The 25th International Conference on Machine Learning (ICML 2008)

Conference Program
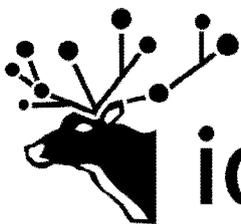
icml2008@helsinki.fi

Helsinki, Finland, July 5-9, 2008

ICML schedule at a glance (Sat-Sun)

Saturday July 5, 2008

	Breakfast in hotel
8:00 am -	Registration (1st [ground] floor)
9:00 am - 11:30 am	**Tutorials** T1 Painless embeddings of distributions: the function space view (S13, 3rd floor) T2 Stochastic optimal control theory (S5, 3rd floor) T3 Dimensionality Reduction the Probabilistic Way (S1, 2nd floor)
	Lunch (on your own)
1:00 pm - 3:30 pm	**Tutorials** T4 Graphical models and variational methods: Message-passing and relaxations (S1, 2nd floor) T5 Playing Machines: Machine Learning Applications in Computer Games (S5, 3rd floor) T6 Beyond Convexity: Submodularity in Machine Learning (S13, 3rd floor)
	Coffee Break (2nd, 3rd & 4th floors)
4:00 pm - 6:30 pm	**Tutorials** T7 Theory and Applications of Online Learning (S1, 2nd floor) T8 Visual Object Recognition and Retrieval (S13, 3rd floor) T9 Sparse Linear Models: Bayesian Inference and Experimental Design (SH, 4th floor)

Sunday July 6, 2008

	Breakfast in hotel
8:00 am -	Registration (1st [ground] floor)
8:30 am - 8:45 am	**Opening** (S1, 2nd floor)
8:45 am - 9:45 am	**Invited Talk: John Winn, Microsoft Research Cambridge: Probabilistic models for understanding images** (S1, 2nd floor)
	Coffee Break (2nd, 3rd & 4th floors)
10:15 am - 11:55 am	**Kernels** (S1, 2nd floor): Papers #377 #277 #216 #643 **Clustering** (S5, 3rd floor): Papers #628 #196 #236 #168 **Hidden Markov Models** (S12, 3rd floor): Papers #182 #305 #413 #679 **Reinforcement Learning 1 - Domain Representation** (S13, 3rd floor): Papers #571 #544 #682 #580 **Graphs** (SH, 4th floor): Papers #379 #681 #565 #396
	Lunch (on your own)
1:30 pm - 3:10 pm	**Active Learning, Experimental Design and Incomplete Data** (S1, 2nd floor): Papers #324 #437 #687 #272 **Distance Learning and Efficient Use** (S5, 3rd floor): Papers #215 #178 #400 #340 **Optimization** (S12, 3rd floor): Papers #327 #461 #497 #260 **Reinforcement Learning 2 - Value Representation and Online Learning** (S13, 3rd floor): Papers #341 #125 #317 #242 **Mixture Models, Dirichlet Processes** (SH, 4th floor): Papers #460 #538 #554 #502
	Coffee Break (2nd, 3rd & 4th floors)
3:40 pm - 5:45 pm	**Award Paper Joint Session** (S1, 2nd floor): Papers 10-year best paper, #588 #627 #266 #452
6:00 pm - 8:30 pm	**Poster Session I** (2nd & 3rd floors, with snacks): Posters from sessions Kernels (Sun 10:15 am) up to Sequence Data (Mon 1:30 pm)

For ICML online program with links to full papers, abstracts and a discussion site, go to http://icml2008.cs.helsinki.fi.

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ICML schedule at a glance (Mon-Tue)

Monday July 7, 2008

	Breakfast in hotel
8:00 am -	Registration (1st [ground] floor)
8:30 am - 9:30 am	**Invited Talk: Luc De Raedt, Katholieke Universiteit Leuven: Logical and Relational Learning Revisited** (S1, 2nd floor)
	Coffee Break (2nd, 3rd & 4th floors)
10:00 am - 12:05pm	**Structured Output, ILP and Sparsity** (S1, 2nd floor): Papers #402 #279 #530 #237 #503 **Kernel - Including Kernel Learning** (S5, 3rd floor): Papers #158 #665 #531 #449 #641 **Ranking and Bayes Optimal Classification** (S12, 3rd floor): Papers #489 #343 #392 #448 #455 **Reinforcement Learning 3** (S13, 3rd floor): Papers #259 #488 #335 #257 **Semi-supervised Learning - Embeddings and Transduction** (SH, 4th floor): Papers #611 #382 #296 #254 #383
	Lunch (on your own)
1:30 pm - 3:35 pm	**Gaussian Processes** (S1, 2nd floor): Papers #151 #241 #599 #371 #399 **Sequence Data** (S5, 3rd floor): Papers #278 #318 #440 #180 #160 **Feature Selection and Sparsity** (S12, 3rd floor): Papers #630 #574 #390 #113 #323 **Reinforcement Learning 4 - Active Learning** (S13, 3rd floor): Papers #290 #487 #490 #479 #519 **Semi-supervised Clustering and Classification** (SH, 4th floor): Papers #337 #432 #172 #145 #528
	Coffee Break (2nd, 3rd & 4th floors)
4:05 pm - 5:05 pm	**Invited talk: Michael Collins, MIT: Structured Prediction Problems in Natural Language Processing** (S1, 2nd floor)
	Break, leave for boats
5:45 pm - 10:30 pm	**Conference Banquet**, by boats from the Market Square

