ECML/PKDD-2002 PROGRAM SCHEDULE

MONDAY 19 August 2002

9:00 Tutorial T1: Text Mining and Internet Content Filtering
José María Gómez Hidalgo

Tutorial T2: Formal Concept Analysis
Gerd Stumme

Workshop WS1: IDDM — Integration and Collaboration
Aspects of Data Mining, Decision Support and Meta-Learning
Organizers: Marko Bohanec, Dunja Mladenić, Nada Lavrač

Workshop WS2: VDM — Visual Data Mining
Organizers: Simeon J. Simoff, Monique Noirhomme-Fraiture, Michael H. Böhlen

Coffee will be served 10:30–11:00

13:00 Lunch Break

14:30 Tutorial T3: Web Usage Mining for E-business Applications
Myra Spiliopoulou, Bamshad Mobasher, Bettina Berendt

Tutorial T4: Inductive Databases and Constraint-based Mining
Jean-François Boulicaut, Luc De Raedt

Workshop WS1: IDDM — Integration and Collaboration
Aspects of Data Mining, Decision Support and Meta-Learning
Program continues from morning

Workshop WS2: VDM — Visual Data Mining
Program continues from morning

Coffee will be served 16:00–16:30

18:00 End of Tutorials and Workshops
TUESDAY 20 August 2002

9:00  Tutorial T5: An introduction to Quality Assessment in Data Mining  Sali 1
Maria Halkidi, Michalis Vazirgiannis

Tutorial T6: Privacy, Security, and Data Mining  Sali 12
Chris Clifton

Workshop WS4: SWM — Semantic Web Mining  Sali 13
Organizers: Bettina Berendt, Andreas Hotho, Gerd Stumme

Workshop WS5: MOD — Mining Official Data  Sali 6
Organizers: Paula Brito, Donato Malerba

Workshop WS6: KDID — Knowledge Discovery in Inductive Databases  Sali 10
Organizers: Mika Klemettinen, Rosa Moe, Fosca Giannotti, Luc De Raedt

Workshop WSC: Discovery Challenge  Auditorio XIII
Organizers: Petr Berka, Jan Rauch, Shusaku Tsumoto

European Project Presentations Day  Sali 5
Organizers: Dunja Mladenić, Maarten van Someren

Coffee will be served 10:30–11:00

13:00 Lunch Break

14:30 Workshop WS4: SWM — Semantic Web Mining  Sali 13
Program continues from morning

Workshop WS5: MOD — Mining Official Data  Sali 6
Program continues from morning

Workshop WS6: KDID — Knowledge Discovery in Inductive Databases  Sali 10
Program continues from morning

Workshop WSC: Discovery Challenge  Auditorio XIII
Program continues from morning

European Project Presentations Day: Exhibition  Lobby 2nd Floor

16:00 Coffee Break

16:30 ECML/PKDD-2002 Opening and Keynote Talk  Juhlasali
Padhraic Smyth: Learning with Mixture Models: Concepts and Applications
Chair: Heikki Mannila

18:00 Reception Hosted by the City of Helsinki  City Hall
Address: Pohjoisesplanadi 11–13, 00170 Helsinki
WEDNESDAY 21 August 2002

9:00  Keynote Talk
      Bernhard Schölkopf: Learning with Kernels
      Chair: Tapio Elomaa

10:00  KDNet Best ECML-2002 Paper Award Winner
      Ioannis Tsochantaridis, Thomas Hofmann: Support Vector Machines for Polycategorical Classification

10:30  Coffee Break

11:00  Session A1: Ensemble Methods
      Chair: Luc De Raedt
      E  Kwek, Nguyen: iBoost: Boosting Using an Instance-Based Exponential Weighting Scheme
      E  Derbeko, El-Yaniv, Meir: Variance Optimized Bagging
      P  Choki, Suzuki: Iterative Data Squashing for Boosting Based on a Distribution-Sensitive Distance
      E  Fürnkranz: Pairwise Classification as an Ensemble Technique

Session A2: Text and Document Mining
      Chair: Helena Ahonen-Myka
      P  Forman: Choose Your Words Carefully: An Empirical Study of Feature Selection Metrics for Text Classification
      P  Abe, Kawasoe, Asai, Arimura, Arikawa: Optimized Substructure Discovery for Semi-Structured Data
      P  Winkler, Spiliopoulou: Structuring Domain-Specific Text Archives by Deriving a Probabilistic XML DTD
      P  Kosala, Van den Bussche, Bruynooghe, Blockeel: Information Extraction in Structured Documents using Tree Automata Induction

Session A3: Semi-supervised and Unsupervised Learning
      Chair: Katharina Morik (to be confirmed)
      P  Giannotti, Gozzi, Manco: Clustering Transactional Data
      E  Vittaut, Amini, Gallinari: Learning Classification with Both Labeled and Unlabeled Data
      P  Ding, He, Zha, Simon: Unsupervised Learning: Self-Aggregation in Scaled Principal Component Space
      E  Todorovski, Blockeel, Džeroski: Ranking with Predictive Clustering Trees

