

COIN publications 2016

1. Abbas, M, Kivinen, J & Raiko, T 2016, Understanding Regularization by Virtual Adversarial Training, Ladder Networks and Others. in International Conference on Learning Representations (ICLR): Workshop track. ICLR, International Conference on Learning Representations, San Juan, Puerto Rico, 2-4 May.
2. Abbas, M, Ilin, A, Solonen, A, Hakkarainen, J, Oja, E & Järvinen, H 2016, 'Empirical evaluation of bayesian optimization in parametric tuning of chaotic systems' INTERNATIONAL JOURNAL FOR UNCERTAINTY QUANTIFICATION, vol 6, no. 6, pp. 467-485. DOI: 10.1615/Int.J.UncertaintyQuantification.2016016645
3. Alikhani, I, Rezazadegan Tavakoli, H, Rahtu, E & Laaksonen, J 2016, On the Contribution of Saliency in Visual Tracking. in Proceedings of the 11th Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications. vol. 4, SciTePress, pp. 17-21, Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, Rome, Italy, 27-29 February.
4. Alsallakh, B, Micallef, L, Aigner, W, Hauser, H, Miksch, S & Rodgers, P 2016, 'The State-of-the-Art of Set Visualization' COMPUTER GRAPHICS FORUM, vol 35, no. 1, pp. 234-260. DOI: 10.1111/cgf.12722
5. Ammad-ud-din, M, Khan, SA, Malani, D, Murumägi, A, Kallioniemi, O, Aittokallio, T & Kaski, S 2016, 'Drug response prediction by inferring pathway-response associations with kernelized Bayesian matrix factorization' Bioinformatics, vol 32, no. 17, pp. i455-i463. DOI: 10.1093/bioinformatics/btw433
6. Anwer, RM, Khan, FS, Van De Weijer, J & Laaksonen, J 2016, Combining holistic and part-based deep representations for computational painting categorization. in ICMR 2016 - Proceedings of the 2016 ACM International Conference on Multimedia Retrieval. Association for Computing Machinery, Inc, pp. 339-342, ACM International Conference on Multimedia Retrieval, New York, United States, 6-9 June. DOI: 10.1145/2911996.2912063
7. Athukorala, KM, Glowacka, D, Jacucci, G, Oulasvirta, A & Vreeken, J 2016, 'Is Exploratory Search Different?: A Comparison of Information Search Behavior for Exploratory and Lookup Tasks' American Society for Information Science and Technology. Journal, Vuosikerta / volyyymi 65, Nro 11, Sivut 2635-2651. DOI: 10.1002/asi.23617
8. Athukorala, K, Medlar, A, Jacucci, G, Oulasvirta, A & Glowacka, D 2016, Beyond Relevance: Adapting Exploration/Exploitation in Information Retrieval. DOI: 10.1145/2856767.2856786
9. Aurell, E & Ferraro, GD 2016, 'Causal analysis, Correlation-Response, and Dynamic cavity' Journal of Physics: Conference Series, vol 699, no. 1, 012002, pp. 1-12. DOI: 10.1088/1742-6596/699/1/012002
10. Aurell, E, Innocenti, N & Zhou, HJ 2016, 'The bulk and the tail of minimal absent words in genome sequences' PHYSICAL BIOLOGY, vol 13, no. 2, 026004, pp. 1-10. DOI: 10.1088/1478-3975/13/2/026004
11. Aurell, E, Bo, S, Dias, M, Eichhorn, R & Marino, R 2016, 'Diffusion of a Brownian ellipsoid in a force field' EPL, vol 114, no. 3, 30005. DOI: 10.1209/0295-5075/114/30005
12. Aurell, E 2016, 'The Maximum Entropy Fallacy Redux?' PLoS Computational Biology, vol 12, no. 5, e1004777, pp. 1-7. DOI: 10.1371/journal.pcbi.1004777
13. Balyo, T, Heule, MJH & Järvisalo, MJ (eds) 2016, Proceedings of SAT Competition 2016: Solver and Benchmark Descriptions. Department of Computer Science Series of Publications B, B-2016-1, University of Helsinki, Helsinki.
14. Barral, O, Kosunen, I, Ruotsalo, T, Spapé, MM, Eugster, MJA, Ravaja, N, Kaski, S & Jacucci, G 2016, 'Extracting relevance and affect information from physiological text annotation' USER MODELING AND USER-ADAPTED INTERACTION, vol 26, no. 5, pp. 493-520. DOI: 10.1007/s11257-016-9184-8
15. Berg, J & Järvisalo, M 2016, Impact of SAT-Based Preprocessing on Core-Guided MaxSAT Solving, In International Conference on Principles and Practice of Constraint Programming, Toulouse, Ranska. 5. - 9.9, 2016.. DOI: 10.1007/978-3-319-44953-1_5
16. Berg, J, Saikko, P & Järvisalo, M 2016, Subsumed Label Elimination for Maximum Satisfiability. DOI: 10.3233/978-1-61499-672-9-630

17. Berglund, M 2016, Stochastic gradient estimate variance in contrastive divergence and persistent contrastive divergence. in ESANN 2016 - 24th European Symposium on Artificial Neural Networks. i6doc, pp. 521-526, European Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning, Bruges, Belgium, 27-29 April.
