Tuesday, 18. October

18:00 - 20:00	Registration Desk
19:00 - 21:00	Welcome Reception at Nicolaus Sheraton Hotel (Roof)

Wednesday, 19. October

8:00 - 18:00	Registration Desk	
8:50 - 9:00	**Conference opening**: Donato Malerba, Ronald Ortner, Hans Ulrich Simon, Toon Calders, Michelangelo Ceci	
9:00 - 10:30	**Tutorial ALT** Gábor Lugosi *How to Estimate the Mean of a Random Variable?* (Chair: Ronald Ortner)	
10:30 - 11:00	Coffee Break and **Poster Exhibition**	
11:00 - 12:40	**SESSION DS 1: Pattern mining and rules** (Chair: Nada Lavrac)	**SESSION ALT 1: Generalization Error and Sample Compression** (Chair: Nader Bshouty)
	11:00 – 11:20 Cláudio Rebelo De Sá, Wouter Duivesteijn, Carlos Soares and Arno Knobbe *Exceptional Preferences Mining*	**11:00 – 11:25** Andreas Maurer *A Vector-Contraction Inequality for Rademacher Complexities*
	11:20 – 11:40 Guillaume Bosc, Jérôme Golebiowski, Moustafa Bensafi, Céline Robardet, Marc Plantevit, Jean-Francois Boulicaut and Mehdi Kaytoue *Local subgroup discovery for eliciting and understanding new structure-odor relationships*	**11:25–11:50** Nikita Zhivotovskyi and Steve Hanneke *Localization of VC Classes: Beyond Local Rademacher Complexities*
	11:40 – 12:00 Matej Mihelčić and Tomislav Šmuc *InterSet: Interactive redescription set exploration*	**11:50–12:15** Shay Moran and Manfred Warmuth *Labeled Compression Schemes for Extremal Classes*
	12:00 – 12:20 Matthijs van Leeuwen and Antti Ukkonen *Expect the unexpected - On the significance of subgroups*	**12:15–12:40** Shai Ben-David and Ruth Urner *On Version Space Compression*
	12:20 – 12:40 Pascal Welke, Tamas Horvath and Stefan Wrobel *Min-Hashing for Probabilistic Frequent Subtree Feature Spaces*	
12:40 - 14:00	Lunch (Hotel Nicolaus Sheraton)	

14:00 - 15:00	**Invited Talk ALT/DS** John Shawe-Taylor *Margin Based Structured Output Learning* (Chair: Donato Malerba)	
15:00 - 15:30	Coffee Break and **Poster Exhibition**	
15:30 - 16:45	**SESSION DS 2: Structured output prediction** (Chair: Dragi Kocev)	**SESSION ALT 2: Dimension Reduction, Kernel Methods and Evolvability** (Chair: Shai Ben-David)
	15:30 – 15:50 Leon Bornemann, Jason Lecerf and Panagiotis Papapetrou *STIFE: A Framework for Feature-based Classification of Sequences of Temporal Intervals*	**15:30–15:55** Lijun Zhang, Tianbao Yang, Rong Jin, and Zhi-Hua Zhou *Sparse Learning for Large-scale and High-dimensional Data: A Randomized Convex-concave Optimization Approach*
	15:50 – 16:10 Giuseppe Rizzo, Claudia d'Amato, Nicola Fanizzi and Floriana Esposito *Approximating Numeric Role Fillers via Predictive Clustering Trees for Knowledge Base Enrichment in the Web of Data*	**15:55–16:20** Corinna Cortes, Giulia Desalvo, and Mehryar Mohri *Learning with Rejection*
	16:10 – 16:30 Aljaz Osojnik, Saso Dzeroski and Dragi Kocev *Option predictive clustering trees for multi-target regression*	**16:20–16:45** Dimitrios I. Diochnos *On the Evolution of Monotone Conjunctions: Drilling for Best Approximations*
	16:30 – 16:45 Leandro R. Galvão and Luiz Merschmann *HSIM: A Supervised Imputation Method for Hierarchical Classification Scenario*	
17:00 - 18:00	**Business Meeting**	
18:00 - 19:00	**Steering Committee Meeting**	
19:00 - 20:00	**Poster Exhibition**	

