ALGODAN Publications 2008-2013

2013

Articles in refereed scientific journals


Refereed conference articles and articles in edited books


Technical reports and other publications


**Artistic work**

1. **O. Gross (editor) and H. Toivonen.** Organization of Computational Creativity Club. 2013.
3. **O. Holmqvist, D. Murphy and J. Paalasmaa.** Biomusic performance, the 8th World Conference of Science Journalists, 2013.

**2012**

**Articles in refereed scientific journals**


Refereed conference articles and articles in edited books


Technical reports and other publications


**Artistic work**


**2011**

**Articles in refereed scientific journals**


**Refereed conference articles and articles in edited books**


Technical reports and other publications


2010

Articles in refereed scientific journals


Refereed conference articles and articles in edited books


73. **K. Zhang and A. Hyvärinen.** Source separation and higher-order causal analysis of MEG and EEG. In *Proceedings of the Twenty-Sixth Conference Uncertainty in Artificial Intelligence (UAI 2010)*, 2010, pp. 709-716.


### Technical reports and other publications


2009

Books


Articles in refereed scientific journals

11. Jouhten, Paula; Pitkänen, Esa; Pakula, Tiina; Saloheimo, Markku; Penttilä, Merja; Maaheimo, Hannu. 13C-metabolic flux ratio and carbon path analyses confirmed that Trichoderma reesi uses


26. Tuupanen, Sari; Turunen, Mikko; Lehtonen, Rainer; Hallikas, Outi; Vanharanta, Sakari; Kivioja, Teemu; Björklund, Mikael; Wei, Gonghong; Yan, Jian; Niittymaki, Iina; Mecklin, Jukka-Pekka; Järvinen, Heikki J; Ristimäki, Ari; Di-Bernardo, Mariachiara; East, Phil; Carvajal-Carmona, Luis; Houlston, Richard S; Tomlinson, Ian; Palin, Kimmo; Ukkonen, Esko.; Karhu, Auli; Taipale, Jussi; Aaltonen, Lauri A. The common colorectal cancer predisposition SNP rs6983267 at chromosome 8q24 confers potential to enhanced Wnt signaling. Nature genetics 41 (2009): 8, pp. 885-890.


29. Vesala, Timo; Launainen, Samuli; Kolari, P; Pumpanen, J; Sevanto, Sanna; Hari, P; Nikinmaa, E; Kaski, Petteri; Mannila, Heikki; Ukkonen, Esko; Piao, S; Clais, P. Autumn warming and carbon

30. Vingron, Martin; Brazma, Alvis; Coulson, Richard; van Helden, Jacques; Manke, Thomas; Palin, Kimmo; Sand, Olivier; Ukkonen, Esko. Integrating sequence, evolution and functional genomics in regulatory genomics. Genome biology 10 (2009): 1, 202, 8 pp.


32. Wessman, Jaana; Paunio, Tiina; Tuulio-Henriksson, Annamari; Koivisto, Mikko; Partonen, Timo; Suvisaari, Jaana; Turunen, Joni A; Wedenoja, Juho; Hennah, William; Pietilainen, Olli; Lonnqvist, Jouko; Mannila, Heikki; Peltonen, Leena. Mixture model clustering of phenotype features reveals evidence for association of DTNBP1 to a specific subtype of schizophrenia. Biological psychiatry 66 (2009) 11, s. 990-996.


Refereed conference articles and articles in edited books


5. Coulson, R; Manke, T; Palin, K; Roider, H; Sand, O; van Helden, J; Ukkonen, Esko ; Vingron, M; Brazma, A. From gene expression profiling to gene regulation. Modern genome annotation. pp. 105-119.


24. Mäkinen, Veli; Navarro, Gonzalo; Sirén, Jouni; Välimäki, Niko. Storage and retrieval of individual genomes. Research in computational molecular biology. pp. 121-137.


32. **Rizo, David; Lemström, Kjell; Inesta, Jose M.** Tree representation in combined polyphonic music comparison. *Computer music modeling and retrieval.* pp. 177-195.


34. **Sirén, Jouni.** Compressed suffix arrays for massive data. *String processing and information retrieval.* pp. 63-74.


