The 24th Conference on Uncertainty in Artificial Intelligence (UAI 2008)

The 21st Annual Conference on Learning Theory (COLT 2008)

Welcome to UAI and COLT! This sheet contains some practical information about these events. A separate sheet is available for ICML, MLG and the joint workshops.

UAI and COLT take place in the **Porthania building** of University of Helsinki (Yliopistonkatu 3). ICML, MLG and the workshops take place earlier in the University Main Building (entrance at Fabianinkatu 33).

Registration and information desk is located in the entrance hall of the Main Building on Wednesday (where the workshops and the University Reception take place) and in the entrance hall of the Porthania building on Thu-Sat. The opening times are as follows:

- Wed., July 9: 8:00-18:00 (Main Building)
- Thu., July 10: 8:00-20:00 (Porthania)
- Fri., July 11: 8:00-20:00 (Porthania)
- Sat., July 12: 8:00-14:00 (Porthania)

Phone: 046 667 26 71 (from Finland) or +358 46 667 26 71 (international).

Lecture halls and other functions in Porthania are located as follows:

- 1st (ground) floor: registration desk, lecture halls PI and PII
- 2nd floor: room P219 ("lehtisali" i.e. "newspaper room")
- 7th floor: rooms P723 and P724

UAI sessions and **all invited talks** take place in **PI**. **COLT sessions** except for invited talks take place in **PII**. UAI and COLT delegates may freely switch between PI and PII, but you are encouraged to wait until session breaks to avoid hassle.

There is a short (5 min.) break after the joint invited talks in PI to allow COLT people to move to PII. Please make this switch as swift as possible to avoid delays in the program.

Coffee and UAI posters will be in the 1st (ground) floor lobby. Rooms P219, P723 and P724 are freely available for working on your laptop etc.

Lunches are on your own. There are several restaurants nearby, especially on Aleksanterinkatu and its side streets. University cafeterias in the main building and Porthania offer lunch at appr. EUR 5-7.

Proceedings for UAI or COLT are included in your registration package. All UAI, COLT and ICML papers are also freely available via the conference web pages. A limited number of copies of the paper proceedings are for sale at the registration desk.

The university **WLAN** (HUPnet) can be accessed using your personal user id and password, printed on a piece of paper in your registration package. Outside the university, in the downtown area there are also several WLAN public hotspots available, some of which are completely free and some free for customers of cafeterias etc. (see http://ptp.hel.fi/wlan/start.asp?lang=3).

Welcoming reception jointly for all participants of UAI, COLT, ICML, MLG and the workshops will be offered by the University of Helsinki on Wednesday, July 9, at 18:00-20:00 in the University Main Building (Fabianinkatu 33, 2nd floor).

Banquet for UAI and COLT participants takes place in the White Hall (Valkoinen sali), Aleksanterinkatu 16-18, immediately after the last session on Friday. To get to the White Hall, exit Porthania and turn left. When you come to Senate Square, the White Hall is in the building diagonally across the square from you ("C" in the map below). Your name badge is your banquet ticket. If you ordered extra banquet tickets, they are in your registration package.

Public transportation: For getting around in the city, see the Journey Planner at http://aikataulut.ytv.fi/reittiopas/en/. Be warned that there are several active construction sites in the city, possibly affecting the traffic.