Tuesday, July 8, 2008

	Breakfast in hotel
8:00 am -	Registration (1st [ground] floor)
8:30 am - 10:10 am	**Discriminative vs Generative, and Energy-Based Learning** (S1, 2nd floor): Papers #415 #601 #573 #638 **Boosting** (S5, 3rd floor): Papers #676 #331 #362 #258 **Compressed Sensing and Projections** (S12, 3rd floor): Papers #121 #209 #459 #361 **Reinforcement Learning 5** (S13, 3rd floor): Papers #581 #652 #645 #111 **Ranking and IR** (SH, 4th floor): Papers #167 #179 #470 #264
	Coffee Break (2nd, 3rd & 4th floors)
10:40 am - 12:20 pm	**Topic models** (S1, 2nd floor): Papers #562 #419 #667 #129 **Embeddings 1** (S5, 3rd floor): Papers #163 #484 #551 #600 **Classification with Sampling, Costs** (S12, 3rd floor): Papers #523 #614 #632 #150 **Reinforcement Learning 6** (S13, 3rd floor): Papers #458 #564 #197 #429 **Online learning** (SH, 4th floor): Papers #367 #322 #355 #511
	Lunch (on your own)
2:00 pm - 4:05 pm	**NLP** (S1, 2nd floor): Papers #304 #391 #398 #311 #673 **Multiple Instance Learning, Missing Features, Categorical Features** (S5, 3rd floor): Papers #130 #552 #587 #202 #536 **Embeddings 2** (S12, 3rd floor): Papers #270 #668 #312 #582 #592 **Transfer Learning and Games** (S13, 3rd floor): Papers #412 #520 #229 #542 #655 **Kernels - Including scalability** (SH, 4th floor): Papers #166 #411 #491 #476 #513
	Coffee Break (2nd, 3rd & 4th floors)
4:35 pm - 5:35 pm	**Invited Talk: Andrew Ng, Stanford University: STAIR: The STanford Artificial Intelligence Robot project** (S1, 2nd floor)
5:40 pm - 6:30 pm	**Business Meeting** (S1, 2nd floor)
6:00 pm - 8:30 pm	**Poster Session II** (2nd & 3rd floors, with snacks): posters from sessions Feature selection and sparsity (Mon 1:30 pm) up to Kernels - Including scalability (Tue 2:00 pm)

ICML detailed schedule (Sat, Sun 8:30-9:45 AM)

Saturday July 5, 2008

	Breakfast in hotel
8:00 am -	Registration (1st [ground] floor)

9:00 am - **11:30 am**	**Tutorials T1, T2 and T3** T1 Painless embeddings of distributions: the function space view. Alex Smola, Arthur Gretton and Kenji Fukumizu (S13, 3rd floor) T2 Stochastic optimal control theory. Bert Kappen, Marc Toussaint (S5, 3rd floor) T3 Dimensionality Reduction the Probabilistic Way. Neil Lawrence (S1, 2nd floor)
11:30 am - 1:00 pm	Lunch (on your own)
1:00 pm - **3:30 pm**	**Tutorials T4, T5 and T6** T4 Graphical models and variational methods: Message-passing and relaxations. Martin Wainwright (S1, 2nd floor) T5 Playing Machines: Machine Learning Applications in Computer Games. Ralf Herbrich, Thore Graepel (S5, 3rd floor) T6 Beyond Convexity: Submodularity in Machine Learning. Andreas Krause, Carlos Guestrin (S13, 3rd floor)
3:30 pm - 4:00 pm	Coffee Break (2nd, 3rd and 4th floors)
4:00 pm - **6:30 pm**	**Tutorials T7, T8 and T9** T7 Tutorial on Theory and Applications of Online Learning. Shai Shalev-Shwartz, Yoram Singer (S1, 2nd floor) T8 Visual Object Recognition and Retrieval. Rob Fergus (S13, 3rd floor) T9 Sparse Linear Models: Bayesian Inference and Experimental Design. Matthias Seeger (SH, 4th floor)

Sunday July 6, 2008

	Breakfast in hotel
8:00 am -	Registration (1st [ground] floor)
8:30 am - **8:45 am**	**Opening** (S1, 2nd floor)
8:45 am - **9:45 am**	**Invited Talk: John Winn, Microsoft Research Cambridge: Probabilistic models for understanding images** (S1, 2nd floor)
9:45 am - 10:15 am	Coffee Break (2nd, 3rd and 4th floors)

ICML detailed schedule (Sun 10:15-11:55 AM)

10:15 am -   **5 parallell sessions**
11:55 am

Kernels (Sun 10:15 am, S1, 2nd floor)

10:15 am - 10:40 am	Paper #377: Tailoring Density Estimation via Reproducing Kernel Moment Matching. Le Song, Xinhua Zhang, Alex Smola, Arthur Gretton, and Bernhard Schoelkopf.
10:40 am - 11:05 am	Paper #277: Nonextensive Entropic Kernels. Andre F. T. Martins, Mario A. T. Figueiredo, Pedro M. Q. Aguiar, Noah A. Smith, and Eric P. Xing.
11:05 am - 11:30 am	Paper #216: Nu-Support Vector Machine as Conditional Value-at-Risk Minimization. Akiko Takeda and Masashi Sugiyama.
11:30 am - 11:55 am	Paper #643: A Generalization of Haussler's Convolution Kernel - Mapping Kernel. Kilho Shin and Tetsuji Kuboyama.

Clustering (Sun 10:15 am, S5, 3rd floor)

10:15 am - 10:40 am	Paper #628: A Rate-Distortion One-Class Model and its Applications to Clustering. Koby Crammer, Partha Pratim Talukdar, and Fernando Pereira.
10:40 am - 11:05 am	Paper #196: Estimating Local Optimums in EM Algorithm over Gaussian Mixture Model. Zhenjie Zhang, Bing Tian Dai, and Anthony K.H. Tung.
11:05 am - 11:30 am	Paper #236: A Decoupled Approach to Exemplar-based Unsupervised Learning. Sebastian Nowozin and Gökhan Bakir.
11:30 am - 11:55 am	Paper #168: Efficient MultiClass Maximum Margin Clustering. Bin Zhao, Fei Wang, and Changshui Zhang.

Hidden Markov Models (Sun 10:15 am, S12, 3rd floor)

10:15 am - 10:40 am	Paper #182: Inverting the Viterbi Algorithm: an Framework for Structure Design. Michael Schnall-Levin, Leonid Chindelevitch, and Bonnie Berger.
10:40 am - 11:05 am	Paper #305: An HDP-HMM for Systems with State Persistence. Emily Fox, Erik Sudderth, Michael Jordan, and Alan Willsky.
11:05 am - 11:30 am	Paper #413: Modeling Interleaved Hidden Processes. Niels Landwehr.
11:30 am - 11:55 am	Paper #679: Beam Sampling for the Infinite Hidden Markov Model. Jurgen Van Gael, Yunus Saatci, Yee Whye The, and Zoubin Ghahramani.

Reinforcement Learning 1 - Domain Representation (Sun 10:15 am, S13, 3rd floor)

10:15 am - 10:40 am	Paper #571: An Object-Oriented Representation for Efficient Reinforcement Learning. Carlos Diuk, Andre Cohen, and Michael Littman.
10:40 am - 11:05 am	Paper #544: Hierarchical Model-Based Reinforcement Learning: R-max + MAXQ. Nicholas Jong and Peter Stone.
11:05 am - 11:30 am	Paper #682: On the Hardness of Finding Symmetries in Markov Decision Processes. Shravan Narayanamurthy and Balaraman Ravindran.
11:30 am - 11:55 am	Paper #580: Reinforcement Learning in the Presence of Rare Events. Jordan Frank, Shie Mannor, and Doina Precup.

