

# Detailed Program of the joint 20<sup>th</sup> EANN 2019 - 15<sup>th</sup> AIAI'2019 Conference

**Friday 24/5/2019**

**8:00-16:00 Registration**

**9:30- 10:30 Plenary Session 1**

Chair: *Plamen Angelov*

**Room A: Keynote Speaker: Evangelos Eleftheriou**

IBM Fellow, Cloud & Computing Infrastructure, Zurich Research Laboratory, Zurich, Switzerland

**Title:** *"In-memory Computing: Accelerating AI Applications"*

**Room A:**

**10:30- 11:45 AIAI Session 1: (ONS-CL<sup>2</sup>) Ontologies-Semantics & Classification-Clustering**

Chair: *Elias Pimenidis*

*Dennis Müller, Dirk Pallmer, Ernst-Josef Behmer, Krishna Chandramouli, Victor Garrido, Dirk Mühlenberg, Wilmoth Müller, Francisco Pérez, Tomas Piatrik, Camilo Vargas*

*Ontology population framework of MAGNETO for instantiating heterogeneous forensic data modalities (full)*

*András Dobó, János Csirik*

*Comparison of the best parameter settings in the creation and comparison of feature vectors in distributional semantic models across multiple languages (full)*

*Zijian Kang, Le Wang, Ziyi Liu, Qilin Zhang, Nanning Zheng*

*Extracting Action Sensitive Features to Facilitate Weakly-supervised Action Localization (full)*

*Suvra Jyoti Choudhury, Nikhil R. Pal*

*Classification of incomplete data using autoencoder and evidential reasoning (full)*

*Konstantinos Delibasis*

*A new topology-preserving distance metric with applications to multi-dimensional data clustering (full)*

**Room B: 10:30- 11:45 AIAI Session 2: (AUV-LE) Autonomous Vehicles-Learning**

Chair: Konstantinos Demertzis

*Qinbing Fu, Nicola Bellotto, Huatian Wang, F. Claire Rind, Hongxin Wang, Shigang Yue*

*A Visual Neural Network for Robust Collision Perception in Vehicle Driving Scenarios (full)*

*Tangyike Zhang, Shitao Chen, Songyi Zhang, Yu Chen, Chao Xia, Nanning Zheng*

*Mixture Modules Based Intelligent Control System for Autonomous Driving (full)*

*Jiannan Zhao, Xingzao Ma, Qinbing Fu, Cheng Hu, Jiannan Zhao, Xingzao Ma, Qinbing Fu, Cheng Hu, Shigang Yue*

*An LGMD Based Competitive Collision Avoidance Strategy for UAV (full)*  
Stamatis Karlos, Vasileios G. Kanas, Nikos Fazakis, Christos Aridas, Sotiris Kotsiantis  
*Investigating the benefits of exploiting incremental learners under Active Learning scheme (full)*  
Agus Budi Raharjo, Mohamed Quafafou  
Dynamic Reliable Voting in Ensemble Learning

**Room C: 10:30- 11:45 EANN Session 1: (MDL-EN&IN)**

**Machine & Deep Learning - AI in Energy & Industry**

Chair: Ioannis Tsamardinos

Valentina Colla, Ismael Matino, Stefano Dettori, Silvia Cateni, Ruben Matino  
*Reservoir Computing Approaches Applied to Energy Management in Industry (full)*  
Sven Opalic, Morten Goodwin, Lei Jiao, Henrik Kofoed Nielsen, Mohan Lal Kolhe  
*Modelling of compressors in an industrial CO2-based operational cooling system using ANN for energy management purposes (full)*  
Christoforos Nalmpantis, Dimitris Vrakas  
*Signal2Vec: Time Series Embedding Representation (full)*  
Rolandos Alexandros Potamias, Georgios Siolas, Andreas Stafylopatis  
*A Robust Deep Ensemble Classifier for Figurative Language Detection (full)*  
Nameer Al Khafaf, Mahdi Jalili, Peter Sokolowski  
*Application of Deep Learning Long Short-Term Memory in Energy Demand Forecasting (full)*