Misc. information
- A university bookshop is located in Porthania
- Photocopying machines operate with cards sold in the bookshop
- 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
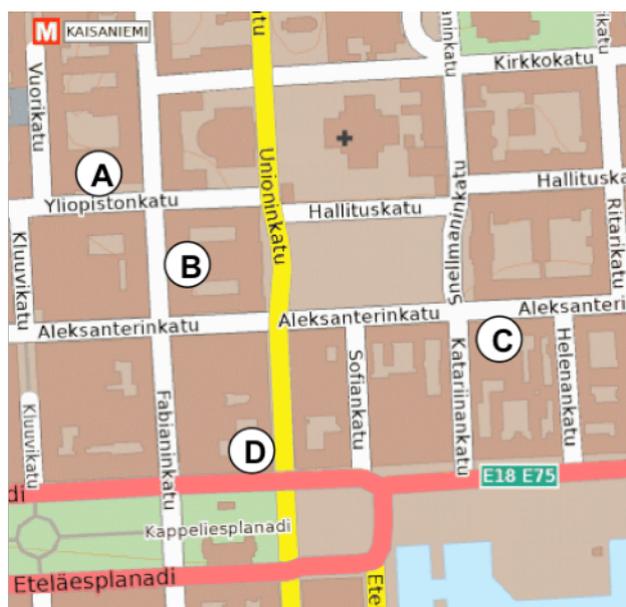
UAI/COLT points of interest

A: Porthania, Yliopistonkatu 3: UAI, COLT sessions

B: Main Building, Fabianinkatu 33: ICML, MLG, workshops, welcoming reception

C: Valkoinen sali (White Hall), Aleksanterinkatu 16-18: joint UAI/COLT Banquet

D: Helsinki City Tourist Office, Pohjoisesplanadi 19

UAI/COLT SCHEDULE FOR THURSDAY, JULY 10, 2008

	UAI		COLT		
			8:30-8:35: COLT Opening Remarks		08:30
08:45		8:45-9:00 UAI Opening Remarks	Kamalika Chaudhuri and Satish Rao. Learning Mixtures of Product Distributions Using Correlations and Independence	Unsupervised, Semi-Supervised and Active Learning	08:35
09:00	Topic Models and Clustering	David Mimno and Andrew McCallum. Topic Models Conditioned on Arbitrary Features with Dirichlet-multinomial Regression	Kamalika Chaudhuri and Satish Rao. Beyond Gaussians: Spectral Methods for Learning Mixtures of Heavy-Tailed Distributions		09:00
09:25		Amit Gruber and Michal Rosen Zvi, Yair Weiss. Latent Topic Models for Hypertext	Shai Ben-David, Tyler Lu and David Pal. Does Unlabeled Data Provably Help? Worst-case Analysis of the Sample Complexity of Semi-Supervised Learning		09:25
09:50		Daniel Tarlow, Richard Zemel and Brendan Frey. Flexible Priors for Exemplar-based Clustering	Maria-Florina Balcan, Steve Hanneke and Jennifer Wortman. The True Sample Complexity of Active Learning (*Mark Fulk award*)		09:50
10:15	10:15-10:40: Coffee break				10:15
10:40	10:40-11:40: Invited talk by Peter Grünwald, CWI *The Catch-Up Phenomenon in Bayesian Inference*				10:40
11:40	11:40-11:45: Short break for switching rooms				11:40
11:45	Inference I	Tamir Hazan and Amnon Shashua. Convergent Message-Passing Algorithms for Inference over General Graphs with Convex Free Energies (*Best student paper award runner up*)	Elad Hazan and Satyen Kale. Extracting Certainty from Uncertainty: Regret Bounded by Variation in Costs	On-Line Learning (I)	11:45
