

# Detailed Program of the EANN'2017 Conference

**Friday 25/8/2017**

**8:30-9:30**      **Registration**

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

Chair: Wlodzislaw Duch

Keynote Speaker: Stefanos Kollias, Lincoln University, UK

*Title: Developing Performance-aware Trustful Neural Architectures for Complex Data Analysis*

**10:30-12:00**    **EANN Session 1: Optimization – Data Mining (OPT-DM)**

Chair: Stephanos Kollias

Alexandros Tzanetos, Georgios Dounias: *A New Metaheuristic Method for Optimization: Sonar Inspired Optimization (full)*

Ioannis Stephanakis, Theodoros Iliou, George Anastassopoulos: *Information Feature Selection: Using Local Attribute Selections to Represent Connected Distributions in Complex Datasets (full)*

Amelia Badica, Costin Badica, Florin Leon, Daniela Danciulescu: *Optimization of Freight Transportation Brokerage Using Agents and Constraints (full)*

**10:30-12:00**    **EANN Session 2: Learning Generalization (LEA\_GEN1)**

Chair: George Tsekouras

Vera Kurkova: *Sparsity of Shallow Networks Representing Finite Mappings (full)*

Naohiro Ishii, Toshinori Deguchi, Masashi Kawaguchi, Hiroshi Sasaki: *Application of Asymmetric Networks to Movement Detection and Generating Independent Subspaces (full)*

Alan Thomas, Miltos Petridis, Simon Walters, Saeed Malekshahi Gheytsi, Robert Morgan: *Two Hidden Layers are Usually Better than One (full)*

Dimitris Kalles, Alexandros Nikolalakis: *Neural Networks as a Learning Component for Designing Board Games (full)*

**12:00-12:30**    **Coffee Break**

**12:30-13:30**    **EANN Session 3: Deep Learning - Convolutional - Chaotic ANN (DEL-CON-CH)**

Chair: Costin Badica

Varsha Prasad Narsing, Sriharini V. Tumu, A. Ruhan Bevi: *Memristor Based Chaotic Neural Network with Application in Nonlinear Cryptosystem (full)*

Alan Mosca, George Magoulas: *Boosted Residual Networks (full)*

Tiberiu Boroş, Stefan Daniel Dumitrescu: *A Convolutional Approach to Multiword Expression Detection Based on Unsupervised Distributed Word Representations and Task-driven Embedding of Lexical Features (full)*

**12:30-13:30**    **EANN Session 4: Medical applications (MEDIC\_A)**

Chair: Ilias Maglogiannis

Michael Vasilakakis, Dimitris Iakovidis, Evaggelos Spyrou, Dimitris Chatzis, Anastasios Koulaouzidis: *Beyond Lesion Detection: Towards Semantic Interpretation of Endoscopy Videos (full)*

Athanasios Tagaris, Dimitrios Kollias, Andreas Stafylopatis: *Assessment of Parkinson's Disease Based on*

*Deep Neural Networks (full)*

S.V. Georgakopoulos, K. Kottari, K. Delibasis, V.P. Plagianakos, I. Maglogiannis: *Detection of Malignant Melanoma in Dermoscopic Images Using Convolutional Neural Networks with Transfer Learning (full)*

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

**14:30-15:45 EANN Session 5: Intelligent Systems for Audio Signal Processing Intelligent (ISASPI)**

Chair: Stavros Ntalampiras

Rafael Torres, Daniele Battaglino, Ludovick Lepauloux: *Baby Cry Sound Detection: A Comparison of Hand Crafted Features and Deep Learning Approach (full)*

Danish Shaikh, Poramate Manoonpong: *A Neural Circuit for Acoustic Navigation combining Heterosynaptic and Non-synaptic Plasticity that Learns Stable Trajectories (full)*

Stavros Ntalampiras, Ilyas Potamitis: *Emotion Prediction of Sound Events Based on Transfer Learning (full)*

Michal Farkaš, Peter Lacko: *Using Advanced Audio Generating Techniques to Model Electrical Energy Load (short)*