Graphs (Sun 10:15 am, SH, 4th floor)

10:15 am - 10:40 am	Paper #379: Graph Kernels Between Point Clouds. Francis Bach.
10:40 am - 11:05 am	Paper #681: Message-passing for Graph-structured Linear Programs: Proximal Projections, Convergence and Rounding Schemes. Pradeep Ravikumar, Alekh Agarwal, and Martin J. Wainwright.
11:05 am - 11:30 am	Paper #565: Fast Incremental Proximity Search in Large Graphs. Purnamrita Sarkar, Andrew Moore, and Amit Prakash.
11:30 am - 11:55 am	Paper #396: The Skew Spectrum of Graphs. Risi Kondor and Karsten Borgwardt.

12:00 pm - 1:30 pm	Lunch (on your own)

ICML DETAILED SCHEDULE (SUN 1:30-3:10 PM)

1:30 pm - **5 parallell sessions**
3:10 pm

Active Learning and Experimental Design (Sun 1:30 pm, S1, 2nd floor)

1:30 pm - 1:55 pm	Paper #324: Hierarchical sampling for active learning. Sanjoy Dasgupta and Daniel Hsu.
1:55 pm - 2:20 pm	Paper #437: Active Kernel Learning. Steven C.H. Hoi and Rong Jin.
2:20 pm - 2:45 pm	Paper #687: Actively Learning Level-Sets of Composite Functions. Brent Bryan and Jeff Schneider.
2:45 pm - 3:10 pm	Paper #272: Learning from Incomplete Data with Infinite Imputations. Uwe Dick, Peter Haider, and Tobias Scheffer.

Distance Learning and Efficient Use (Sun 1:30 pm, S5, 3rd floor)

1:30 pm - 1:55 pm	Paper #215: Fast Solvers and Efficient Implementations for Distance Metric Learning. Kilian Weinberger and Lawrence Saul.
1:55 pm - 2:20 pm	Paper #178: Nearest Hyperdisk Methods for High-Dimensional Classification. Hakan Cevikalp, Bill Triggs, and Robi Polikar.
2:20 pm - 2:45 pm	Paper #400: Fast Nearest Neighbor Retrieval for Bregman Divergences. Lawrence Cayton.
2:45 pm - 3:10 pm	Paper #340: Deep Learning via Semi-Supervised Embedding. Jason Weston, Frederic Ratle, and Ronan Collobert.

Optimization (Sun 1:30 pm, S12, 3rd floor)

1:30 pm - 1:55 pm	Paper #327: Efficiently Solving Convex Relaxations for MAP Estimation. Pawan Kumar Mudigonda and Philip Torr.
1:55 pm - 2:20 pm	Paper #461: A Quasi-Newton Approach to Nonsmooth Convex Optimization. Jin Yu, S.V.N. Vishwanathan, Simon Guenter, and Nicol Schraudolph.
2:20 pm - 2:45 pm	Paper #497: Stopping Conditions for Exact Computation of Leave-One-Out Error in Support Vector Machines. Vojtech Franc, Pavel Laskov, and Klaus-R. Mueller.
2:45 pm - 3:10 pm	Paper #260: On Partial Optimality in Multi-label MRFs. Pushmeet Kohli, Alexander Shekhovtsov, Carsten Rother, Vladimir Kolmogorov, and Philip Torr.

Reinforcement Learning 2 - Value Representation and Online Learning (Sun 1:30 pm, S13, 3rd floor)

1:30 pm - 1:55 pm	Paper #341: Online Kernel Selection for Bayesian Reinforcement Learning. Joseph Reisinger, Peter Stone, and Risto Miikkulainen.
1:55 pm - 2:20 pm	Paper #125: A Worst-Case Comparison Between Temporal Difference and Residual Gradient with Linear Function Approximation. Lihong Li.
2:20 pm - 2:45 pm	Paper #317: On-line Discovery of Temporal-Difference Networks. Takaki Makino and Toshihisa Takagi.
2:45 pm - 3:10 pm	Paper #242: Prediction with Expert Advice for the Brier Game. Vladimir Vovk and Fedor Zhdanov.

Mixture Models, Dirichlet Processes (Sun 1:30 pm, SH, 4th floor)

1:30 pm - 1:55 pm	Paper #460: Statistical Models for Partial Membership. Katherine Heller, Sinead Williamson, and Zoubin Ghahramani.
1:55 pm - 2:20 pm	Paper #538: The Dynamic Hierarchical Dirichlet Process. Lu Ren, David B. Dunson, and Lawrence Carin.
2:20 pm - 2:45 pm	Paper #554: Hierarchical Kernel Stick-Breaking Process for Multi-Task Image Analysis. Qi An, Chunping Wang, Ivo Shterev, Eric Wang, Lawrence Carin, and David B. Dunson.
2:45 pm - 3:10 pm	Paper #502: Data Spectroscopy: Learning Mixture Models using Eigenspaces of Convolution Operators. Tao Shi, Mikhail Belkin, and Bin Yu.

3:10 pm - 3:40 pm	Coffee Break (2nd, 3rd and 4th floors)

ICML detailed schedule (Sun 3:40-8:30 PM, Mon 8:30 AM-12:05 PM)

3:40 pm - 5:45 pm	**Award Paper Joint Session** (Sun 3:40 pm, S1, 2nd floor)
3:40 pm - 4:05 pm	Combining abelled and unlabeled data with co-training. Avrim Blum, Tom Mitchell (COLT-1998)
4:05 pm - 4:30 pm	Paper #588: An Asymptotic Analysis of Generative, Discriminative, and Pseudolikelihood Estimators. Percy Liang and Michael Jordan.
4:30 pm - 4:55 pm	Paper #627: Knows What It Knows: A Framework For Self-Aware Learning. Lihong Li, Michael Littman, and Thomas Walsh.
4:55 pm - 5:20 pm	Paper #266: SVM Optimization: Inverse Dependence on Training Set Size. Shai Shalev-Shwartz and Nathan Srebro.
5:20 pm - 5:45 pm	Paper #452: Learning for Control from Multiple Demonstrations. Adam Coates, Pieter Abbeel, and Andrew Ng.