13:00  Lunch Break

14:30  Session B1: Support Vector Machines
      Chair: Stephen Kwek
      E  Engel, Mannor, Meir: Sparse Online Greedy Support Vector Regression
      E  Martin: On-line Support Vector Machine Regression
      P  Paaß, Leopold, Larson, Kindermann, Eickeler: SVM Classification Using Sequences of Phonemes and Syllables
Session B2: Relational Learning  
Chair: Stan Matwin

- Peña Castillo, Wrobel: *Macro-Operators in Multirelational Learning: A Search-Space Reduction Technique*
- Ženko, Džeroski: *Stacking with an Extended Set of Meta-Level Attributes and MLR*
- Knobbe, Siebes, Marseille: *Involving Aggregate Functions in Multi-Relational Search*

Session B3: Time Series and Collaborative Recommendation  
Chair: Einoshin Suzuki

- Berberidis, Vlahavas, Aref, Atallah, Elmagarmid: *On the Discovery of Weak Periodicities in Large Time Series*
- Hirano, Tsumoto: *Multiscale Comparison of Temporal Patterns in Time-Series Medical Databases*
- Kushmerick: *Robustness Analyses of Instance-Based Collaborative Recommendation*

16:00 Coffee Break

16:30 Session C1: Biological and Medical Applications  
Chair: Maarten van Someren

- Arnborg, Agartz, Hall, Jönsson, Sillén, Sedvall: *Data Mining in Schizophrenia Research—Preliminary Analysis*
- Lidén, Asker, Boström: *Rule Induction for Classification of Gene Expression Array Data*
- Tsumoto: *Mining Hierarchical Decision Rules from Clinical Databases using Rough Sets and Medical Diagnostic Model*

Session C2: Association Rules  
Chair: Jean-François Boulicaut

- Sese, Morishita: *Answering the Most Correlated N Association Rules Efficiently*
- Coenen, Leng: *Finding Association Rules with Some Very Frequent Attributes*
- Hüllermeier: *Association Rules for Expressing Gradual Dependencies*

Session C3: Sampling and Feature Selection  
Chair: Johannes Fürnkranz

- Klösgen, May: *Spatial Subgroup Mining Integrated in an Object-Relational Spatial Database*
- Mamitsuka: *Iteratively Selecting Feature Subsets for Mining from High-Dimensional Databases*
- Scheffer, Wrobel: *A Scalable Constant-Memory Sampling Algorithm for Pattern Discovery in Large Databases*

18:00 End of Sessions C1 – C3

19:30 Conference Dinner  
*Restaurant Kulosaaren Casino*

Boats leave from the Market Square at 19:30

*Address of the restaurant:* Hopeasalmenpolku 1, 00570 Helsinki
THURSDAY 22 August 2002

9:00 Keynote Talk
Dan Roth: Reasoning with Classifiers
Chair: Hannu Toivonen

10:00 KDNet Best PKDD-2002 Paper Award Winner
Toon Calders, Bart Goethals: Mining All Non-Derivable Frequent Itemsets

10:30 Coffee Break

11:00 Session D1: Data Mining
Chair: Michael May

P Bailey, Manoukian, Ramamohanarao: Fast Algorithms for Mining Emerging Patterns
P Li, Wong: Geography of Differences between Two Classes of Data
P Jaroszewicz, Simovici: Support Approximations Using Bonferroni-Type Inequalities
P Kargupta, Sivakumar, Ghosh: Dependency Detection in MobiMine and Random Matrices

Session D2: Ensemble Methods
Chair: Stefan Wrobel

E Eibl, Pfeiffer: How to Make AdaBoost.M1 Work for Weak Base Classifiers by Changing Only One Line of the Code
E Nock, Lefaucheur: A Robust Boosting Algorithm
E Thollard, Sebban, Ezequel: Boosting Density Function Estimators
P Wall, Cunningham, Walsh: Explaining Predictions from a Neural Network Ensemble One at a Time

Session D3: Class Probability Estimation
Chair: Bernhard Pfahringer

E Halck: Using Hard Classifiers to Estimate Conditional Class Probabilities
E Kukar, Kononenko: Reliable Classifications with Machine Learning
E Margineantu: Class Probability Estimation and Cost-Sensitive Classification Decisions
E Banerjee, Peng: Convergent Gradient Ascent in General-Sum Games

13:00 Lunch Break
14:30  **Session E1: Reinforcement Learning**  
*Chair: Joost N. Kok*

- Menache, Mannor, Shimkin: *Q-Cut — Dynamic Discovery of Sub-Goals in Reinforcement Learning*
- Preux: *Propagation of Q-values in Tabular TD(λ)*

