

# ECML/PKDD-2004

15th European Conference on Machine Learning (ECML)  
8th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD)  
Pisa, Italy, September 20-24, 2004

## Call for Papers

The 15th European Conference on *Machine Learning* (ECML) and the 8th European Conference on *Principles and Practice of Knowledge Discovery in Databases* (PKDD) will be co-located in Pisa, Italy, September 20-24, 2004. The combined event will comprise presentations of contributed papers and invited speakers, a wide program of workshops and tutorials, a demo session, and a discovery challenge.

### Important dates

- **Submission deadline:** Monday April 19, 2004
- **Notification of acceptance:** Monday June 7, 2004
- **Camera-ready copies due:** Monday June 28, 2004
- **Conferences:** Monday September 20 through Friday September 24, 2004

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### WebSite and Contacts

<http://ecmlpkdd.isti.cnr.it>

[ecmlpkdd@isti.cnr.it](mailto:ecmlpkdd@isti.cnr.it)

### Paper submission

High quality research contributions pertinent to any aspects of machine learning and knowledge discovery are called for, ranging from principles to practice; particular attention will be paid to papers describing innovative, challenging applications.

There will be a single electronic submission procedure, where authors should indicate whether they submit their paper to ECML, PKDD, or both. In the latter case, the topic of the joint submission must be within the scope of both conferences; accepted joint submissions will be assigned to the most appropriate of the conferences. Student submissions should be clearly indicated on the submission form. All submissions will be reviewed by the respective program committees. The papers must be in English and should be formatted according to the Springer-Verlag Lecture Notes in Artificial Intelligence guidelines. Authors instructions and style files can be downloaded at <http://www.springer.de/comp/lncs/authors.html>. The maximum length of papers is 12 pages.

The proceedings of ECML and PKDD will be published as two separate volumes by Springer-Verlag in the Lecture Notes in Artificial Intelligence series and will be available at the conference. Simultaneous submissions to other conferences are allowed, provided this fact is clearly indicated on the submission form. Simultaneous submissions that are not clearly specified as such will be rejected. Accepted papers will appear in the ECML/PKDD conference proceedings only if they are withdrawn from proceedings of other conferences.

### Best Paper Awards

KNet and Kluwer will honour the best papers and the best student papers with awards. The awards will be based on the significance and originality of the contributions.

### Sponsors – initial list



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## ECML Call for Papers

The European Conference on *Machine Learning* series intends to provide an international forum for the discussion of the latest high quality research results in machine learning and is the major European scientific event in the field. Submissions of papers that describe the application of machine learning methods to real-world problems are encouraged, particularly exploratory research that describes novel learning tasks and applications requiring non-standard techniques. Submissions that demonstrate both theoretical and empirical rigor are especially encouraged.

Topics of interest (non-exhaustive list):

- o artificial neural networks
  - o Bayesian networks
  - o case-based reasoning
  - o computational models of human learning
  - o computational learning theory
  - o cooperative learning
  - o decision tree learning
  - o discovery of scientific laws
  - o evolutionary computation
  - o multirelational learning
  - o statistical relational learning
  - o grammatical inference
  - o incremental induction and on-line learning
  - o inductive logic programming
  - o information retrieval and learning
  - o instance based learning
  - o kernel methods
  - o knowledge acquisition and learning
  - o knowledge base refinement
  - o knowledge intensive learning
  - o learning from text and web
  - o evaluation metrics and methodologies
  - o machine learning of natural language
  - o meta learning
  - o multi-agent learning
  - o multi-strategy learning
  - o planning and learning
  - o reinforcement learning
  - o revision and restructuring
  - o statistical approaches
  - o unsupervised learning
  - o vision and learning
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## PKDD Call for Papers

*Data Mining and Knowledge Discovery in Databases* (KDD) is the ability to extract useful patterns from typically large amounts of data stored in databases, data warehouses or other information repositories. KDD is a combination of many research areas: databases, statistics, machine learning, automated scientific discovery, artificial intelligence, visualization, and high performance computing. KDD focuses on the value that is added by the creative combination of the contributing areas. The European Conference on *Principles and Practice of Knowledge Discovery in Databases* series intends to provide an international forum for the discussion of the latest high quality research results in KDD and is the major European scientific event in the field. Submissions are invited that describe empirical and theoretical research in all areas of KDD, as well as submissions that describe challenging applications of KDD.

Topics of interest (non-exhaustive list):

### *Algorithms and techniques*

- o classification
- o clustering
- o frequent patterns
- o rule discovery
- o statistical techniques and mixture models
- o constraint-based mining
- o incremental algorithms
- o scalable algorithms
- o distributed and parallel algorithms
- o privacy preserving data mining
- o multi-relational data mining

### *Data mining and databases*

- o database integration
- o inductive databases
- o data mining query languages
- o data mining query optimization

### *Data pre-processing*

- o dimensionality reduction
- o data reduction
- o discretization
- o uncertain and missing information handling

### *Foundations of data mining*

- o complexity issues
- o knowledge (pattern) representation
- o global vs. local patterns
- o logic for data mining
- o statistical inference and probabilistic modelling

### *Innovative applications*

- o mining bio-medical data
- o web content, structure and usage mining
- o semantic web mining
- o mining governmental data, mining for the public administration
- o personalization
- o adaptive data mining architectures
- o invisible data mining

### *KDD process and process-centric data mining*

- o models of the KDD process
- o standards for the KDD process
- o background knowledge integration
- o collaborative data mining
- o vertical data mining environments

### *Mining different forms of data*

- o graph, tree, sequence mining
- o semi-structured and XML data mining
- o text mining
- o temporal, spatial, and spatio-temporal data mining
- o data stream mining
- o multimedia mining

### *Pattern post-processing*

- o quality assessment
- o visualization
- o knowledge interpretation and use