6:00 pm - 8:30 pm	**Poster Session I** (2nd & 3rd floors, with snacks) Posters from sessions Kernels (Sun 10:15 am) up to Sequence Data (Mon 1:30 pm)

Monday July 7, 2008

	Breakfast in hotel

8:00 am -	Registration (1st [ground] floor)

8:30 am - 9:30 am	**Invited Talk: Luc De Raedt, Katholieke Universiteit Leuven: Logical and Relational Learning Revisited** (S1, 2nd floor)

9:30 am - 10:00 am	Coffee Break (2nd, 3rd and 4th floors)

10:00 am - 12:05 pm	**5 parallell sessions**

Structured output, ILP and Sparsity (Mon 10:00 am, S1, 2nd floor)

10:00 am - 10:25 am	Paper #402: Accurate Max-margin Training for Structured Output Spaces. Sunita Sarawagi and Rahul Gupta.
10:25 am - 10:50 am	Paper #279: Training Structural SVMs when Exact Inference is Intractable. Thomas Finley and Thorsten Joachims.
10:50 am - 11:15 am	Paper #530: Discriminative Structure and Parameter Learning for Markov Logic Networks. Tuyen Huynh and Raymond Mooney.
11:15 am - 11:40 am	Paper #237: Laplace Maximum Margin Markov Networks. Jun Zhu, Eric Xing, and Bo Zhang.
11:40 am - 12:05 pm	Paper #503: Fast Estimation of Relational Pattern Coverage through Randomization and Maximum Likelihood. Ondrej Kuzelka and Filip Zelezny.

ICML detailed schedule (Mon 10:00 AM-12:05 PM)

More parallel sessions on the previous page

Kernel - Including Kernel Learning (Mon 10:00 am, S5, 3rd floor)

10:00 am - 10:25 am	Paper #158: Localized Multiple Kernel Learning. Mehmet Gonen and Ethem Alpaydin.
10:25 am - 10:50 am	Paper #665: Composite Kernel Learning. Marie Szafranski, Yves Grandvalet, and Alain Rakotomamonjy.
10:50 am - 11:15 am	Paper #531: Training SVM with Indefinite Kernels. Jianhui Chen and Jieping Ye.
11:15 am - 11:40 am	Paper #449: Robust Matching and Recognition using Context-Dependent Kernels. Hichem Sahbi, Jean-Yves Audibert, Jaonary Rabarisoa, and Renaud Keriven.
11:40 am - 12:05 pm	Paper #641: An RKHS for Multi-View Learning and Manifold Co-Regularization. Vikas Sindhwani and David Rosenberg.

Ranking and Classification with Sampling (Mon 10:00 am, S12, 3rd floor)

10:00 am - 10:25 am	Paper #489: Democratic Approximation of Lexicographic Preference Models. Fusun Yaman, Thomas Walsh, Michael Littman, and Marie desJardins.
10:25 am - 10:50 am	Paper #343: Unsupervised Rank Aggregation with Distance-Based Models. Alexandre Klementiev, Dan Roth, and Kevin Small.
10:50 am - 11:15 am	Paper #392: Learning Dissimilarities by Ranking: From SDP to QP. Hua Ouyang and Alexander Gray.
11:15 am - 11:40 am	Paper #448: Optimizing Estimated Loss Reduction for Active Sampling in Rank Learning. Pinar Donmez and Jaime Carbonell.
11:40 am - 12:05 pm	Paper #455: Bayes Optimal Classification for Decision Trees. Siegfried Nijssen.

Reinforcement Learning 3 (Mon 10:00 am, S13, 3rd floor)

10:00 am - 10:25 am	Paper #259: Non-Parametric Policy Gradients: A Unified Treatment of Propositional and Relational Domains. Kristian Kersting and Kurt Driessens.
10:25 am - 10:50 am	Paper #488: Space-indexed Dynamic Programming: Learning to Follow Trajectories. J. Zico Kolter, Adam Coates, Andrew Ng, Yi Gu, and Charles DuHadway.
10:50 am - 11:15 am	Paper #335: Privacy-Preserving Reinforcement Learning. Jun Sakuma, Shigenobu Kobayashi, and Rebecca Wright.
11:15 am - 11:40 am	Paper #257: Learning All Optimal Policies with Multiple Criteria. Leon Barrett and Srinivas Narayanan.

Semi-supervised Learning - Embeddings and Transduction (Mon 10:00 am, SH, 4th floor)

10:00 am - 10:25 am	Paper #611: Semi-supervised Learning of Compact Document Representations with Deep Networks. Marc'Aurelio Ranzato and Martin Szummer.
10:25 am - 10:50 am	Paper #382: Large Scale Manifold Transduction. Michael Karlen, Jason Weston, Ayse Erkan, and Ronan Collobert.
10:50 am - 11:15 am	Paper #296: Graph Transduction via Alternating Minimization. Jun Wang, Tony Jebara, and Shih-Fu Chang.
11:15 am - 11:40 am	Paper #254: Stability of Transductive Regression Algorithms. Corinna Cortes, Mehryar Mohri, Dmitry Pechyony, and Ashish Rastogi.
11:40 am - 12:05 pm	Paper #383: On Multi-View Active Learning and the Combination with Semi-Supervised Learning. Wei Wang and Zhi-Hua Zhou.

12:05 pm - 1:30 pm	Lunch (on your own)

ICML detailed schedule (Mon 1:30-3:35 PM)

1:30 pm -   5 parallell sessions
3:35 pm

Gaussian Processes (Mon 1:30 pm, S1, 2nd floor)

1:30 pm - 1:55 pm	Paper #151: Fast Gaussian Process Methods for Point Process Intensity Estimation. John Cunningham, Krishna Shenoy, and Maneesh Sahani.
1:55 pm - 2:20 pm	Paper #241: Gaussian Process Product Models for Nonparametric Nonstationarity. Ryan Adams and Oliver Stegle.
2:20 pm - 2:45 pm	Paper #599: Sparse Multiscale Gaussian Process Regression. Christian Walder, Kwang In Kim, and Bernhard Schoelkopf.
2:45 pm - 3:10 pm	Paper #371: Topologically-Constrained Latent Variable Models. Raquel Urtasun, David Fleet, Andreas Geiger, Jovan Popovic, Trevor Darrell, and Neil Lawrence.
3:10 pm - 3:35 pm	Paper #399: Bi-Level Path Following for Cross Validated Solution of Kernel Quantile Regression. Saharon Rosset.