Thursday, 20. October

8:00 - 18:00	Registration Desk	
9:00 - 10:00	**Invited Talk ALT** Avrim Blum *Learning about Agents and Mechanisms from Opaque Transactions* (Chair: Hans U. Simon)	
10:00 - 10:30	**E. M. Gold Award Talk**: Nader Bshouty and Areej Costa *Exact Learning Juntas from Membership Queries* (Chair: Sandra Zilles)	
10:30 - 11:00	Coffee Break and **Poster Exhibition**	
11:00 - 12:30	**SESSION DS 3: Applications** (Chair: Herna Viktor)	**SESSION ALT 3: Online Learning I** (Chair: Lihong Li)

	11:00 – 11:20 Sebastian Kauschke, Johannes Fürnkranz and Frederik Janssen *Predicting Cargo Train Failures: A Machine Learning Approach for a Lightweight Prototype*	**11:00–11:25** Yuri Kalnishkan *An Upper Bound for Aggregating Algorithm for Regression with Changing Dependencies*
	11:20 – 11:40 Pasquale Ardimento, Massimo Bilancia and Stefano Monopoli *Predicting bug-fix time: using standard versus topic-based text categorization techniques*	**11:25–11:50** Takumi Nakazono, Ken-Ichiro Moridomi, Kohei Hatano, and Eiji Takimoto *A Combinatorial Metrical Task System Problem under the Uniform Metric*
	11:40 – 11:55 Mariana R. Oliveira, Luís Torgo and Vítor Santos Costa - *Predicting Wildfires: Propositional and Relational Spatio-Temporal Pre-Processing Approaches*	**11:50–12:15** Mehryar Mohri and Scott Yang Structural Online Learning
	11:55 – 12:10 Juan Colonna, João Gama and Eduardo Nakamura *Recognizing family, gender and species of anuran using a hierarchical classification approach*	**12:15–12:40** Nader Bshouty and Catherine Haddad-Zaknoon *The Maximum Cosine Framework for Deriving Perceptron Based Linear Classifiers*
	12:10 – 12:30 Shazia Tabassum and Joao Gama *Evolution Analysis of Call Ego-Networks*	
12:30 - 14:00	Lunch (Hotel Nicolaus Sheraton)	
14:00 - 15:30	**Tutorial DS** Gianluca Bontempi *Perspectives of feature selection in bioinformatics: from relevance to causal inference* (Chair: Toon Calders)	
15:30 - 16:10	**SESSION DS 4: Ensemble Learning** (Chair: Johannes Fuernkranz)	**SESSION ALT 4: Interactive Learning and Teaching** (Chair: Frank Stephan)
	15:30 – 15:50 Dariusz Brzezinski and Jerzy Stefanowski *Ensemble Diversity in Evolving Data Streams*	**15:30–15:55** Sivan Sabato *Submodular Learning and Covering with Response-Dependent Costs*
	15:50 – 16:10 Nikola Simidjievski, Ljupčo Todorovski and Sašo Džeroski *Learning Ensembles of Process-Based Models by Bagging of Random Library Samples*	**15:55–16:20** Achilles Beros, Ziyuan Gao, and Sandra Zilles *Classifying the Arithmetical Complexity of Teaching Models*
16:20 -	Departure to Trani (Cathedral, Castle and walk)	
20:00 - 22:00	Conference Dinner (Trani)	