12:10		David Sontag, Talya Meltzer, Amir Globerson, Tommi Jaakkola and Yair Weiss. Tightening LP Relaxations for MAP using Message Passing (*Best paper award*)	Kosuke Ishibashi, Kohei Hatano and Masayuki Takeda. Online Learning of Maximum p-Norm Margin Classifiers with Bias		12:10
12:35		Justin Domke. Learning Convex Inference of Marginals	Subhash Khot and Ashok Kumar Ponnuswami. Minimizing Wide Range Regret with Time Selection Functions		12:35
13:00	13:00-14:30: Lunch break				13:00
14:30	14:30-15:30: Invited talk by Robin Hanson, George Mason University *Combinatorial Prediction Markets*				14:30
15:30	15:30-15:35: Short break for switching rooms				15:30
15:35	Games and Decisions	Sevan Ficici, David Parkes and Avi Pfeffer. Learning and Solving Many-Player Games through a Cluster-Based Representation	Nir Ailon and Mehryar Mohri. An Efficient Reduction of Ranking to Classification	Other Directions (I)	15:35
16:00		Enrique Munoz de Cote and Michael Littman. A Polynomial-time Nash Equilibrium Algorithm for Repeated Stochastic Games (*Best student paper award*)	Michael Kearns and Jennifer Wortman. Learning from Collective Behavior		16:00
16:25		Cassio de Campos and Qiang Ji. Strategy Selection in Influence Diagrams using Imprecise Probabilities	Bharath Sriperumbudur, Arthur Gretton, Kenji Fukumizu, Gert Lanckriet and Bernhard Schölkopf. Injective Hilbert Space Embeddings of Probability Measures		16:25
16:50	16:50-17:15: Coffee break				16:50
17:15		17:15-18:15: UAI Poster Spotlights	Sung-Soon Choi, Kyomin Jung and Jeong Han Kim. Almost Tight Upper Bound for Finding Fourier Coefficients of Bounded Pseudo-Boolean Functions	Complexity and Boolean Functions (I)	17:15
17:40			Sandra Zilles, Steffen Lange, Robert Holte, and Martin Zinkevich. Teaching Dimensions based on Cooperative Learning		17:40
18:05			Vitaly Feldman. On the Power of Membership Queries in Agnostic Learning		18:05
18:15		18:15-21:00: UAI Poster Session	Vitaly Feldman and Leslie Valiant. The Learning Power of Evolution	Open Problem Session	18:30
			Parikshit Gopalan, Adam Kalai and Adam Klivans. A Query Algorithm for Agnostically Learning DNF?		
			Adam Smith and Manfred Warmuth. Learning Rotations		
19:00			19:00-20:00 Break (Refreshments at the UAI Poster Session)		19:00
20:00			20:00-21:30: COLT Business Meeting		20:00
21:00					21:00