**Room D:**

**10:30- 11:45 5G-PINE I (5G – Putting Intelligence to the Network Edge) Workshop Session**

Chair: Ioannis Chochliouros

Ioannis Chochliouros, Anastasia Spiliopoulou, Alexandros Kostopoulos, George Agapiou, Maria Belesioti, Evangelos Sfakianakis, Michail-Alexandros Kourtis, Mike Iosifidis, Marinos Agapiou, Pavlos Lazaridis  
*Inclusion of Telemetry and Data Analytics in the Context of the 5G ESSENCE Architectural Approach (full)*  
Ioannis Chochliouros, Anastasia Spiliopoulou, Alexandros Kostopoulos, Eirini Vasilaki, Athanassios Dardamanis, Uwe Herzog, Tao Chen, Latif Ladid, Marinos Agapiou  
*Testbeds for the Implementation of 5G in the European Union: The Innovative Case of the 5G-DRIVE Project (full)*  
Alexandros Kostopoulos, Ioannis Chochliouros, Evangelos Sfakianakis, Daniele Munaretto, Claus Keuker  
*A Cloud-based Architecture for Video Services in Crowd Events (full)*  
Ioannis Chochliouros, Na Yi, Anastasia Spiliopoulou, Alexandros Kostopoulos, Uwe Herzog, Tao Chen, Athanassios Dardamanis, Olga Segou, Latif Latid, Klaus Moessner, Juha Zidbeck, Philippos Assimakopoulos, Nahan Gomes, Rahim Tafazolli  
*Enhanced Mobile Broadband as Enabler for 5G: Actions from the Framework of the 5G-DRIVE Project (full)*  
Ioanna Mesogiti, Eleni Theodoropoulou, George Lyberopoulos, Fotini Setaki, Aurora Ramos, Panagiotis Gouvas, Anastasios Zafeiropoulos, Roberto Bruschi

*A Framework to Support the Role of Telecommunication Service Providers in evolving 5G Business Models (full)*

**11:45-12:15 Coffee Break**

**12:15-13:15 Plenary Session 2**

Chair: *John Oommen*

**Room A: Keynote Speaker: Papagiorgis Papapetrou**

*Department of Computer and Systems Sciences, Stockholm University*

**Title: *Learning from Electronic Health Records: from temporal abstractions to time series interpretability***

**13:15-14:30 Lunch**

**14:30-16:00**

**Room A: TUTORIAL - (AML-BCB 1)**

**Automated Machine Learning for Bioinformatics and Computational Biology (PART 1)**

Chairs: *Ioannis Tsamardinos, Vincenzo Lagani*

**14:30-15:45**

**Room B: MHDW I (Mining Humanistic Data I) Workshop Session**

Chair: *Andreas Kanavos*

*Oluwole Ajala, Miznah Alshammary, Jia Gao, Costas Iliopoulos, Mai Alzamel, Jakub Radoszewski, Wojciech Rytter, Bruce Watson*

*On the cyclic regularities of strings (short)*

*Ioannis Livieris, Niki Kiriakidou, Andreas Kanavos, Gerasimos Vonitsanos, Vassilis Tampakas*

*Employing Constrained Neural Networks for Forecasting new Products Sales Increase (full)*

*Fotios Kounelis, Andreas Kanavos, Ioannis Livieris, Gerasimos Vonitsanos, Panagiotis Pintelas*

*Predicting Secondary Structure for Human Proteins based on Chou-Fasman Method (short)*

*Theodoros Giannakopoulos, Evaggelos Spyrou, Stavros Perantonis*

*Recognition of urban sound events using deep context-aware feature extractors and handcrafted features (full)*

*Evangelos Geramanis, Alexandros Dimitrios Zervopoulos, Alexandros Toulakis, Asterios Papamichail, Dimitrios Triantafylloy, Theofanis Tasoulas, Katia Lida Kermanidis*

*Language Processing for Predicting Suicidal Tendencies: A Case Study in Greek Poetry (full)*

**14:30-15:45**

**Room C: 5G-PINE II (5G – Putting Intelligence to the Network Edge II) Workshop Session**

Chair: *Ioannis Neokosmidis*

*George Agapiou, Christos Tsirakis, Marinos Agapiou, Dimitris Varoutas, Panagiotis Matzoros, Mariana Goldhame*

*A Techno-Economic Analysis of Employing a central Coordinator Entity in 5G Networks (short)*

*Juan Sanchez-Gonzalez, Jordi Perez-Romero, Oriol Sallent*

*A New Self-Planning Methodology Based on Signal Quality and User Traffic in Wi-Fi Networks (full)*

