Patricia Melin, Mexico
TIME: September 5, 03:30 PM-04:50 PM
Hall "Conferance"

03:30 PM-03:50 PM Evolving Polynomial Neural Networks for Detecting Abnormal Patterns
N. Nyah, L. Jakaite, V. Schetinin, P. Sant, A. Aggoun, United Kingdom

03:50 PM-04:10 PM Simplified Information Neural Cell Model And Its Basic Properties
Valeri Ilchev, Svetozar Ilchev, Bulgaria

04:10 PM-04:30 PM Speech Recognition Using Principal Components Analysis and Neural
Networks
Shaham Shabani, Italy, Yaser Norouzi, Iran

04:30 PM-04:50 PM Neuro-Fuzzy based Identification of Meat Spoilage using an Electronic
Nose
Vassilis S. Kodogiannis, Abeer Alshejari, United Kingdom

SESSION: Autonomous and other Artificial Intelligence Systems

Session: **S6-3**

Chair: Patrick S. P. Wang, USA
TIME: September 5, 05:10 PM-07:10 PM
Hall "Preslav"

05:10 PM-05:30 PM Mixture-based Clustering Non-gaussian Data with Fixed Bounds
Ivan Nagy, Evgenia Suzdaleva, Tereza Mlynářová, Czech Republic

05:30 PM-05:50 PM Decision Making in Intelligent Resource Networks under Risk
Vasil Sgurev, Stanislav Drangajov, Bulgaria

05:50 PM-06:10 PM Formulae, Tautologies, and Equipotences in the Complex S-Logic
Vasil Sgurev, Bulgaria

06:10 PM-06:30 PM A Conceptual Framework for Building a Mobile Services' Recommendation
Engine
Ivan Ganchev, Zhanlin Ji, Máirtín O'Droma, Ireland

06:30 PM-06:50 PM A Service Recommendation Model for the Ubiquitous Consumer Wireless
World
Haiyang Zhang, Ivan Ganchev, Nikola S. Nikolov, Máirtín O'Droma, Ireland

06:50 PM-07:10 PM Use of Intelligent Planning for Integrated Expert Systems Development
Galina V. Rybina, Yury M. Blokhin, Russia

SESSION: Data Science Applications

Session: **S7**

Chair: Panagiotis Chountas, United Kingdom
TIME: September 5, 05:00 PM-06:20 PM

Hall “Conferance”

05:00 PM-05:20 PM A Data-driven Fuzzy Modelling Framework for the Classification of Imbalanced Data

Adrian Rubio-Solis, George Panoutsos, Steve Thornton, United Kingdom

05:20 PM-05:40 PM Expert-based Initialization of Recursive Mixture Estimation

Evgenia Suzdaleva, Ivan Nagy, Tereza Mlynářová, Czech Republic

05:40 PM-06:00 PM Puzzle Methods for Data Science Applications

Vladimir Jotsov, Pepa Petrova, Evtim Iliev, Bulgaria

06:00 PM-06:20 PM An Outranking-Based Approach for Skyline Refinement

Mohamed Haddache, Djamel Belkasmi, Allel Hadjali, Hamid Azzoune, France

September 6, 2016

Schedule Graph

Break Type	Time of Beginning	Hemus Hall	Conferance Hall	Poster Hall
		PL-3		
	09 ⁰⁰ AM-	N. Kasabov (NZ)		
	09 ⁴⁰ AM-	Y. Popkov (RU)		
Coffee Break	10 ²⁰ AM- 11 ¹⁰ AM			P2 { 10 ⁴⁰ AM 11 ¹⁰ AM
	11 ¹⁰ AM-	T-3 Boris Stilman (USA)	IS10	
	01 ¹⁰ PM- 01 ³⁵ PM	Lunch		
	01 ³⁵ PM-	Closing		
	01 ⁵⁰ PM- 04 ¹⁰ PM	<i>Summer School</i>		

Plenary SESSION Part III

Session: **PL 3**

Chair: Maciej Krawczak, Poland

TIME: September 6, 09:00 AM-10:20 AM

Hall "Hemus"

9:00 AM-09:40 AM Spiking Neural Networks and Spatio-Temporal Data Machines: Methods, Systems, Applications