**14:30-15:45 Mining Humanistic Data1 Workshop Session (MHDW1)**

Chair: Christos Makris

Nickie Lefevr, Spiridoula Margariti, Andreas Kanavos, Athanasios Tsakalidis: *An Implementation of Disease Spreading over Biological Networks (full)*

Fotini Stathopoulou, Georgios Drakopoulos, Giannis Tzimas, Michail Paraskevas, Phivos Mylonas, Spyros Sioutas: *A Study of Multilingual Social Media (full)*

Mai Alzamel, Jia Gao, Costas Iliopoulos, Chang Liu, Solon Pissis: *Efficient Computation of Palindromes in Sequences with Uncertainties (short)*

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

**16:15-17:00 Special Session**

Chair: Vera Kurkova

Speaker: John Macintyre, University of Sunderland, Editor in Chief

Title: *Presentation of the Neural Computing & Applications Journal (Springer)*

**19:30-21:30 Welcome Reception**

## Saturday 26/8/2017

**8:30-9:30**      **Registration**

**9:30-10:30**    **Plenary Session 2**

Chair: Vera Kurkova

Keynote Speaker: Plamen Angelov, Lancaster University, UK

*Title: Empirical Data Analytics: Learning Autonomously from Data Streams*

**10:30-11:30**    **EANN Session 6: ROBOTICS – MACHINE VISION (ROB\_MV)**

Chair: Danish Shaikh

Vedang Chauhan, Keyur Joshi, Brian Surgenor: *Machine Vision for Coin Recognition with ANNs: Effect of Training and Testing Parameters (full)*

Kazuhiko Takahashi, Iwao Sugimoto: *Remarks on Tea Leaves Aroma Recognition Using Deep Neural Network (full)*

Doina Logofatu, Gil Sobol, Daniel Stamate: *Particle Swarm Optimization Algorithms for Autonomous Robots with Leaders Using Space Filling Movements (short)*

**10:30-11:30**    **EANN Session 7: CLASSIFICATION – PATTERN RECOGNITION 1 (CLAS\_PR1)**

Chair: Giacomo Boracchi

Ioannis Livieris, Konstantina Drakopoulou, Thodoris Kotsilieris, Vassilis Tampakas, Panagiotis Pintelas: *DSS-PSP - A Decision Support Software for Evaluating Student's Performance (full)*

Georgios Kostopoulos, Sotiris Kotsiantis, Anastasia-Dimitra Lipitakis, George Gravvanis: *Predicting Student Performance in Distance Higher Education Using Active Learning (full)*

Carlos Francisco Moreno-García, Eyad Elyan, Chrisina Jayne: *Heuristics-Based Detection to Improve Text/Graphics Segmentation in Complex Engineering Drawings (full)*

**11:30-12:00**    **Coffee Break**

**12:00-13:15**    **EANN Session 8: RECOMMENDATION SYSTEMS (RECOM)**

Chair: Spyros Sioutas

Panagiotis Kouris, Iraklis Varlamis, Georgios Alexandridis: *A Package Recommendation Framework Based on Collaborative Filtering and Preference Score Maximization (full)*

Haidar Almohri, Ratna Babu Chinnam: *Deriving Business Recommendations for Franchises Using Competitive Learning Driven MLP-Based Clustering (full)*

Nikolaos Polatidis, Elias Pimenidis, Michalis Pavlidis, Haralambos Mouratidis: *Recommender Systems Meeting Security: From Product Recommendation to Cyber-attack Prediction (full)*

Orestis Nalmpantis, Christos Tjortjis: *The 50/50 Recommender: A Method Incorporating Personality into Movie Recommender Systems (short)*

**12:00-13:15**    **EANN Session 9: DEEP LEARNING – IMAGE ANALYSIS (DEL\_IMAG)**

Chair: Kazuhiko Takahashi

Adamu Ali-Gombe, Eyad Elyan, Chrisina Jayne: *Fish Classification in Context of Noisy Images (full)*

Nikolaos Passalis, Anastasios Tefas: *Improving Face Pose Estimation using Long-Term Temporal Averaging for Stochastic Optimization (full)*