18. Bhadra, S, Kaski, S & Rousu, J 2016, 'Multi-view kernel completion' Machine Learning, pp. 1-27. DOI: 10.1007/s10994-016-5618-0
19. Blomstedt, P, Dutta, R, Seth, S, Brazma, A & Kaski, S 2016, 'Modelling-based experiment retrieval: A case study with gene expression clustering' BIOINFORMATICS, vol 32, no. 9, pp. 1388-1394. DOI: 10.1093/bioinformatics/btv762
20. Bogaerts, B, Janhunen, T & Tasharrofi, S 2016, Declarative Solver Development: Case Studies. in C Baral, J Delgrande & F Wolter (eds), Fifteenth International Conference on the Principles of Knowledge Representation and Reasoning: Principles of Knowledge Representation and Reasoning: Proceedings of the Fifteenth International Conference, {KR} 2016, Cape Town, South Africa, April 25-29, 2016.. AAAI PRESS, pp. 74-83, International Conference on Principles of Knowledge Representation and Reasoning, Cape Town, South Africa, 25-29 April.
21. Bogaerts, B, Janhunen, T & Tasharrofi, S 2016, 'Stable-unstable semantics: Beyond NP with normal logic programs' THEORY AND PRACTICE OF LOGIC PROGRAMMING, vol 16, no. 5-6, pp. 570-586. DOI: 10.1017/S1471068416000387
22. Bogaerts, B, Janhunen, T & Tasharrofi, S 2016, SAT-To-SAT in QBFEval 2016. in Proceedings of the 4th International Workshop on Quantified Boolean Formulas. CEUR Workshop Proceedings, CEUR-WS, pp. 63-70, International Workshop on Quantified Boolean Formulas, Bordeaux, France, 1 July.
23. Bogaerts, B, Janhunen, T & Tasharrofi, S 2016, Solving QBF Instances With Nested SAT Solvers. in Proceedings of the AAAI-16 Workshop on Beyond NP. AAAI, pp. 307-313, Workshop on Beyond NP, Phoenix, United States, 12-12 February.
24. Bomanson, J, Gebser, M, Janhunen, T, Kaufmann, B & Schaub, T 2016, 'Answer Set Programming Modulo Acyclicity' Fundamenta Informaticae, vol 147, no. 1, pp. 63-91. DOI: 10.3233/FI-2016-1398
25. Bomanson, J, Gebser, M & Janhunen, T 2016, Rewriting optimization statements in answer-set programs. in M Carro, A King, N Saeedloei & M De Vos (eds), Technical Communications of the 32nd International Conference on Logic Programming, ICLP 2016. vol. 52, 5, Schloss Dagstuhl- Leibniz-Zentrum fur Informatik GmbH, Dagstuhl Publishing, International Conference on Logic Programming, New York City, United States, 16-21 October. DOI: 10.4230/OASIcs.ICLP.2016.5
26. Bunte, K, Leppäaho, E, Saarinen, I & Kaski, S 2016, 'Sparse group factor analysis for biclustering of multiple data sources' Bioinformatics, vol 32, no. 16, pp. 2457-2463. DOI: 10.1093/bioinformatics/btw207
27. Caldas, J & Kaski, S 2016, 'A Latent Feature Model Approach to Biclustering' International Journal of Knowledge Discovery in Bioinformatics, vol 6, no. 2. DOI: 10.4018/IJKDB.2016070102
28. Cichonska, A, Rousu, J, Marttinen, P, Kangas, AJ, Soininen, P, Lehtimaki, T, Raitakari, O, Jarvelin, M-R, Salomaa, V, Ala-Korpela, M, Ripatti, S & Pirinen, M 2016, 'metaCCA: summary statistics-based multivariate meta-analysis of genome-wide association studies using canonical correlation analysis' BIOINFORMATICS, vol 32, no. 13, pp. 1981-1989. DOI: 10.1093/bioinformatics/btw052
29. Daee, P, Pyykkö, J, Glowacka, D & Kaski, S 2016, Interactive intent modeling from multiple feedback domains. in International Conference on Intelligent User Interfaces, Proceedings IUI. vol. 07-10-March-2016, ASSOCIATION FOR COMPUTING MACHINERY, pp. 71-75, International Conference on Intelligent User Interfaces, Sonoma, CA, United States, 7-10 March. DOI: 10.1145/2856767.2856803
30. Daee, P, Peltola, T, Soare, M & Kaski, S Probabilistic Expert Knowledge Elicitation of Feature Relevances in Sparse Linear Regression.