*Maria Rita Spada, Alessandro Vincentini*

*5GESSENCE\_Trustworthy AI for 5G\_5GPINE\_Final (short)*

*Bego Blanco, Aitor Sanchoyerto, Ruben Solozabal Ochoa de Retana, Elisa Jimeno, Endika Aldecoa, Estrella Basurto, Fidel Liberal*

*Orchestration of Mission-Critical services over an NFV architecture (full)*

*Ioannis Neokosmidis, Theodoros Rokkas, Dimitrios Xydias, Maria Rita Spada*

*Regulatory Considerations In the 5G era: The 5GCity Neutral Host case (full)*

**14:30-15:45 Room D: (PEINT) (Pervasive Intelligence) Workshop Session**

Chair: *Dimitris Iakovidis*

*Dimitrios Diamantis, Dimitra-Christina Koutsiou, Dimitris Iakovidis*

*Staircase Detection using a Lightweight Look-Behind Fully Convolutional Neural Network (full)*

*Antonios Papadakis, Eirini Mathe, Ioannis Vernikos, Apostolos Maniatis, Evaggelos Spyrou, Phivos Mylonas*

*Recognizing Human Actions using 3D Skeletal Information and CNNs (full)*

*Georgios Dimas, Charis Ntakolia, Dimitris Iakovidis (full)*

*Obstacle Detection based on Generative Adversarial Networks and Fuzzy Sets for Computer-Assisted Navigation (full)*

*Natalia Panagou, Panagiotis Oikonomou, Panos K. Papadopoulos, Maria Koziri, Thanasis Loukopoulos, Dimitris Iakovidis*

*On Predicting Bottlenecks in Wavefront Parallel Video Coding Using Deep Neural Networks (full)*

**15:45-16:15 Coffee Break**

**16:15-17:15**

**Room C: EANN-AIAI Common Session: (DEE-SG) Deep Learning – Social Graphs**

Chair: *Ilias Maglogiannis*

*Konstantinos Demertzis, Lazaros Iliadis, Vardis-Dimitris Anezakis*

*A Machine Hearing Framework for Real-Time Streaming Analytics Using Lambda Architecture (full)*

*Giorgio Lucarelli, Matteo Borrotti*

*A Deep Reinforcement Learning approach for automated cryptocurrency trading (full)*  
Konstantinos Demertzis, Lazaros Iliadis, Panayiotis Kikiras, Nikos Tziritas  
*Cyber-Typhon: An Online Multi-Task Anomaly Detection Framework (full)*  
Christos Makris, Dionisios Pettas, Georgios Pispirigos  
*Distributed Community Prediction for Social Graphs based on Louvain algorithm (full)*

**16:15-17:45**

**Room D: MHDW II (Mining Humanistic Data II Workshop) Session**

Chair: *Phivos Mylonas*

*Vassiliki Gkantouna, Vaios Papaioannou, Giannis Tzimas, Zlatan Sabic*  
*An approach for Domain-specific Design Pattern Identification based on Domain Ontology (full)*

*Miznah Alshammary, Mai Alzamel, Costas Iliopoulos, Richard E. Watson, Bruce W. Watson*

*A brief overview of dead-zone pattern matching algorithms (short)*  
*Georgios Drakopoulos, Xenophon Liapakis, Evaggelos Spyrou, Giannis Tzimas, Phivos Mylonas, Spyros Sioutas*

*Computing Long Sequences of Consecutive Fibonacci Integers with TensorFlow (full)*  
*Giannis Haralabopoulos, Christian Wagner, Derek McAuley, Ioannis Anagnostopoulos*  
*Paid crowdsourcing, low income contributors, and subjectivity (short)*

*Konstantinos Gourzis, Georgios Alexandridis, Stelios Gialis, George Caridakis*  
*Studying the spatialities of short-term rentals' sprawl in the urban fabric: the case of Airbnb in Athens, Greece (full)*

*Elias Dritsas, Gerasimos Vonitsanos, Ioannis Livieris, Andreas Kanavos, Aristidis Ilias, Christos Makris, Athanasios Tsakalidis*

*Pre-processing Framework for Twitter Sentiment Classification (full)*

**16:15-17:45**

**Room A: TUTORIAL (AML-BCB 2)**

**Automated Machine Learning for Bioinformatics and Computational Biology (PART 2)**

Chairs: *Ioannis Tsamardinos, Vincenzo Lagani*

**20:00 Welcome Reception!!**

**Saturday 25/5/2019**

**8:30-14:00 Registration**

**9:00-10:30 Room A: Plenary Session 3**

Chair: *John Macintyre*

**Workshop: EMERGING TRENDS in AI**

Presentations by:

***John Macintyre,  
Andrew Starr,  
Plamen Angelov***

(Free discussion-exchange of Arguments with conference participants)

**10:30-10:45 Coffee Break**

**10:45-11:45 Room A: AIAI Session 3: (BIO) Biomedical AI**

Chair: *Konstantinos Delibasis*

*Corinne Allaart, Lena Mondrejevski, Panagiotis Papapetrou*

*FISUL: A Framework for Detecting Adverse Drug Events from Heterogeneous Medical Sources using Feature Importance (full)*

*Jaakko Hollmen, Panagiotis Papapetrou*

*Clustering diagnostic profiles of patients (full)*

*Seyed Sahand, Mohammadi Ziabari*

*An adaptive Temporal-Causal Network Model for Stress Extinction Using Fluoxetine (full)*

*Athanasios Kallipolitis, Michael Galliakis, Andreas Menychtas, Ilias Maglogiannis*

*Emotion Analysis in Hospital Bedside Infotainment Platforms using Speeded up Robust Features (full)*

**10:45-11:45 Room B: EANN Session 2: (CLA) CLASSIFICATION**

Chair: *Andrew Starr*

*Kennedy Chengeta*

*Enhanced feature selection for Facial Expression Recognition Systems with genetic algorithms (full)*

*Paulo Vitor Campos Souza, Vinicius Jonathan Silva Araujo, Vanessa Souza Araujo, Lucas Oliveira Batista, Augusto Junio Guimaraes*

*Pruning Extreme Wavelets Learning Machine by Automatic Relevance Determination (full)*

*Amal Bouraoui, Salma Jamoussi, Abdelmajid Ben Hamadou*

*Learning meaningful sentence embedding based on recursive auto-encoders (full)*

*Thuan Gia Lam, Doina Logofatu, Costin Badica*

*A Hybrid Approach for the Fighting Game AI Challenge: Balancing Case Analysis and Monte Carlo Tree Search for the Ultimate Performance in Unknown Environment (full)*

**10:45-11:45 Room C: AIAI Session 4: (OPTI-BRI) Optimization - Brain inspired**

Chair: *Peter Hajek*

*Ekaba Besong, John Oommen*

*Optimizing Self-Organizing Lists-on-Lists using Enhanced Object Partitioning (full)*

*George Kyriakides, Konstantinos Margaritis*

*Comparison of Neural Network Optimizers for Relative Ranking Retention Between Neural Architectures (full)*

*Parthiv B. Rana, Jigar L. Patel, D. I. Lalwani*

*Design parameters optimization of a deep-groove ball bearing for different boundary dimensions using Amended Differential Evolution Algorithm (full)*

*Siyu Yu, Nanning Zheng, Hao Wu, Ming Du, Badong Chen*

*Exploring Brain Effective Connectivity in Visual Perception Using a Hierarchical Correlation Network (full)*

**10:45-11:45 Room D: EANN Session 3: (SEC-CLA) Security-Classification**

Chair: *Konstantinos Demertzis*

*Nikolaos Symeonidis, Christoforos Nalmpantis, Dimitris Vrakas*

*A benchmark framework to evaluate Energy Disaggregation solutions (full)*

*Lukas Kaupp, Ulrich Beez, Bernhard G. Humm, Jens Hülsmann*

*Outlier Detection in Temporal Spatial Log Data using Autoencoder for Industry 4.0 (full)*

*Nima Joorabloo, Mahdi Jalili, Yongli Ren*

*A probabilistic graph-based method to improve recommender system accuracy (full)*

*Daniel Pérez, Serafín Alonso, Antonio Morán, Miguel A. Prada, Juan José Fuertes, Manuel Domínguez*

*Comparison of network intrusion detection performance using feature representation (full)*

**11:45-12:00 Coffee Break**

**12:00-13:00 Room A: Plenary Session 4**

Chair: *Panagiotis Papapetrou*

**Keynote Speaker: Plamen Angelov**

Department of Computing and Communications, University of Lancaster

**Title: Empirical Approach: How to get Fast, Interpretable Deep Learning**

**13:00-14:00 Room A: AIAI Session 5: (FUZ-CON) Fuzzy Rule Based-Constrained**

Chair: *Mario Malcangi*

*Petr Hajek*

*Interpretable Fuzzy Rule-Based Systems for Detecting Financial Statement Fraud (full)*