Paraskevi Nousi, Anastasios Tefas: *Discriminatively Trained Autoencoders for Fast and Accurate Face Recognition (full)*

Jivitesh Sharma, Ole-Christoffer Granmo, Morten Goodwin, Jahn Thomas Fidje: *Deep Convolutional Neural Networks for Fire Detection in Images (short)*

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

**14:30-15:30 EANN Session 10: Fuzzy - Neuro Fuzzy (FUZZ)**

Chair: Basil Papadopoulos

George Tsekouras: *Neuro-Fuzzy Network for Modeling the Shoreline Realignment of the Kamari Beach, Santorini, Greece (full)*

Panagiotis Pagouropoulos, Christos Tzimopoulos, Basil Papadopoulos: *A Method for the Detection of the Most Suitable Fuzzy Implication for Data Applications (full)*

Mario Malcangi, Marco Di Rienzo, Hao Quan: *Applying the EFuNN Evolving Paradigm to the Recognition and Removal of Artefactual Beats in Continuous Seismocardiogram Recordings (full)*

**14:30-15:30 Mining Humanistic Data2 Workshop Session (MHDW2)**

Chair: Elias Pimenidis

Dimos Makris, Maximos Kaliakatsos-Papakostas, Ioannis Karydis, Katia Lida Kermanidis: *Combining LSTM and Feed Forward Neural Networks for Conditional Rhythm Composition (full)*

Hayam Alamro, Mai Alzamel, Costas Iliopoulos, Solon Pissis, Wing-Kin Sung, Steven Watts: *Efficient Identification of k-closed Strings (full)*

Kalita Oxana, Denisenko Vladimir, Tryapelnikov Anatoly, Fotis Nanopoulos, Georgios Pavlidis: *Analyzing the Mobile Learning System Behavior: The Case of the Russian Verbs of Motion (short)*

**15:30-16:00 Coffee Break**

**16:00-17:20 5G-PINE1 Workshop Session**

Chair: Theodoros Rokkas

Ioannis Chochliouros, Oriol Sallent, Jordi Pérez-Romero, Anastasia S. Spiliopoulou, Athanassios Dardamanis: *Implications of Multi-Tenancy upon RRM/Self-X Functions supporting Mobility Control (full)*

Ioannis Neokosmidis, Theodoros Rokkas, Ioannis P. Chochliouros, Leonardo Goratti, Haralambos Mouratidis, Karim M. Nasr, Seiamak Vahid, Klaus Moessner, Antonino Albanese, Ioannis P. Chochliouros, Anastasia S. Spiliopoulou, Alexandros Kostopoulos, Maria Belesioti, Evangelos Sfakianakis, Philippos Georgantas, Eirini Vasilaki, Ioannis Neokosmidis, Theodoros Rokkas, Athanassios Dardamanis: *Putting Intelligence in the Network Edge through NFV and Cloud Computing: The SESAME Approach (full)*

Ioannis P. Chochliouros, Alan Whitehead, Oriol Sallent, Jordi Pérez-Romero, Anastasia S. Spiliopoulou, Athanassios Dardamanis: *Inclusion of "Self-x" Properties in the SESAME-based Wireless Backhaul for Support of Higher Performance (full)*

**16:00-17:20 Mining Humanistic Data3 Workshop Session (MHDW3)**

Chair: Christos Makris

Eirini Chioti, Elias Dritsas, Andreas Kanavos, Xenophon Liapakis, Spyros Sioutas, Athanasios Tsakalidis: *Bloom Filters for Efficient Coupling between Tables of a Database (full)*

Koray Açıcı, Çağatay Berke Erdaş, Tunç Aşuroğlu, Münire Kılınc, Hamit Erdem, Hasan Oğul: *A Random Forest Method to Detect Parkinson's Disease via Gait Analysis (full)*

Georgios Dimitrakopoulos, Ioannis Kakkos, Aristidis Vrahatis, Kyriakos Sgarbas, Junhua Li, Yu Sun, Anastasios Bezerianos: *Driving Mental Fatigue Classification based on Brain Functional Connectivity (full)*