Sequence Data (Mon 1:30 pm, S5, 3rd floor)

1:30 pm - 1:55 pm	Paper #278: A Distance Model for Rhythms. Jean-Francois Paiement, Yves Grandvalet, Samy Bengio, and Douglas Eck.
1:55 pm - 2:20 pm	Paper #318: A Reproducing Kernel Hilbert Space Framework for Pairwise Time Series Distances. Zhengdong Lu, Todd K. Leen, Yonghong Huang, and Deniz Erdogmus.
2:20 pm - 2:45 pm	Paper #440: Sequence Kernels for Predicting Protein Essentiality. Cyril Allauzen, Mehryar Mohri, and Ameet Talwalkar.
2:45 pm - 3:10 pm	Paper #180: Local Likelihood Modeling of Temporal Text Streams. Guy Lebanon and Yang Zhao.
3:10 pm - 3:35 pm	Paper #160: Causal Modelling Combining Instantaneous and Lagged Effects: an Identifiable Model Based on Non-Gaussianity. Aapo Hyvarinen, Shohei Shimizu, and Patrik Hoyer.

(All papers above belong to Poster session I)
(All papers below belong to Poster sesssion II)

Feature Selection and Sparsity (Mon 1:30 pm, S12, 3rd floor)

1:30 pm - 1:55 pm	Paper #630: Detecting Statistical Interactions with Additive Groves of Trees. Daria Sorokina, Rich Caruana, Mirek Riedewald, and Daniel Fink.
1:55 pm - 2:20 pm	Paper #574: Sparse Bayesian Nonparametric Regression. Francois Caron and Arnaud Doucet.
2:20 pm - 2:45 pm	Paper #390: Bolasso: Model Consistent Lasso Estimation through the Bootstrap. Francis Bach.
2:45 pm - 3:10 pm	Paper #113: The GroupLASSO for Generalized Linear Models: Uniqueness of Solutions and Efficient Algorithms. Volker Roth and Bernd Fischer.
3:10 pm - 3:35 pm	Paper #323: On the Chance Accuracies of Large Collections of Classifiers. Mark Palatucci and Andrew Carlson.

Reinforcement Learning 4 - Active Learning (Mon 1:30 pm, S13, 3rd floor)

1:30 pm - 1:55 pm	Paper #290: Active Reinforcement Learning. Arkady Epshteyn, Adam Vogel, and Gerald DeJong.
1:55 pm - 2:20 pm	Paper #487: Reinforcement Learning with Limited Reinforcement: Using Bayes Risk for Active Learning in POMDPs. Finale Doshi, Joelle Pineau, and Nicholas Roy.
2:20 pm - 2:45 pm	Paper #490: The Many Faces of Optimism: a Unifying Approach. Istvan Szita and Andras Lorincz.
2:45 pm - 3:10 pm	Paper #479: Transfer of Samples in Batch Reinforcement Learning. Alessandro Lazaric, Marcello Restelli, and Andrea Bonarini.
3:10 pm - 3:35 pm	Paper #519: Exploration Scavenging. John Langford, Alexander Strehl, and Jennifer Wortman.

ICML detailed schedule (Mon 1:30-10:30 PM, Tue 8:30-10:10 AM)

Semi-supervised Clustering and Classification (Mon 1:30 pm, SH, 4th floor)

1:30 pm - 1:55 pm	Paper #337: Estimating Labels from Label Proportions. Novi Quadrianto, Alex Smola, Tiberio Caetano, and Quoc Viet Le.
1:55 pm - 2:20 pm	Paper #432: Self-taught Clustering. Wenyuan Dai, Qiang Yang, Gui-Rong Xue, and Yong Yu.
2:20 pm - 2:45 pm	Paper #172: Spectral Clustering with Inconsistent Advice. Tom Coleman, James Saunderson, and Anthony Wirth.
2:45 pm - 3:10 pm	Paper #145: Pairwise Constraint Propagation by Semidefinite Programming for Semi-Supervised Classification. Zhenguo Li, Jianzhuang Liu, and Xiaoou Tang.
3:10 pm - 3:35 pm	Paper #528: The Asymptotics of Semi-Supervised Learning in Discriminative Probabilistic Models. Nataliya Sokolovska, Olivier Cappé, and François Yvon.

3:35 pm - 4:05 pm	Coffee Break (2nd, 3rd and 4th floors)

4:05 pm - 5:05 pm	**Invited talk: Michael Collins, MIT: Structured Prediction Problems in Natural Language Processing** (S1, 2nd floor)

5:05 pm - 5:45 pm	Break, leave for boats
5:45 pm - 6:45 pm	**Boats leave to Suomenlinna from the Market Square**

7:00 pm - 10:30 pm	**Conference Banquet**

Tuesday, July 8, 2008

	Breakfast in hotel
8:00 am -	Registration (1st [ground] floor)

8:30 am - 10:10 am	**5 parallell sessions**

Discriminative vs Generative, and Energy-Based Learning (Tue 8:30 am, S1, 2nd floor)

8:30 am - 8:55 am	Paper #415: Discriminative Parameter Learning for Bayesian Networks. Jiang Su, Harry Zhang, Charles X. Ling, and Stan Matwin.
8:55 am - 9:20 am	Paper #601: Classification using Discriminative Restricted Boltzmann Machines. Hugo Larochelle and Yoshua Bengio.
9:20 am - 9:45 am	Paper #573: On the Quantitative Analysis of Deep Belief Networks. Ruslan Salakhutdinov and Iain Murray.
9:45 am - 10:10 am	Paper #638: Training Restricted Boltzmann Machines using Approximations to the Likelihood Gradient. Tijmen Tieleman.

ICML detailed schedule (Tue 8:30-10:10 AM)

More parallel sessions on the previous page

Boosting (Tue 8:30 am, S5, 3rd floor)

8:30 am - 8:55 am	Paper #676: ManifoldBoost: Stagewise Function Approximation for Fully-, Semi- and Un-supervised Learning. Nicolas Loeff, David Forsyth, and Deepak Ramachandran.
8:55 am - 9:20 am	Paper #331: Boosting with Incomplete Information. Gholamreza Haffari, Yang Wang, Shaojun Wang, Greg Mori, and Feng Jiao.
9:20 am - 9:45 am	Paper #362: Maximum Likelihood Rule Ensembles. Wojciech Kotlowski, Krzysztof Dembczynski, and Roman Slowinski.
9:45 am - 10:10 am	Paper #258: Random Classification Noise Defeats All Convex Potential Boosters. Philip M. Long and Rocco A. Servedio.

Compressed Sensing and Projections (Tue 8:30 am, S12, 3rd floor)

8:30 am - 8:55 am	Paper #121: Autonomous Geometric Precision Error Estimation in Low-level Computer Vision Tasks. Andrés Corrada-Emmanuel and Howard Schultz.
8:55 am - 9:20 am	Paper #209: Multi-Task Compressive Sensing with Dirichlet Process Priors. Yuting Qi, Dehong Liu, David Dunson, and Lawrence Carin.
9:20 am - 9:45 am	Paper #459: Compressed Sensing and Bayesian Experimental Design. Matthias Seeger and Hannes Nickisch.
9:45 am - 10:10 am	Paper #361: Efficient Projections onto the L1-Ball for Learning in High Dimensions. John Duchi, Shai Shalev-Shwartz, Yoram Singer, and Tushar Chandra.