*Augusto Junio Guimarães, Vinicius Jonathan Silva Araujo, Vanessa Souza Araujo, Lucas Oliveira Batista, Paulo Vitor Campos Souza*

*A hybrid model based on fuzzy rules to act on the prediction of autism in adults (full)*

*Suchismita Das, Nikhil R. Pal*

*An Unsupervised Fuzzy Rule-based Method for Structure Preserving Dimensionality Reduction with Prediction Ability (full)*

*Ke Liu*

*Solving the Talent Scheduling Problem by Parallel Constraint Programming (full)*

**13:00-14:00 Room B: EANN Session 4: (BiOM-BI) Biomedical-Bioinformatics**

Chair: *Ilias Maglogiannis*

*Stavros Ntalampiras, Ilyas Potamitis*

*Classification of Sounds Indicative of Respiratory Diseases (full)*

*Mike Spiliotis, Ana Iglesias, Luis Garrote*

*A meta-multicriteria approach to estimate drought vulnerability based on fuzzy pattern recognition (full)*

*Beatriz A Garro, Roberto A Vazquez*

*A New Generalized Neuron Model applied to DNA Microarray Classification (full)*

*Georgios Papadopoulos, Nikolaos Vasillas, Anastasios Kessidis*

*Convolutional Neural Network for Detection of Building Contours Using Multisource Spatial Data (full)*

**13:00-14:00 Room C: AIAI Session 6: (ML I) Machine Learning I**

Chair: *Jaakko Hollmen*

*Siva Krishna Dasari, Abbas Cheddad, Petter Andersson*

*Random Forest Surrogate Models to Support Design Space Exploration in Aerospace Use-case (full)*

*Stamatios-Aggelos Alexandropoulos, Christos Aridas, Sotiris Kotsiantis, Michael Vrahatis*

*Stacking strong ensembles of classifiers (full)*

*Tiago Azevedo, Luca Passamonti, Pietro Lio, Nicola Toschi*

*A machine learning tool for interpreting differences in cognition using brain features (full)*

*Theodoros Iliou, Georgia Konstantopoulou, Christina Lympelopoulou, Konstantinos Anastasopoulos, George Anastassopoulos, Dimitrios Margounakis, Dimitrios Lymberopoulos*



*Iliou Machine Learning Data Preprocessing Method for Suicide Prediction from Family History (full)*

**13:00-14:00 Room D: EANN Session 5: (OPT-ML) Optimization-Machine Learning**

Chair: *Ioannis Refanidis*

*Iakov Karandashev, Boris Kryzhanovskiy*

*Global Minimum Depth In Edwards-Anderson Model (full)*

*Marco Vannucci, Valentina Colla*

*Imbalanced Datasets Resampling Through Self Organizing Maps and Genetic Algorithms (full)*

*Lamprini Kyrkou, Christoforos Nalmpantis, Dimitris Vrakas*

*Imaging Time-Series for NILM (full)*

*Sotirios Tasoulis, Georgios Mallis, Spiros Georgakopoulos, Aristidis Vrahatis, Vassilis Plagianakos, Ilias Maglogiannis*

*Deep Learning and Change Detection for Fall Recognition (full)*

**14:00-15:00 Lunch**

**15:10-18:30 Knossos Guided Tour**

**21:00 Conference Gala Party!!**

**Sunday 26/5/2019**

**8:30-15:00 Registration**

**9:30-10:30 Room A: Plenary Session 5**

Chair: *John Macintyre*

**Keynote Speaker:** John Oomen, School of Computer Science, Carleton University, Ottawa, Canada

**Topic:** The Power of the “Pursuit” Learning Paradigm in the Partitioning of Data

**10:30-11:45 Room A: AIAI Session 7 (DEE I) Deep Learning**

Chair: *Serafin Alonso*

*Jacek Zurada, Babajide Ayinde, Keishin Nishihama*

*Diversity Regularized Adversarial Deep Learning (full)*

*Aliaksandr Barushka, Petr Hajek*

*Review Spam Detection using Word Embeddings and Deep Neural Networks (full)*

*Giorgio Morales, Itamar Salazar-Reque, Joel Telles, Daniel Díaz*

*Detecting Violent Robberies in CCTV Videos Using Deep Learning (full)*

*Harald Schallner*

*Capacity Requirements Planning for Production Companies Using Deep Reinforcement Learning (full)*