46. **Åstrand, Matti; Floréen, Patrik; Polishchuk, Valentin; Rybicki, Joel; Suomela, Jukka; Uitto, Jara.** A local 2-approximation algorithm for the vertex cover problem. *Distributed computing.* pp. 191-205.

**Technical reports and other publications**


2. **Astrikainen, Katja; Holm, Liisa; Pitkänen, Esa; Rousu, Juho.** Reaction kernels. *University of Helsinki, Department of Computer Science,* 2009. - 13 pp.


**2008**

**Articles in refereed scientific journals**


**Refereed conference articles and articles in edited books**


5. **Björklund, Andreas; Husfeldt, Thore; Kaski, Petteri; Koivisto, Mikko.** The travelling salesmen problem in bounded degree graphs. *Automata, languages and programming,* pp. 198-209.


8. **Fischer, Johannes; Mäkinen, Veli; Navarro, Gonzalo.** An(other) entropy-bounded compressed suffix tree. *Combinatorial pattern matching,* pp. 152-165.


10. **Floréen, Patrik; Hassinen, Marja; Kaski, Petteri; Suomela, Jukka.** Tight local approximation results for max-min linear programs. *Algorithmic aspects of wireless sensor networks,* pp. 2-17.


17. Grandoni, Fabrizio; Gupta, Anupam; Leonardi, Stefano; Miettinen, Pauli; Sankowski, Piotr; Singh, Mohit. Set covering with our eyes closed. 49th Annual IEEE Symposium on Foundations of Computer Science, pp. 347-356.
22. Hoyer, Patrik O; Hyvärinen, Aapo; Scheines, Richard; Spirtes, Peter; Ramsey, Joseph; Lacerda, Gustavo; Shimizu, Shohei. Causal discovery of linear acyclic models with arbitrary distributions. Uncertainty in Artificial Intelligence, 8 pp.
25. Hyvönen, Saara; Miettinen, Pauli; Terzi, Evimaria. Interpretable nonnegative matrix decompositions. KDD 08, pp. 345-353.
27. Kim, Joondong; Mitchell, Joseph S. B; Polishchuk, Valentin; Vihavainen, Arto. Routing a maximum number of disks through a scene of moving obstacles. Proceedings of the Twenty-fourth Annual Symposium on Computational Geometry (SCG-08), June 9-11, 2008, College Park, Maryland, USA, pp. 230-231.
28. Korpela, Mikko; Mäkinen, Harri; Sulkava, Mika; Nöjd, Pekka; Hollmén, Jaakko; Smoothed Prediction of the Onset of Tree Stem Radius Increase Based on Temperature Patterns. The 11th International Conference on Discovery Science (DS-2008), 2008, Springer-Verlag, pp. 100-110.
33. Lacerda, Gustavo; Spirtes, Peter; Ramsey, Joseph; Hoyer, Patrik O. Discovering cyclic causal models by Independent Components Analysis. Uncertainty in Artificial Intelligence, 9 pp.
34. Lehtonen, Miro; Doucet, Antoine. Phrase detection in the Wikipedia. Focused access to XML documents, pp. 115-121.
42. Merilä, Päivi; Derome, John; Luyssaert, Sebastiaan; Sulkava, Mika; Holmén, Jaakko; Mustajärvi, Kaisa; Nöjd, Pekka. How are N and S in deposition, in percolation water and in upper soil layers reflected in the chemical composition of needles in Finland?. The Scientific Seminar on Forest Condition Monitoring and Ecosystem Functioning in Northern Europe under the Forest Focus and ICP Forests programmes. Vantaa 2008, Finnish Forest Research Institute, pp. 39-42.
56. Rizo, David; Lemström, Kjell; Inesta, Jose M. Tree structured and combined methods for comparing metered polyphonic music. CMMR 2008, pp. 263-278.
57. Sirén, Jouni; Välimäki, Niko; Mäkinen, Veli; Navarro, Gonzalo. Run-length compressed indexes are superior for highly repetitive sequence collections. String processing and information retrieval, pp. 164-175.