**21:00**      **Conference Dinner**

<b>Sunday 27/8/2017</b>
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**8:30-9:30**      **Registration**

**9:30-10:30**      **Plenary Session 3**

Chair: Plamen Angelov

Keynote Speaker: Wlodzislaw Duch, Nicolaus Copernicus University, Poland

*Title: From Understanding the Brain to Neurocognitive Technologies*

**10:30-11:50**      **EANN Session 11: Artificial Neural Networks in Engineering (ANN\_ENG)**

Chair: Mario Malcangi

Shun Shibata, Yukimasa Kaneda, Hiroshi Mineno: *Motion-specialized Deep Convolutional Descriptor for Plant Water Stress Estimation (full)*

Antonio Morán, Serafin Alonso, Miguel A. Prada, Juan J. Fuertes, Ignacio Diaz, Manuel Dominguez: *Analysis of Parallel Process in HVAC Systems Using Deep Autoencoders (full)*

Cosimo Ieracitano, Patrizia Frontera, Fabiola Pantò, Francesco Carlo Morabito: *A Neural Network Approach for Predicting the Diameters of Electrospun Polyvinylacetate (PVAc) Nanofibers (full)*

Jose Simmonds, Agapito Ledezma, Juan Gómez: *Data Preprocessing to Enhance Flow Forecasting in a Tropical River Basin (short)*

**10:30-11:50**      **EANN Session 12: Classification Pattern Recognition 2 (CLAS\_PR2)**

Chair: Stavros Ntalampiras

Andrianna Polydouri, Georgios Siolas, Andreas Stafylopatis: *Intrinsic Plagiarism Detection with Feature-rich Imbalanced Dataset Learning (full)*

Sotiris Kotsiantis, Christos Aridas, Stamatis-Aggelos Alexandropoulos, Michael Vrahatis: *Resampling in One-Versus-All Strategy for Handling Multi-class Problems (full)*

Kostantinos Demertzis, Lazaros Iliadis: *A Spiking One-class Anomaly Detection Framework for Cyber-Security on Industrial Control Systems (full)*

**11:50-12:20**      **Coffee Break**

**12:20-13:45**      **EANN Session 13: Learning Generalization 2 (LEA\_GEN2)**

Chair: Konstantinos Demertzis

Stavros Adam, Aristidis Likas, Michael Vrahatis: *Interval Analysis based Neural Network Inversion: A Means for Evaluating Generalization (full)*

Spiros Georgakopoulos, Vassilis Plagianakos: *A Novel Adaptive Learning Rate Algorithm for Convolutional Neural Network Training (full)*

Torkil Aamodt and Jim Torresen. *Comparing Neural Networks for Predicting Stock Markets (full)*

Stamatis Karlos, Georgios Kostopoulos, Sotiris Kotsiantis and Vasilis Tampakas. *Using Active Learning Methods for predicting fraudulent financial statements (full)*

**12:20-13:45**      **5G-PINE2 Workshop Session**

Chair: Ioannis P. Chochliouros

Ruben Solozabal, Bego Blanco, Jose Oscar Fajardo, Ianire Taboada, Fidel Liberal, Elisa Jimeno, Javier G. Lloreda: *Design of Virtual Infrastructure Manager with Novel VNF Placement Features for Edge Clouds in 5G (full)*

Paolo Secondo Crosta, Pietro Paglierani: *Are Small Cells and Network Intelligence at the Edge the Drivers for 5G Market Adoption? The SESAME case (full)*

L. Goratti, C. E. Costa, J. Perez-Romero, P. S. Khodashenas, A. Whitehead, I. Chochliouros: *The Role of Virtualization in the Small Cell Enabled Mobile Edge Computing Ecosystem (full)*

Jordi Pérez-Romero, Juan Sánchez-González, Oriol Sallent, Alan Whitehead: *On Introducing Knowledge Discovery Capabilities in Cloud-Enabled Small Cells (full)*

**13:45-14:00 Closing Session**

Chair: Lazaros Iliadis