*Pradeep Hewage, Ardhendu Behera, Marcello Trovati, Ella Pereira*

*Long-Short Term Memory for an Effective Short-Term Weather Forecasting Model Using Surface Weather Data (short)*

**10:30-11:45 Room B: EANN Session 6: (FL-ML) Fuzzy Logic-Machine Learning**

Chair: *Will Serrano*

*Paul Alexandru Bucur, Philipp Hungerländer*

*Canonical correlation analysis framework for the reduction of test time in industrial manufacturing quality tests (full)*

*Ladislava Smítková Janků*

*Improvement of Routing in Opportunistic Communication Networks of Vehicles by Unsupervised Machine Learning (full)*

*Mario Malcangi, Marco Malcangi*

*Bioinspired Early Prediction of Earthquakes inferred by an Evolving Fuzzy Neural Network Paradigm (full)*

*Ruchi Panwar, N. Sukavanam*

*Smooth Trajectory Generation Using Different Neural Networks (Short)*

**10:30-11:45 Room C: AIAI Session 8: (DEE-CON I) Deep Learning-Convolutional I ANN**

Chair: *Alexander Wendt*

*Ladislav Lenc, Jiří Martínek, Pavel Král*

*Tools for Semi-automatic Preparation of Training Data for OCR (full)*

*Jiří Martínek, Ladislav Lenc, Pavel Kral*

*Training Strategies for OCR Systems for Historical Documents (full)*

*Andres Ovidio Restrepo Rodriguez, Daniel Esteban Casas Mateus, Paulo Alonso Gaona-Garcia, Adriana Gomez Acosta, Carlos Enrique Montenegro Marin*

*Segmentation methods for image classification using a Convolutional Neural Network on AR-Sandbox (short)*

*Linfeng Sui, Xuyang Zhao, Qibin Zhao, Toshihisa Tanaka, Jianting Cao*

*Localization of Epileptic Foci by Using Convolutional Neural Network Based on iEEG (full)*

**10:30-11:45 Room D: EANN Session 7: (DEE-CON II) Deep-Convolutional ANN II**

Chair: *Paulo Novais*

*Vedang Chauhan, Keyur Joshi, Brian Surgenor*

*Image Classification Using Deep Neural Networks: Transfer Learning and handling unknown Images (full)*

*Andreea-Iulia Patachi, Florin Leon, Doina Logofatu*

*A Deep Network System for Simulated Autonomous Driving Using Behavioral Cloning (full)*

*Hasniza Hassan, Syahid Anuar, Nor Bahiah Ahmad*

*Students' Performance Prediction Model using Meta-Classifer Approach (full)*

*Nameer Al Khafaf, Mahdi Jalili, Peter Sokolowski*

*Application of Deep Learning Long Short-Term Memory in Energy Demand Forecasting (full)*

*Antonios Karatzoglou*

*Evolutionary Optimization on Artificial Neural Networks for Predicting the User's Future Semantic Location (full)*

**11:45-12:00 Coffee Break**

**12:00-13:15 Room A: AIAI Session 9: (DEE-AND) Deep Learning-Anomaly Detection**

Chair: *Antonis Papaleonidas*

*Leonardo Matos, Mariana Rodrigues, Ricardo Magalhaes, Victor Alves, Paulo Novais*

*Interpretability of a Deep Learning Model for Rodents Brain Semantic Segmentation (full)*

*Neha Bansal, Arun Sharma, R. K. Singh*

*A Review on the Application of Deep Learning in Legal Domain (full)*

*Fabio Fassetti, Ilaria Fassetti, Simona Nisticò*

*Learning and Detecting Stuttering Disorders (full)*

*Will Serrano*

*The Blockchain Random Neural Network in Cybersecurity and the Internet of Things (full)*

**12:00-13:15 Room B: EANN Session 8: (DEE II) Deep Learning II**

Chair: *Doina Logofatou*

*Spyridon Nikolaidis, Ioannis Refanidis*

*LEARNAE: Distributed and Resilient Deep Neural Network Training for Heterogeneous Peer to Peer Topologies (full)*