UAI/COLT SCHEDULE FOR FRIDAY, JULY 11, 2008

		UAI	COLT		
			Thorsten Doliwa, Michael Kallweit and Hans Ulrich Simon. Dimension and Margin Bounds for Reflection-invariant Kernels	Complexity and Boolean Functions (II)	08:35
09:00	Multi-View and Transfer Learning	Kuzman Ganchev, Joao Graca, John Blitzer and Ben Taskar. Multi-View Learning over Structured and Non-Identical Outputs	Dana Angluin, James Aspnes, Jiang Chen, David Eisenstat and Lev Reyzin. Learning Acyclic Probabilistic Circuits Using Test Paths		09:00
09:25		C. Mario Christoudias, Raquel Urtasun and Trevor Darrell. Multi-View Learning in the Presence of View Disagreement	Linda Sellie. Learning Random Monotone DNF Under the Uniform Distribution		09:25
09:50		Gal Elidan, Benjamin Packer, Geremy Heitz and Daphne Koller. Convex Point Estimation using Undirected Bayesian Transfer Hierarchies	Eric Blais, Ryan O'Donnell and Karl Wimmer. Polynomial Regression under Arbitrary Product Distributions		09:50
10:15	10:15-10:40: Coffee break				10:15
10:40	10:40-11:40: Invited talk by Gabor Lugosi, Pompeu Fabra University *Concentration Inequalities*				10:40
11:40	11:40-11:45: Short break for switching rooms				11:40
11:45	Reinforcement learning	Emma Brunskill, Bethany Leffler, Lihong Li, Michael Littman and Nicholas Roy. CORL: A Continuous-state Offset-dynamics Reinforcement Learner	Alon Zakai and Ya'acov Ritov. How Local Should a Learning Method Be?	Generalization and Statistics (I)	11:45
12:10		Branislav Kveton and Milos Hauskrecht. Partitioned Linear Programming Approximations for MDPs	Yiming Ying and Colin Campbell. Learning Coordinate Gradients with Multi-Task Kernels		12:10
12:35		Marc Toussaint, Laurent Charlin and Pascal Poupart. Hierarchical POMDP Controller Optimization by Likelihood Maximization (*Best paper award runner up*)	Vladimir Koltchinskii and Ming Yuan. Sparse Recovery in Large Ensembles of Kernel Machines		12:35
13:00	13:00-14:30: Lunch break				13:00
14:30	14:30-15:30: Invited talk by Dan Klein, UC Berkeley *Unsupervised Learning for Natural Language Processing*				14:30
15:30	15:30-15:35: Short break for switching rooms				15:30
15:35	Causality	Ulf Nielsen, Jean-Philippe Pellet and André Elisseeff. Explanation Trees for Causal Bayesian Networks	Amy Greenwald, Zheng Li and Warren Schudy. More Efficient Internal-Regret-Minimizing Algorithms	On-Line Learning and Bandits	15:35
16:00		Phil Dawid and Vanessa Didelez. Identifying Optimal Sequential Decisions	Giovanni Cavallanti, Nicolò Cesa-Bianchi and Claudio Gentile. Linear Algorithms for Online Multitask Classification		16:00
16:25		Jin Tian. Identifying Dynamic Sequential Plans	Jacob Abernethy, Elad Hazan and Alexander Rakhlin. Competing in the Dark: An Efficient Algorithm for Bandit Linear Optimization (*Machine Learning Journal award*)		16:25
16:50	16:50-17:15: Coffee break				16:50
17:15	Network learning	Harald Steck. Learning the Bayesian Network Structure: Dirichlet Prior vs. Data	Wouter Koolen and Steven de Rooij. Combining Expert Advice Efficiently	Other Directions (II)	17:15
17:40		Gustavo Lacerda, Peter Spirtes, Joseph Ramsey and Patrik Hoyer. Discovering Cyclic Causal Models by Independent Components Analysis	Maria-Florina Balcan, Avrim Blum and Nathan Srebo. Improved Guarantees for Learning via Similarity Functions		17:40
18:05		Varun Ganapathi, David Vickrey, John Duchi and Daphne Koller. Constrained Approximate Maximum Entropy Learning of Markov Random Fields	Benjamin I. P. Rubinstein and J. Hyam Rubinstein. Geometric & Topological Representations of Maximum Classes with Applications to Sample Compression		18:05
18:30	18:30.-19:55: UAI Business Meeting		Shai Shalev-Shwartz and Yoram Singer. On the Equivalence of Weak Learnability and Linear Separability: New Relaxations and Efficient Boosting Algorithms		18:30
			18:55-19:55: COLT Rump Session		18:55
20:00	20:00-23:00: Joint UAI/COLT Banquet at Valkoinen Sali (the White Hall), address: Aleksanterinkatu 16-18				20:00