**Session E2: Web Mining**  
*Chair: Myra Spiliopoulou*

- Park, Palaniswami, Ramamohanarao: *A Novel Web Text Mining Method Using the Discrete Cosine Transform*
- Kemp, Ramamohanarao: *Long-Term Learning for Web Search Engines*

15:30  __Coffee Break__

16:00  **Session F1: Decision Trees**  
*Chair: Hendrik Blockeel*

- Holmes, Pfahringer, Kirkby, Frank, Hall: *Multiclass Alternating Decision Trees*
- Hüllermeier: *Possibilistic Induction in Decision-Tree Learning*

**Session F2: Markov Techniques**  
*Chair: Tobias Scheffer*

- Kermorvant, Dupont: *Improved Smoothing for Probabilistic Suffix Trees Seen as Variable Order Markov Chains*
- Ratitch, Precup: *Characterizing Markov Decision Processes*

**Session F3: Association Rules**  
*Chair: Kotagiri Ramamohanarao (to be confirmed)*

- Jeudy, Boulicaut: *Using Condensed Representations for Interactive Association Rule Mining*
- Veloso, Gusmão, Meira, Carvalho, Parthasarathy, Zaki: *Efficiently Mining Approximate Models of Associations in Evolving Databases*

17:00  **ECML/PKDD Business Meeting**

18:00  **Reception Hosted by the University of Helsinki**
FRIDAY 23 August 2002

9:00  Keynote Talk  
Erkki Oja: Finding Hidden Factors Using Independent Component Analysis  
Chair: Heikki Mannila

10:00  Coffee Break

10:30  Session G1: Aspects of Data Mining  
Chair: Fosca Giannotti (to be confirmed)

- Angiulli, Pizzuti: Fast Outlier Detection in High Dimensional Spaces
- Felty, Matwin: Privacy-Oriented Data Mining by Proof Checking
- Gamberger, Lavrač: Generating Actionable Knowledge by Expert-Guided Subgroup Discovery
- Koyutürk, Grama, Ramakrishnan: Algebraic Techniques for Analysis of Large Discrete-Valued Datasets

Session G2: Foundations of Learning  
Chair: Sašo Džeroski

- Rückert, Kramer, De Raedt: Phase Transitions and Stochastic Local Search in k-Term DNF Learning
- Harris: Evidence that Incremental Delta-Bar-Delta is an Attribute-Efficient Linear Learner
- Papadopoulos, Proedrou, Vovk, Gammerman: Inductive Confidence Machines for Regression
- Proedrou, Nouretdinov, Vovk, Gammerman: Transductive Confidence Machines for Pattern Recognition

Session G3: Supervised Learning  
Chair: Donato Malerba

- Dai, Li, Tu: An Empirical Study of Encoding Schemes and Search Strategies in Discovering Causal Networks
- Zighed, Lallich, Muhlenbach: Separability Index in Supervised Learning
- Brain, Webb: The Need for Low Bias Algorithms in Classification Learning from Large Data Sets

12:30  Lunch Break
14:00  **Session H1: Unsupervised Learning**  
*Chair: Stefan Kramer*

- E Ludl, Widler: *Towards a Simple Clustering Criterion Based on Minimum Length Encoding*
- E Buntine: *Variational Extensions to EM and Multinomial PCA*
- E Sinkkonen, Kaski, Nikkilä: *Discriminative Clustering: Optimal Contingency Tables by Learning Metrics*

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**Session H2: Applications of Learning**  
*Chair: Michèle Sebag*

- E Carreras, Márquez, Punyakanok, Roth: *Learning and Inference for Clause Identification*
- E Klink, Hust, Junker, Dengel: *Collaborative Learning of Term-Based Concepts for Automatic Query Expansion*
- E Kråkenes, Halck: *Learning to Play a Highly Complex Game from Human Expert Games*

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**Session H3: Learning Approaches**  
*Chair: Richard Nock*

- E Ontañón, Plaza: *Case Exchange Strategies in Multiagent Learning*
- E Bay, Shapiro, Langley: *Revising Engineering Models: Combining Computational Discovery with Knowledge*
- P Joshi, Agarwal, Kumar: *Predicting Rare Classes: Comparing Two-Phase Rule Induction to Cost-Sensitive Boosting*
- P Domeniconi, Perng, Vilalta, Ma: *A Classification Approach for Prediction of Target Events in Temporal Sequences*

16:00  **End of Sessions H1 – H3**

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**Key**

- E ECML paper
- P PKDD paper

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<tr>
<th>Sali 1</th>
<th>lecture halls or lecture rooms in the New Part of the Main Building of the University of Helsinki</th>
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**Auditorio XIII** a lecture room in the Old Part of the Main Building

**Juhlasali** the Main Hall in the Old Part of the Main Building

**Lehtisali** the Reading Room in the Old Part of the Main Building

**New Part** Fabianinkatu side of the Main Building

**Old Part** Unioninkatu side of the Main Building