Reinforcement Learning 5 (Tue 8:30 am, S13, 3rd floor)

8:30 am - 8:55 am	Paper #581: An Analysis of Linear Models, Linear Value-Function Approximation, and Feature Selection for Reinforcement Learning. Ronald Parr, Lihong Li, Gavin Taylor, Christopher Painter-Wakefield, and Michael Littman.
8:55 am - 9:20 am	Paper #652: An Analysis of Reinforcement Learning with Function Approximation. Francisco Melo, Sean Meyn, and Isabel Ribeiro.
9:20 am - 9:45 am	Paper #645: Apprenticeship Learning Using Linear Programming. Umar Syed, Michael Bowling, and Robert Schapire.
9:45 am - 10:10 am	Paper #111: Preconditioned Temporal Difference Learning. Hengshuai Yao and Zhi-Qiang Liu.

Ranking and IR (Tue 8:30 am, SH, 4th floor)

8:30 am - 8:50 am	Paper #167: Listwise Approach to Learning to Rank - Theory and Algorithm. Fen Xia, Tie-Yan Liu, Jue Wang, Wensheng Zhang, and Hang Li.
8:55 am - 9:20 am	Paper #179: Query-Level Stability and Generalization in Learning to Rank. Yanyan Lan, Tie-Yan Liu, Tao Qin, Zhiming Ma, and Hang Li.
9:20 am - 9:45 am	Paper #470: Predicting Diverse Subsets Using Structural SVMs. Yisong Yue and Thorsten Joachims.
9:45 am - 10:10 am	Paper #264: Learning Diverse Rankings with Multi-Armed Bandits. Filip Radlinski, Robert Kleinberg, and Thorsten Joachims.

10:10 am - 10:40 am	Coffee Break (2nd, 3rd and 4th floors)

ICML detailed schedule (Tue 10:40 AM-12:20 PM)

10:40 am -   **5 parallell sessions**
12:20 pm

Topic Models (Tue 10:40 am, S1, 2nd floor)

10:40 am - 11:05 am	Paper #562: mStruct: A New Admixture Model for Inference of Population Structure in Light of Both Genetic Admixing and Allele Mutations. Suyash Shringarpure and Eric Xing.
11:05 am - 11:30 am	Paper #419: Memory Bounded Inference in Topic Models. Ryan Gomes, Max Welling, and Pietro Perona.
11:30 am - 11:55 am	Paper #667: Nonnegative Matrix Factorization via Rank-One Downdate. Michael Biggs, Ali Ghodsi, and Stephen Vavasis.
11:55 am - 12:20 pm	Paper #129: Dirichlet Component Analysis: Feature Extraction for Compositional Data. Hua-Yan Wang, Qiang Yang, Hong Qin, and Hongbin Zha.

Embeddings 1 (Tue 10:40 am, S5, 3rd floor)

10:40 am - 11:05 am	Paper #163: Uncorrelated Multilinear Principal Component Analysis through Successive Variance Maximization. Haiping Lu, Konstantinos Plataniotis, and Anastasios Venetsanopoulos.
11:05 am - 11:30 am	Paper #484: Expectation-Maximization for Sparse and Non-Negative PCA. Christian David Sigg and Joachim M. Buhmann.
11:30 am - 11:55 am	Paper #551: ICA and ISA Using Schweizer-Wolff Measure of Dependence. Sergey Kirshner and Barnabás Póczos.
11:55 am - 12:20 pm	Paper #600: Bayesian Probabilistic Matrix Factorization using Markov Chain Monte Carlo. Ruslan Salakhutdinov and Andriy Mnih.

Classification with Sampling, Costs (Tue 10:40 am, S12, 3rd floor)

10:40 am - 11:05 am	Paper #523: Empirical Bernstein Stopping. Volodymyr Mnih, Csaba Szepesvari, and Jean-Yves Audibert.
11:05 am - 11:30 am	Paper #614: Pointwise Exact Bootstrap Distributions of Cost Curves. Charles Dugas and David Gadoury.
11:30 am - 11:55 am	Paper #632: An Empirical Evaluation of Supervised Learning in High Dimensions. Rich Caruana, Nikos Karampatziakis, Ainur Yessenalina
11:55 am - 12:20 pm	Paper #150: Cost-Sensitive Multi-class Classification from Probability Estimates. Deirdre O'Brien, Maya Gupta, and Robert Gray.

Reinforcement Learning 6 (Tue 10:40 am, S13, 3rd floor)

10:40 am - 11:05 am	Paper #458: Automatic Discovery and Transfer of MAXQ Hierarchies. Neville Mehta, Soumya Ray, Prasad Tadepalli, and Thomas Dietterich.
11:05 am - 11:30 am	Paper #564: Sample-Based Learning and Search with Permanent and Transient Memories. David Silver, Richard Sutton, and Martin Mueller.
11:30 am - 11:55 am	Paper #197: Efficiently Learning Linear-Linear Exponential Family Predictive Representations of State. David Wingate and Satinder Singh.
11:55 am - 12:20 pm	Paper #429: A Semi-parametric Statistical Approach to Model-free Policy Evaluation. Tsuyoshi Ueno, Motoaki Kawanabe, Takeshi Mori, Shin-Ichi Maeda, and Shin Ishii.

Online Learning (Tue 10:40 am, SH, 4th floor)

10:40 am - 11:05 am	Paper #367: Rank Minimization via Online Learning. Raghu Meka, Prateek Jain, Constantine Caramanis, and Inderjit Dhillon.
11:05 am - 11:30 am	Paper #322: Confidence-Weighted Linear Classification. Mark Dredze, Koby Crammer, and Fernando Pereira.
11:30 am - 11:55 am	Paper #355: The Projectron: a Bounded Kernel-Based Perceptron. Francesco Orabona, Joseph Keshet, and Barbara Caputo.
11:55 am - 12:20 pm	Paper #511: Efficient Bandit Algorithms for Online Multiclass Prediction. Sham M. Kakade, Shai Shalev-Shwartz, and Ambuj Tewari.

