

Wednesday, June 26, 2019

- 08:30–09:00 Registration
- 09:00–10:15 Welcome speech and invited talk (Alessandro Sperduti, Italy)
- 10:15–11:05 **Session 1. LVQ: Practical Applications**
Sousa, D. et al. LVQ-Type Classifiers for Condition Monitoring of Induction Motors: A Performance Comparison
Villmann, T. et al. Searching for the Origins of Life - Detecting RNA Life Signatures Using Learning Vector Quantization
- 11:05–11:30 Coffee break
- 11:30–13:10 **Session 2. SOM: Theory and Methods**
Fix, J., Frezza-Buet, H. Look and Feel What and How Recurrent Self-Organizing Maps Learn
Ma, X. et al. Self-Organizing Mappings on the Flag Manifold
Girau, B., Upegui, A. Cellular Self-Organising Maps - CSOM
Taylor, J., Merényi, E. A Probabilistic Method for Pruning CADJ Graphs with Applications to SOM Clustering
- 13:15–14:40 Lunch
- 14:45–16:00 **Session 3. SOM: Practical Applications, part I**
Bernard, Y. et al. Novelty Detection with Self-Organizing Maps for Autonomous Extraction of Salient Tracking Features
Hameed, A.A. et al. Robust Adaptive SOMs Challenges in a Varied Datasets Analytics
Cottrell, M. et al. Detection of Abnormal Flights Using Fickel Instances in SOM Maps
- 16:00–17:00 Invited Talk (Paulo Lisboa, U.K.)
- 18:30- Welcome event @ PRBB by the beach

Thursday, June 27, 2019

- 09:00–10:00 Invited talk (Aida Valls, Spain)
- 10:00–10:50 **Session 4. Life Science Applications, part I**
Riley, P. et al. A Voting Ensemble Method to Assist the Diagnosis of Prostate Cancer Using Multiparametric MRI
Srivastava, M. et al. Classifying and Grouping Mammography Images into Communities Using Fisher Information Networks to Assist the Diagnosis of Breast Cancer
- 10:50–11:15 Coffee break
- 11:15–13:00 **Session 5. Applications**
Faigl, J., Prágr, M. Incremental Traversability Assessment Learning using Growing Neural Gas Algorithm
Elend, L., Kramer, O. Self-Organizing Maps with Convolutional Layers
Olteanu, M. Lamirel, J.C. When Clustering the Multiscalar Fingerprint of the City Reveals its Segregation Patterns
Gibert, K., Karna, A. Using Hierarchical Clustering to Understand Behavior of 3D Printer Sensors
Kvinge, H. et al. A Walk Through Spectral Bands: Using Virtual Reality to Better Visualize Hyperspectral Data
- 13:05–14:25 Lunch
- 14:30–15:40 Industry Workshop
- 15:40–17:20 **Session 6. LVQ: Theory and Methods**
Villmann, T. et al. Investigation of Activation Functions for Generalized Learning Vector Quantization
Saralajew, S. et al. Robustness of Generalized Learning Vector Quantization Models against Adversarial Attacks
Heusinger, M. et al. Passive Concept Drift Handling via Momentum Based Robust Soft Learning Vector Quantization
Biehl, M. et al. Prototype-Based Classifiers in the Presence of Concept Drift: A Modelling Framework
- 18:30- BCN Guided Tour + Gala Dinner

Friday, June 28, 2019

- 09:30–10:30 Invited talk (Tobias Schreck, Austria)
- 10:30–11:00 Coffee break
- 11:00–13:10 **Session 7. Theory and Methods**
Fleer, S., Ritter, H. Solving a Tool-Based Interaction Task Using Deep Reinforcement Learning with Visual Attention
Coelho D., Barreto, G. Approximate Linear Dependence as a Design Method for Kernel Prototype-based Classifiers
Stiverson, S. et al. Subspace Quantization on the Grassmannian
Geweniger T., Villmann, T. Variants of Fuzzy Neural Gas
Szadkowski, R. et al. Autoencoders Covering Space as a Life-Long Classifier
Oualid, A.M. et al. Soft Subspace Topological Clustering over Evolving Data Stream
- 13:15–14:40 Lunch
- 14:45–16:25 **Session 8. SOM: Practical Applications, part II**
Rosengarten, M., Ramachandran, S. SOM-Based Anomaly Detection & Localization for Space Subsystems
Alves Santos, L. et al. Self-Organizing Maps in Earth Observation Data Cubes Analysis
Nogales, A. et al. Competencies in Higher Education: a Feature Analysis with Self-Organizing Maps
Bai, Z. et al. Using SOM-based Visualization to Analyze the Financial Performance of Consumer Discretionary Firms
- 16:25–17:20 **Session 9. Life Science Applications, part II**
Jansen, C. Mortazavi, A. Progressive Clustering and Characterization of Increasingly Higher Dimensional Datasets with Living Self-Organizing Maps
Rodríguez-Bazaga, A. Vellido, A. Network Community Cluster-Based Analysis for the Identification of Potential Leukemia Drug Targets
Tokutaka, H. et al. Simultaneous Display of Front and Back Sides of Spherical SOM for Health Data Analysis
- 17:20- Conference Closing