Friday, 21. October

8:30 - 12:30	Registration Desk

9:00 - 10:00	**Invited Talk DS** Kristian Kersting *Collective attention on the web* (Chair: Michelangelo Ceci)	
10:00 - 10:30	**Carl H. Smith Award Talk**: Isak Karlsson, Panagiotis Papapetrou and Henrik Boström *Early Random Shapelet Forest* (Chair: Sašo Džeroski)	
10:30 - 11:00	Coffee Break and **Poster Exhibition**	
11:00 - 12:30	**SESSION DS 5: Classification** (Chair: João Gama)	**SESSION ALT 5: Bandits, Reinforcement Learning, and Clustering** (Chair: Kohei Hatano)
	11:00 – 11:20 Julius Stecher, Frederik Janssen and Johannes Fürnkranz *Shorter Rules Are Better, Aren't They?*	**11:00–11:25** Chen-Yu Liu and Lihong Li *On the Prior Sensitivity of Thompson Sampling*
	11:20 – 11:40 Annalisa Appice and Pietro Guccione *Exploiting Spatial Correlation of Spectral Signature for Training Data Selection in Hyperspectral Image Classification*	**11:25–11:50** Anna Harutyunyan, Marc G. Bellemare, Tom Stepleton, and Remi Munos *Q( ) with Off-Policy Corrections*
	11:40 – 12:00 Matej Petković, Pance Panov and Saso Dzeroski *A Comparison of Different Data Transformation Approaches in the Feature Ranking Context*	**11:50–12:15** Emilie Kaufmann, Thomas Bonald, and Marc Lelarge *A Spectral Algorithm with Additive Clustering for the Recovery of Overlapping Communities in Networks*
	12:00 – 12:20 Gert Jacobusse and Cor Veenman *On Selection Bias with Imbalanced Classes*	**12:15–12:40** Shrinu Kushagra, Shai Ben-David, and Samira Samadi *Finding Meaningful Cluster Structure Admidst Background Noise*
	12:20 – 12:40 Ali Pesaranghader, Herna Viktor and Eric Paquet *A Framework for Classification in Data Streams using Multi-strategy Learning*	
12:40 - 14:00	Lunch (Hotel Nicolaus Sheraton)	
14:00 - 15:15	**SESSION 6: Networks** (Chair: Annalisa Appice)	**Session 6: Inductive Inference** (Chair: Hans U. Simon)
	14:00 – 14:20 Fabrizio Angiulli, Fabio Fassetti and Estela Narvaez *Anomaly Detection in Networks with Temporal Information*	**14:00–14:25** Sanjay Jain and Efim Kinber *Intrinsic Complexity of Partial Learning*
	14:20 – 14:40 Kouzou Ohara, Kazumi Saito, Masahiro Kimura and Hiroshi Motoda *Accelerating computation of distance based centrality measures for spatial networks*	**14:25–14:50** Rupert Hölzl, Sanjay Jain, and Frank Stephan *Learning Pattern Languages over Groups*

	14:40 – 15:00 Ruggero G. Pensa and Gianpiero Di Blasi *A Semi-supervised Approach to Measuring User Privacy in Online Social Networks*	**14:50–15:15** Klaus Ambos-Spies *Learning Finite Variants of Single Languages from Informant*
	15:00 – 15:15 Fabiola Pereira, Sandra de Amo and João Gama *On Using Temporal Networks to Analyze User Preferences Dynamics*	
15:15 - 15:45	Coffee Break and **Poster Exhibition**	
15:45 - 17:00	**SESSION DS 7: Kernels and deep learning** (Chair: Matthijs van Leeuwen)	**Session ALT 7: Online Learning II** (Chair: Ronald Ortner)
	15:45 – 16:05 Huibin Shen, Sandor Szedmak, Céline Brouard and Juho Rousu - *Soft Kernel Target Alignment for Two-stage Multiple Kernel Learning*	**15:45–16:10** Tugkan Batu and Pongphat Taptagaporn *Competitive Portfolio Selection Using Stochastic Predictions*
	16:05 – 16:25 Timo Nolle, Alexander Seeliger and Max Mühlhäuser *Unsupervised Anomaly Detection in Noisy Business Process Event Logs Using Denoising Autoencoders*	**16:10–16:35** Wojciech Kotlowski *On Minimaxity of Follow the Leader Strategy in the Stochastic Setting*
	16:25 – 16:45 Jan Ruben Zilke, Eneldo Loza Mencía and Frederik Janssen *DeepRED - Rule Extraction from Deep Neural Networks*	**16:35–17:00** Daniil Ryabko *Things Bayes Can't Do*
	16:45 – 16:55 Katrin Ullrich, Jennifer Mack and Pascal Welke *Ligand Affinity Prediction with Multi-Pattern Kernels*	
17:00	**Closing**	