12:20 pm - 2:00 pm	Lunch (on your own)

ICML detailed schedule (Tue 2:00-4:05 PM)

2:00 pm -   **5 parallell sessions**
4:05 pm

NLP (Tue 2:00 pm, S1, 2nd floor)

2:00 pm - 2:25 pm	Paper #304: Learning to Sportscast: A Test of [ground]ed Language Acquisition. David Chen and Raymond Mooney.
2:25 pm - 2:50 pm	Paper #391: A Unified Architecture for Natural Language Processing: Deep Neural Networks with Multitask Learning. Ronan Collobert and Jason Weston.
2:50 pm - 3:15 pm	Paper #398: Modified MMI/MPE: a Direct Evaluation of the Margin in Speech Recognition. Georg Heigold, Thomas Deselaers, Ralf Schlueter, and Hermann Ney.
3:15 pm - 3:40 pm	Paper #311: Fully Distributed EM for Very Large Datasets. Jason Wolfe, Aria Haghighi, and Dan Klein.
3.40 pm - 4:05 pm	Paper #673: Structure Compilation: Trading Structure for Features. Percy Liang, Hal Daume, and Dan Klein.

Multiple Instance Learning and Learning with Missing Features, Categorical Features (Tue 2:00 pm, S5, 3rd floor)

2:00 pm - 2:25 pm	Paper #130: Adaptive p-Posterior Mixture-Model Kernels for Multiple Instance Learning. Hua-Yan Wang, Qiang Yang, and Hongbin Zha.
2:25 pm - 2:50 pm	Paper #552: Multiple Instance Ranking. Charles Bergeron, Jed Zaretzki, Curt Breneman, and Kristin Bennett.
2:50 pm - 3:15 pm	Paper #587: Bayesian Multiple Instance Learning: Automatic Feature Selection and Inductive Transfer. Vikas Raykar, Balaji Krishnapuram, Jinbo Bi, Murat Dundar, and R. Bharat Rao.
3:15 pm - 3:40 pm	Paper #202: Learning to Classify with Missing and Corrupted Features. Ofer Dekel and Ohad Shamir.
3:40 pm - 4:05 pm	Paper #536: Multi-Classification by Categorical Features via Clustering. Yevgeny Seldin and Naftali Tishby.

Embeddings 2 (Tue 2:00 pm, S12, 3rd floor)

2:00 pm - 2:25 pm	Paper #270: A Least Squares Formulation for Canonical Correlation Analysis. Liang Sun, Shuiwang Ji, and Jieping Ye.
2:25 pm - 2:50 pm	Paper #668: Closed-form Supervised Dimensionality Reduction with Generalized Linear Models. Irina Rish, Genady Grabarnilk, Guillermo Cecchi, Francisco Pereira, and Geoffrey J. Gordon.
2:50 pm - 3:15 pm	Paper #312: Grassmann Discriminant Analysis: a Unifying View on Subspace-Based Learning. Jihun Hamm and Daniel Lee.
3:15 pm - 3:40 pm	Paper #582: Metric Embedding for Kernel Classification Rules. Bharath Sriperumbudur, Omer Lang, and Gert Lanckriet.
3:40 pm - 4:05 pm	Paper #592: Extracting and Composing Robust Features with Denoising Autoencoders. Pascal Vincent, Hugo Larochelle, Yoshua Bengio, and Pierre-Antoine Manzagol.

Transfer Learning and Games (Tue 2:00 pm, S13, 3rd floor)

2:00 pm - 2:25 pm	Paper #412: Learning to Learn Implicit Queries from Gaze Patterns. Kai Puolamäki, Antti Ajanki, and Samuel Kaski.
2:25 pm - 2:50 pm	Paper #520: Multi-Task Learning for HIV Therapy Screening. Steffen Bickel, Jasmina Bogojeska, Thomas Lengauer, and Tobias Scheffer.
2:50 pm - 3:15 pm	Paper #229: Manifold Alignment using Procrustes Analysis. Chang Wang and Sridhar Mahadevan.
3:15 pm - 3:40 pm	Paper #542: No-Regret Learning in Convex Games. Geoffrey J. Gordon, Amy Greenwald, and Casey Marks.
3:40 pm - 4:05 pm	Paper #655: Strategy Evaluation in Extensive Games with Importance Sampling. Michael Bowling, Michael Johanson, Neil Burch, and Duane Szafron.

ICML detailed schedule (Tue 2:00-8:30 PM)

More parallel sessions on the previous page

Kernels - Including Scalability (Tue 2:00 pm, SH, 4th floor)

2:00 pm - 2:25 pm	Paper #166: A Dual Coordinate Descent Method for Large-scale Linear SVM. Cho-Jui Hsieh, Kai-Wei Chang, Chih-Jen Lin, S. Sathiya Keerthi, and S. Sundararajan.
2:25 pm - 2:50 pm	Paper #411: Optimized Cutting Plane Algorithm for Support Vector Machines. Vojtech Franc and Soeren Sonnenburg.
2:50 pm - 3:15 pm	Paper #491: Fast Support Vector Machine Training and Classification on Graphics Processors. Bryan Catanzaro, Narayanan Sundaram, and Kurt Keutzer.
3:15 pm - 3:40 pm	Paper #476: Improved Nystrom Low-Rank Approximation and Error Analysis. Kai Zhang, Ivor Tsang, and James Kwok.
3:40 pm - 4:05 pm	Paper #513: Polyhedral Classifier for Target Detection A Case Study: Colorectal Cancer. Murat Dundar, Matthias Wolf, Sarang Lakare, Marcos Salganicoff, and Vikas C. Raykar.

4:05 pm - 4:35 pm	Coffee Break (2nd, 3rd and 4th floors)

4:35 pm - 5:35 pm	**Invited Talk: Andrew Ng, Stanford University: STAIR: The STanford Artificial Intelligence Robot project** (S1, 2nd floor)

5:40 pm - 6:30 pm	**Business Meeting** (S1, 2nd floor)

|	
6:00 pm - 8:30 pm	**Poster Session II** (2nd & 3rd floors, with snacks) Posters from sessions Feature selection and sparsity (Mon 1:30 pm) up to Kernels - Including scalability (Tue 2:00 pm)

Wed, July 9, 2008:
– Joint ICML/UAI/COLT workshops
– Reception by the University of Helsinki

Thu-Sat, July 10-12, 2008: UAI and COLT

For ICML online program with links to full papers, abstracts and a discussion site, go to http://icml2008.cs.helsinki.fi.