UAI/COLT SCHEDULE FOR SATURDAY, JULY 12, 2008

Time	UAI		COLT		Time
			Andrey Bernstein and Nahum Shimkin. Adaptive Aggregation for Reinforcement Learning with Efficient Exploration: Deterministic Domains	Bandits and Reinforcement Learning	08:35
09:00	Modeling and Regression	Keith Noto and Mark Craven. Learning Hidden Markov Models for Regression using Path Aggregation	Peter Bartlett, Varsha Dani, Thomas Hayes, Sham Kakade, Alexander Rakhlin and Ambuj Tewari. High-Probability Regret Bounds for Bandit Online Linear Optimization		09:00
09:25		Seyoung Kim and Eric Xing. Feature Selection via Block-Regularized Regression	Aleksandrs Slivkins and Eli Upfal. Adapting to a Changing Environment: the Brownian Restless Bandits		09:25
09:50		David Barber. Clique Matrices for Statistical Graph Decomposition and Parameterising Restricted Positive Definite Matrices	Varsha Dani, Thomas Hayes and Sham Kakade. Stochastic Linear Optimization under Bandit Feedback		09:50
10:15	10:15-10:40: Coffee break				10:15
10:40	Inference II	Arthur Choi and Adnan Darwiche. Approximating the Partition Function by Deleting and then Correcting for Model Edges	Ohad Shamir and Naftali Tishby. Model Selection and Stability in k-means Clustering	Unsupervised and Semi-Supervised Learning	10:40
11:05		Venkat Chandrasekaran, Nathan Srebro and Prahladh Harsha. Complexity of Inference in Graphical Models	Shai Ben-David and Ulrike von Luxburg. Relating Clustering Stability to Properties of Cluster Boundaries		11:05
11:30		Peter Thwaites, Jim Smith and Robert Cowell. Propagation using Chain Event Graphs	Kamalika Chaudhuri and Andrew McGregor. Finding Metric Structure in Information Theoretic Clustering		11:30
11:55		Tal El-Hay, Nir Friedman and Raz Kupferman. Gibbs Sampling in Factorized Continuous-Time Markov Processes (*Best student paper award runner up*)	Karthik Sridharan and Sham Kakade. An Information Theoretic Framework for Multi-view Learning		11:55
12:20	12:20-13:50: Lunch break				12:20
13:50	Modeling	Noah Goodman, Vikash Mansinghka, Daniel Roy, Keith Bonawitz and Joshua Tenenbaum. Church: a language for generative models	Jacob Abernethy, Peter Bartlett, Alexander Rakhlin and Ambuj Tewari. Optimal Stragies and Minimax Lower Bounds for Online Convex Games	Online Learning (II)	13:50
14:15		Mathias Niepert, Dirk Van Gucht and Marc Gyssens. On the Conditional Independence Implication Problem: A Lattice-Theoretic Approach (*Best student paper award runner up*)	Robert Kleinberg, Alexandru Niculescu-Mizil and Yogeshwer Sharma. Regret Bounds for Sleeping Experts and Bandits (*Machine Learning Journal award*)		14:15
14:40		Hannaneh Hajishirzi and Eyal Amir: Sampling First Order Logical Particles	Jacob Abernethy, Manfred Warmuth and Joel Yellin. Optimal Strategies for Random Walks		14:40
15:05		Jim Huang and Brendan Frey. Cumulative distribution networks and the derivative-sum-product algorithm (*Best student paper award runner up*)	András György, Gábor Lugosi and György Ottucsák. On-line Sequential Bin Packing		15:05
15:30	15:30-15:55: Coffee break				15:30
			Shuheng Zhou, John Lafferty and Larry Wasserman. Time Varying Undirected Graphs	Generalization and Statistics (II)	15:55
			Constantine Caramanis and Shie Mannor. Learning in the Limit with Adversarial Disturbances		16:20
			Liwei Wang, Masashi Sugiyama, Cheng Yang, Zhi-Hua Zhou and Jufu Feng. On the Margin Explanation of Boosting Algorithms		16:45
			Aarti Singh, Robert Nowack and Clayton Scott. Adaptive Hausdorff Estimation of Density Level Sets		17:10
			Satyaki Mahalanabis and Daniel Stefankovic. Density estimation in linear time		17:35

UAI Posters

The poster session will take place on Thursday, July 10, at 18:15-21:00 in the lobby area of the Porthania building. The session is open for both UAI and COLT participants. Snacks available.