Technical reports and other publications


3. Mäkinen, Veli; Lindén, Greger; Kujala, Inka. From data to knowledge: University of Helsinki, 2008. - 144 pp, ill;


PhD degrees and theses

2014
1. **Galbrun, Esther.** Methods for Redescription Mining. *University of Helsinki.*
2. **Korhonen, Janne.** Graph and Hypergraph Decompositions for Exact Algorithms. *University of Helsinki.*

2013
1. **Entner, Doris.** Causal Structure Learning and Effect Identification in Linear Non-Gaussian Models and Beyond. *University of Helsinki.*
4. **Lijffijt, Jeffrey.** Computational methods for comparison and exploration of event sequences. *Aalto University.*
5. **Luosto, Panu.** Normalized Maximum Likelihood Methods for Clustering and Density Estimation. *University of Helsinki.*

2012
1. **Hanhijärvi, Sami.** Multiple hypothesis testing in data mining. *Aalto University.*
2. **Heinonen, Markus.** Computational Methods for Small Molecules. *University of Helsinki.*
3. **Parviainen, Pekka.** Algorithms for Exact Structure Discovery in Bayesian Networks. *University of Helsinki.*
4. **Sirén, Jouni.** Compressed Full-Text Indexes for Highly Repetitive Collections. *University of Helsinki.*
5. **Vuokko, Niko.** Testing the Significance of Patterns in Complex Null Hypotheses. *Aalto University.*
6. **Välimäki, Niko.** Applications of Compressed Data Structures on Sequences and Structured Data. *University of Helsinki.*
7. **Wessman, Jaana.** Mixture Model Clustering in the Analysis of Complex Diseases. *University of Helsinki.*

2011
1. **Junttila, Esa.** Patterns in Permutated Binary Matrices. *University of Helsinki.*
2. **Hintsanen, Petteri.** Simulation and Graph Mining Tools for Improving Gene Mapping Efficiency. *University of Helsinki.*
3. **Ojala, Markus.** Randomization Algorithms for Assessing the Significance of Data Mining Results. *Aalto University.*

2010
1. **Helkinheimo, Hannes.** Extending data mining techniques for frequent pattern discovery: trees, lowentropy sets, and crossmining. *Aalto University.*
2. **Hämäläinen, Wilhelmina.** Efficient search for statistically significant dependency rules in binary data. *University of Helsinki.*
3. **Kollin, Jussi.** Computational Methods for Detecting Large-Scale Chromosome Rearrangements in SNP Data. *University of Helsinki.*


5. **Pitkänen, Esa.** Computational Methods for Reconstruction and Analysis of Genome-Scale Metabolic Networks. *University of Helsinki.*

**2009**

1. **Hätönen, Kimmo.** Data mining for telecommunications network log analysis. *University of Helsinki*

2. **Kurki, Ilmari.** Feature Integration in Human Vision. *University of Helsinki*

3. **Köster, Urs.** A Probabilistic approach to the primary visual cortex. *University of Helsinki*

4. **Laasonen, Kari.** Mining cell transition data. *University of Helsinki*

5. **Makkonen, Juha.** Semantic classes in topic detection and tracking. *University of Helsinki*

6. **Miettinen, Pauli.** Matrix decomposition methods for data mining. *University of Helsinki*

7. **Rastas, Pasi.** Computational Techniques for Haplotype Inference and for Local Alignment Significance. *University of Helsinki*

**2008**

1. **Autio, Ilkka.** Modeling efficient classification as a process of confidence assessment and delegation. *University of Helsinki*

2. **Haiminen, Niina.** Mining sequential data. *University of Helsinki*

3. **Lindgren, Jussi T.** Learning nonlinear visual processing from natural images. *University of Helsinki*

4. **Ruosaari, Salla.** Microarrays in lung cancer research: From comparative analyses to verified findings. *University of Helsinki*

5. **Sulkava, Mika.** Learning from environmental data: methods for analysis of forest nutrition time series. *Helsinki University of Technology*

6. **Tikka, Jarkko.** Input variable selection methods for construction of interpretable regression models. *Helsinki University of Technology*

7. **Ukkonen, Antti.** Algorithms for finding orders and analyzing sets of chains. *Helsinki University of Technology*