Nikola Kasabov, New Zealand

9:40 AM-10:20 AM Randomized Machine Learning

Yuri S. Popkov, Russia

10:20 AM-11:00 AM Coffee Break

Poster SESSION Part II

Session: **P 2**

Chair: Orest Kochan, Ukraine

TIME: September 6, 10:40 AM-11:10 AM

Room: Poster*

A Self Configured And Hybrid Fusion Approach For an Electric Wheelchair Control

Fatma Ben Taher, Nader Ben Amor, Mohamed Jallouli, Tunisia

Particle Filter Localization and Real Time Obstacle Avoidance Control Based on 3D Perception for Wheelchair Mobile Robot

Emna Baklouti, Nader Ben Amor, Mohamed Jallouli, Tunisia

Automatic generation of test questions by software agents using ontologies

Nina Stancheva Stancheva, Asya Stoyanova-Doycheva, Ivan Popchev, Stanimir Stoyanov, Bulgaria

Architecture of a Module for Analyzing Electronic Test Results

I. Kehayova, V. Valkanov, P. Malinov, E. Doychev, Bulgaria

Learning Intelligent System for Student Assistance – LISSA

J. Todorov, B. Daskalov, S. Stoyanov, I. Popchev, V. Valkanov, Bulgaria

The Model of Intelligent Autonomous Hybrid Renewable Energy System Based on Bayesian Network

D.G. Arseniev, V.P. Shkodyrev, V.A. Yarotsky, K.I. Yagafarov, Russia

Expansion of a CNN-Based Image Classifier's Scope Using Transfer Learning and k-NN. Technical Report

Georgi Kadrev, Georgi Kostadinov, Petko Ruskov, Bulgaria

Time Series Reconstruction Analysis

Vladimir Kurbalija, Brankica Bratić, Serbia

Decision Support System for Assessment of Vocational Aptitude of Man-Machine Systems Operators

Igor Petukhov, Pavel Kurasov, Luydmila Steshina, Ilya Tanryverdiev, Russia

Request Generation and Intelligent Scheduling for Cloud Educational Resource Datacenter

Petr N. Polezhaev, Alexander E. Shukhman, Irina P. Bolodurina, Yuri A. Ushakov, Leonid V. Legashev, Russia

TUTORIAL: T-3

Session: **T-3**

Chair: Boris Stilman, USA

TIME: September 6, 11:10 AM-01:10 PM

Hall "Hemus"

11:10 AM-01:10 PM Linguistic Geometry: A Strategic Guide to Battles, From Ancient to Modern Ones

Boris Stilman, USA

SESSION: Intelligent Control and Optimization Part II

Session: **IS10**

Chair: Petia Koprinkova-Hristova, Bulgaria

TIME: September 6, 11:10 AM-12:50 AM

Hall "**Conference**"

11:10 AM-11:30 AM Intuitionistic Neo-Fuzzy Predictive Control
Margarita Terziyska, Yancho Todorov, Bulgaria

11:30 AM-11:50 AM An Intelligent System for Resource Allocation Optimization of Medical
Teams in Mass Casualty Incidents
Nina Dobrinkova, Bulgaria, Ioannis Galatas, Greece, Geert Seynaeve, Belgium

11:50 AM-12:10 AM Action Unit Recognition in Still Images Using Graph-Based Feature
Selection
Teodora Sechkova, Krasimir Tonchev, Agata Manolova, Bulgaria

12:10 AM-12:30 AM Neuro-Fuzzy Tuning of Kalman Filter
Petia Koprinkova-Hristova, Kiril Alexiev, Bulgaria

12:30 AM-12:50 AM Self-Organization Types for Autonomous Investment Portfolio
Angel Marchev, Jr., Angel Marchev, Sr., Bulgaria

01:10 PM-01:35 PM Lunch

01:35 PM-01:50 PM Closing Ceremony

Chair: Vassil Sgurev, Bulgaria
Hall "Hemus"

IEEE Summer School on Intelligent Systems

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Chairs: Ronald R. Yager, USA, Vladimir Jotsov, Bulgaria, Yancho Todorov, Bulgaria
TIME: September 6, 01:50 PM-04:10 PM
Hall "Hemus"