*Sanjay Kumar, Manish Kumar*

*Predicting Customer Churn Using Artificial Neural Network (Short)*

*Biju R Mohan, Nagaraj Naik*

*Study of Stock Return Predictions using Recurrent Neural Networks with LSTM (short)*

*Spyridon Papastergiou, Haralambos Mouratidis, Eleni-Maria Kalogeraki*

*Cyber Security Incident Handling, Warning and Response System for the European Critical Information Infrastructures (CyberSANE) (full)*

*Serafin Alonso, Antonio Moran, Daniel Pérez, Perfecto Reguera, Ignacio Diaz, Manuel Dominguez*

*Virtual Sensor Based on a Deep Learning Approach for Estimating Efficiency in Chillers (full)*

**12:00-13:15 Room C: AIAI Session 10: (AG-MV) Agents-Machine Vision**

Chair: *Pavel Kral*

*Alexander Wendt, Maximilian Götzinger, Thilo Sauter*

*An Agent-Based Framework for Complex Networks (full)*

*Spyridon Blatsios, Ioannis Refanidis*

*Towards an Adaption and Personalisation Solution based on Multi Agent System Applied on Serious Games (full)*

*Hanene Lejmi, Mouna Belhaj, Lamjed Ben Said*

*Studying emotions at work using agent-based modeling and simulation (full)*

*Huatian Wang, Qinqing Fu, Hongxin Wang, Jigen Peng, Shigang Yue*

*Constant Angular Velocity Regulation for Visually Guided Terrain Following (full)*

**12:00-13:15 Room D: AIAI Session 11: (REC-NATI) Recommendation-Nature Inspired**

Chair: *Lazaros Iliadis*

*Ioannis Schoinas, Christos Tjortjis*

*MuSIF: A Product Recommendation System Based on Multi-source Implicit Feedback (full)*

*Giannis Maniadis, Konstantinos N. Vavliakis, Andreas L. Symeonidis*

*Banner Personalization for e-commerce (full)*

*Flora Sakketou, Nicholas Ampazis*

*On the Invariance of the SELU Activation Function on Algorithm and Hyperparameter Selection in Neural Network Recommenders (full)*

*Antonios Papaleonidas, Lazaros Iliadis, Elias Pimenidis*

*Hybrid data set optimization in recommender systems using Fuzzy T-norms (full)*  
Ying Bai, Dali Wang  
Using Shallow Neural Network Fitting Technique to Improve Calibration Accuracy  
of Modeless Robots (short)

**13:15-14:15 Lunch**

**14:15-15:30 Room A: EANN Session 9: (ML II-DEE III) Machine Learning II-Deep Learning III**

Chair: *Antonios Papaleonidas*

*Yograj Singh Mandloi, Yoshinobu Inada*

*Machine Learning Approach for Drone Perception and Control (full)*

*Arthur Silveira, Cristian Muñoz, Leonardo Mendonza*

*Severe Asthma Exacerbations Prediction Using Neural Networks (full)*

*Stamatios-Aggelos Alexandropoulos, Christos Aridas, Sotiris Kotsiantis, Michael Vrahatis*

*A Deep Dense Neural Network for Bankruptcy Prediction (full)*

*Naik Nagaraj, R Mohan Biju*

*Stock Price Movements Classification using Machine and Deep Learning Techniques.*

*The Case Study of Indian Stock Market (short)*

*Sanjay Kumar, Arka Bhowmik, Neeraj Bhat*

*Eye Disease Prediction from Optical Coherence Tomography Images with Transfer Learning (full)*

**14:15-15:30 Room B: AIAI Session 12: (LEA-CV) Learning -Computer Vision**

Chair: *Konstantinos Vavliakis*

*Omar Ghaleb, John Oommen*

*Learning Automata-based Solutions to the Single Elevator Problem (full)*

*Xiaodan Deng, Xiaoxuan Sun, Ping Guo, Qian Yin*

*Image Recognition Based on Combined filters with Pseudoinverse Learning Algorithm (short)*

*Dimitrios Arampatzis, Maria Doulgeraki, Michail Giannoulis, Evropi Stefanidi, Theodore Patkos*

*EduBAI: An Educational Platform for Logic-based Reasoning (short)*

*Sandeep Singh Sengar*

*Motion segmentation based on structure-texture decomposition and improved three frame differencing (full)*

**15:30-15:45 Room A: Closing Session**