Points of Interest
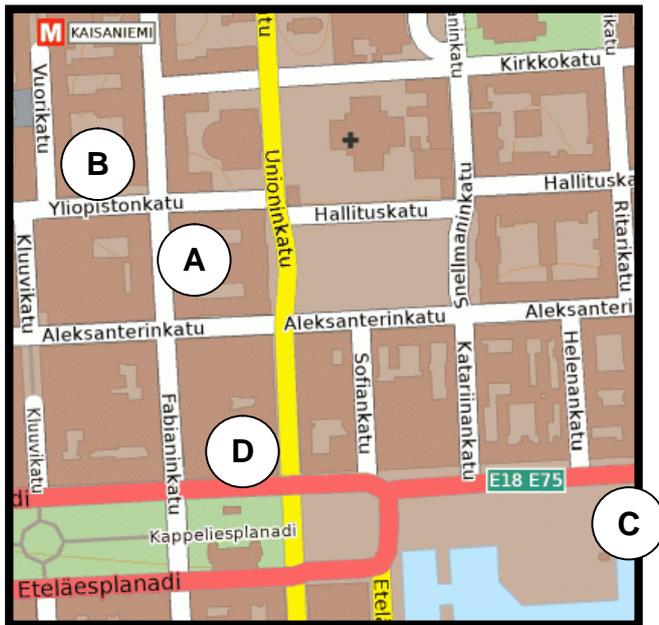
A: Main building, Fabianinkatu 33:
ICML, MLG, workshops

B: Porthania, Yliopistonkatu 3:
UAI, COLT

C: Market square (east corner):
boats to ICML banquet

D: Pohjoisesplanadi 19:
Helsinki City Tourist Office

ICML Banquet and Boats to Suomenlinna

The ICML banquet will be held in the historic Suomenlinna sea fortress, at Restaurant Walhalla. As a mixture of a small town, large parks and fortifications, it is a popular picnic spot. Suomenlinna is a 15-minute boat trip from the market square.

Your badge is your banquet ticket. Additionally, you have a boat ticket in your registration material.

Transportation to Suomenlinna will be on four boats. The departures are between 18.00 and 18.45.
 − **Check your boat schedule from your boat ticket**. You may freely swap tickets with other participants or ask the reception for swap tickets. There are no tickets for the return trip.
 − Our charter boats leave from the **charter peer at the extreme eastern corner of the market square**. Look for the signs of ICML.
 − Please, be prepared to **board your boat 10 minutes before its departure time**.
 − (Guided walks from the conference registration desk to the peer leave 20 minutes before each boat departure.)
 − (Make sure you board on an ICML boat. JT-LINE and HKL also operate regular traffic to Suomenlinna, see below)
 − After the banquet, the charter boats will leave Suomenlinna approximately at 22.30-23.15. No ticket is needed for a return trip on the charter boats.

In case you want to spend more time in Suomenlinna, or if you miss the ICML boats:
 − JT-Lines operates regular traffic between the market square and Suomenlinna (€3.50 one way)
   − From the market square: every 30 mins until 18.00 and then every full hour.
   − From Suomenlinna (King's Gate/Walhalla) at 21.30, 22.30, 23.00, 23.30, 00.15.
   − Full schedule: http://www.jt-line.fi/eng/suomenlinna_aikataulut.htm
 − A HKL ferry runs between the market square and Suomenlinna all day (€2.20 one way)
   − In Suomenlinna, HKL operates at the Main Quay, appr. 1 km from Restaurant Walhalla
   − From market square every 20 minutes (except 16.20) until 18.40 and then every 40 minutes.
   − From Suomenlinna at 23.40, 00.40, 01.20, 02.00.
   − Full schedule: http://www.hel2.fi/HKL/aikataulut/kauppatori.pdf
 − A map of Suomenlinna: http://www.suomenlinna.fi/tiedostot/matkailu/SLmap.pdf
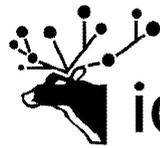
icml2008@helsinki.fi

Practical information about ICML and joint ICML/UAI/COLT workshops

We welcome you to ICML and 11 ICML/UAI/COLT workshops! This sheet contains some practical information about these events. A separate sheet is available for UAI and COLT, and for MLG.

ICML and the workshops are held in the university main building, at Fabianinkatu 33. (This is the newer part of the building. Take a walk around the block to see the Senate Square and the old facade of the main building!) UAI and COLT will be held in a neighbouring building, Porthania, at Yliopistonkatu 3.

Registration and information desk is located in the entrance hall.
- Opening times: the desk opens daily at 8.00 and closes after the last technical sessions.
- Phone: 046 667 26 71 (from Finland) or +358 46 667 26 71 (international).

Lecture halls and other functions in the main building are located as follows:
- 1st (ground) floor: registration
- 2nd floor: lecture hall S1, coffee breaks, posters
- 3rd floor: lecture halls S4 – S13, coffee breaks, posters
- 4th floor: lecture halls SH, S14, S15, coffee breaks

Coffee breaks are distributed through the 2nd– 4th floors.

Lunch is on your own. There are several restaurants nearby, especially on Aleksanterinkatu and its side streets. University cafes in the main building and Porthania offer lunch at EUR 5-7 (Mon-Fri).

Evening program is located as follows.
- Sun, July 6, **ICML poster session**: 2nd and 3rd floors
- Mon, July 7, **ICML banquet**: Restaurant Walhalla on Suomenlinna sea fortress. The first boat leaves the market square at 18.00. Return to Helsinki will be around 22.30-23.30 (see details on the previous page).
- Tue, July 8, **ICML poster session**: 2nd and 3rd floors
- Wed, July 9, **Joint reception** by the University of Helsinki: 2nd floor

Proceedings: ICML registration includes a copy of the ICML Book of Abstracts. A limited number of full proceedings is available for sale at the registration desk. Workshops do not have printed proceedings. Complete ICML proceedings, workshop material, tutorial material and much more can be accessed from http://icml2008.cs.helsinki.fi.

WLAN is freely available for the participants in the university premises. Your personal user id and password have been provided to you on a sticker with your registration material. Stick it to the back of your name badge or other convenient location.

Ready rooms: during ICML, lecture halls S7 and S8 (3rd floor) can be used for working or checking your email on your own laptop. (During the workshop day, they are used for workshops.) There are no computers for public use by the participants.

Misc. information
- A university bookshop is located in Porthania (Yliopistonkatu 3)
- Printing is available at Yliopistopaino (Vuorikatu 3, tel. 09 7010 2351)
- Electricity has 230 V, 50 Hz (but availability in lecture halls is limited)
- Helsinki City Tourist Office is located at Pohjoisesplanadi 19
- Taxi cab: tel. 0100 0700
- Emergency tel.: 112