1	Umut A. Acar, Alexander Ihler, Ramgopal R. Mettu, Özgür Sumer	Adaptive inference on general graphical models
2	Dimitrios Antos, Avi Pfeffer	Identifying reasoning patterns in games
3	Vincent Auvray, Louis Wehenkel	Learning Inclusion-Optimal Chordal Graphs
4	Debarun Bhattacharjya, Ross Shachter	Sensitivity analysis in decision circuits
5	Liefeng Bo, Cristian Sminchisescu	Greedy Block Coordinate Descent for Large Scale Gaussian Process Regression
6	Zhihong Cai, Manabu Kuroki	On Identifying Total Effects in the Presence of Latent Variables and Selection bias
7	Botond Cseke, Tom Heskes	Bounds on the Bethe Free Energy for Gaussian Networks
8	James Cussens	Bayesian network learning by compiling to weighted MAX-SAT
9	Gert De Cooman, Filip Hermans, Erik Quaeghebeur	Sensitivity analysis for finite Markov chains in discrete time
10	John Duchi, Stephen Gould, Daphne Koller	Projected Subgradient Methods for Learning Sparse Gaussians
11	Quang Duong, Michael Wellman, Satinder Singh	Knowledge Combination in Graphical Multiagent Models
12	Frederick Eberhardt	Almost Optimal Intervention Sets for Causal Discovery
13	Vibhav Gogate, Rina Dechter	AND/OR Importance Sampling
14	Peter Grünwald, Joe Halpern	A Game-Theoretic Analysis of Updating Sets of Probabilities
15	Eric Hansen	Sparse Stochastic Finite-State Controllers for POMDPs
16	Greg Hines, Kate Larson	Learning When to Take Advice: A Statistical Test for Achieving A Correlated Equilibrium
17	Patrik Hoyer, Aapo Hyvärinen, Richard Scheines, Peter Spirtes, Joseph Ramsey, Gustavo Lacerda, Shohei Shimizu	Causal discovery of linear acyclic models with arbitrary distributions
18	Bowen Hui, Craig Boutilier	Toward Experiential Utility Elicitation for Interface Customization
19	Alejandro Isaza, Csaba Szepesvari, Vadim Bulitko, Russell Greiner	Speeding Up Planning in Markov Decision Processes via Automatically Constructed Abstraction
20	Tony Jebara	Bayesian Out-Trees
21	Manabu Kuroki, Zhihong Cai	The Evaluation of Causal Effects in Studies with an Unobserved Exposure/Outcome Variable: Bounds and Identification
22	Johan Kwisthout, Linda van der Gaag	The Computational Complexity of Sensitivity Analysis and Parameter Tuning
23	Eric Laber, Susan Murphy	Small Sample Inference for Generalization Error in Classification Using the CUD Bound
24	Gregory Lawrence, Stuart Russell	Improving Gradient Estimation by Incorporating Sensor Data
25	Daniel Lowd, Pedro Domingos	Learning Arithmetic Circuits
26	Marina Meila, Le Bao	Estimation and clustering with infinite rankings
27	Kurt Miller, Thomas Griffiths, Michael I. Jordan	The Phylogenetic Indian Buffet Process: A Non-Exchangeable Nonparametric Prior for Latent Features
28	Lars Otten, Rina Dechter	Bounding Search Space Size via (Hyper)tree Decompositions
29	Yan Radovilsky, Eyal Shimony	Observation Subset Selection as Local Compilation of Performance Profiles
30	Sebastian Riedel	Improving the Accuracy and Efficiency of MAP Inference for Markov Logic
31	Stephane Ross, Joelle Pineau	Model-Based Bayesian Reinforcement Learning in Large Structured Domains
32	Aleksandr Simma, Moises Goldszmidt, John MacCormick, Paul Barham, Richard Black, Rebecca Isaacs, Richard Mortier	CT-NOR: Representing and Reasoning About Events in Continuous Time
33	Tomas Singliar, Denver Dash	Efficient Inference in Persistent Dynamic Bayesian Networks
34	Matthew Streeter, Stephen Smith	New Techniques for Algorithm Portfolio Design
35	Richard Sutton, Csaba Szepesvari, Alborz Geramifard, Michael Bowling	Dyna-Style Planning with Linear Function Approximation and Prioritized Sweeping
36	Jarno Vanhatalo, Aki Vehtari	Modelling local and global phenomena with sparse Gaussian processes
37	Chong Wang, David Blei, David Heckerman	Continuous Time Dynamic Topic Models
38	Max Welling, Yee Whye Teh, Bert Kappen	Hybrid Variational/Gibbs Collapsed Inference in Topic Models
39	Ydo Wexler, Christopher Meek	Inference for Multiplicative Models
40	Haohai Yu, Robert van Engelen	Refractor Importance Sampling