31. Dasseville, I, van der Hallen, M, Bogaerts, B, Janssens, G & Denecker, M 2016, A Compositional Framework for Building Typed Higher-Order Logics. in Technical communitations of ICLP 2016. International Conference on Logic Programming, New York City, United States, 16-21 October.

32. Dasseville, I, Van Der Hallen, M, Bogaerts, B, Janssens, G & Denecker, M 2016, A compositional typed higher-order logic with definitions. in Technical Communications of the 32nd International Conference on Logic Programming, ICLP 2016. vol. 52, 14, Schloss Dagstuhl- Leibniz-Zentrum fur Informatik GmbH, Dagstuhl Publishing, International Conference on Logic Programming, New York City, United States, 16-21 October. DOI: 10.4230/OASIcs.ICLP.2016.14
33. Del Ferraro, G, Wang, C, Zhou, H-J & Aurell, E 2016, 'On one-step replica symmetry breaking in the Edwards-Anderson spin glass model' JOURNAL OF STATISTICAL MECHANICS: THEORY AND EXPERIMENT. DOI: 10.1088/1742-5468/2016/07/073305
34. Devriendt, J, Bogaerts, B, Bruynooghe, M & Denecker, M 2016, Improved static symmetry breaking for SAT. in Theory and Applications of Satisfiability Testing – SAT 2016 - 19th International Conference, Proceedings. vol. 9710, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), vol. 9710, Springer-Verlag, pp. 104-122, International Conference on Theory and Applications of Satisfiability Testing, Bordeaux, France, 5-8 July. DOI: 10.1007/978-3-319-40970-2_8
35. Devriendt, J, Bogaerts, B, Bruynooghe, M & Denecker, M 2016, 'On Local Domain Symmetry for Model Expansion' THEORY AND PRACTICE OF LOGIC PROGRAMMING, vol 16, pp. 636-652.
36. Devriendt, J & Bogaerts, B 2016, 'BreakID: Static Symmetry Breaking for ASP' Paper presented at Workshop on Answer Set Programming and Other Computing Paradigms, New York City, United States, 16/10/2016 - 16/10/2016.,
37. Dolev, D, Heljanko, K, Järvisalo, M, Korhonen, JH, Lenzen, C, Rybicki, J, Suomela, J & Wieringa, S 2016, 'Synchronous counting and computational algorithm design' Journal of Computer and System Sciences, Vuosikerta / volyyymi 82, Nro 2, Sivut 310-332. DOI: 10.1016/j.jcss.2015.09.002
38. Enarvi, S & Kurimo, M 2016, TheanoLM-An extensible toolkit for neural network language modeling. in Proceedings of the Annual Conference of the International Speech Communication Association: Interspeech'16, San Francisco, USA, Sept. 8-12, 2016. vol. 08-12-September-2016, Proceedings of the Annual Conference of the International Speech Communication Association, ISCA, pp. 3052-3056, INTERSPEECH, San Francisco, United States, 8-12 September. DOI: 10.21437/Interspeech.2016-618
39. Eugster, M, Ruotsalo, T, Späte, M, Barral, O, Ravaja, N, Jacucci, G & Kaski, S 2016, 'Natural brain-information interfaces: Recommending information by relevance inferred from human brain signals' SCIENTIFIC REPORTS, vol 6, 38580 , pp. 1-10. DOI: 10.1038/srep38580
40. Find, M, Göös, M, Järvisalo, M, Kaski, P, Koivisto, M & Korhonen, JH 2016, 'Separating OR, SUM, and XOR Circuits' Journal of Computer and System Sciences, Vuosikerta / volyyymi 82, Nro 5, Sivut 793-801. DOI: 10.1016/j.jcss.2016.01.001
41. Gao, J, Yamada, M, Kaski, S, Mamitsuka, H & Zhu, S 2016, A Robust Convex Formulation for Ensemble Clustering. in S Kambhampati (ed.), Proceedings of the Twenty-Fifth International Joint Conference on Artificial Intelligence (IJCAI-16). AAAI PRESS, 2275 East Bayshore Road, Suite 160, Palo Alto CA 94303 USA, pp. 1476-1482, International Joint Conference on Artificial Intelligence, New York City, United States, 9-16 July.
42. Gebser, M, Janhunen, T, Kaminski, R, Schaub, T & Tasharrofi, S 2016, Writing declarative specifications for clauses. in Logics in Artificial Intelligence - 15th European Conference, JELIA 2016, Proceedings. vol. 10021 LNAI, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), vol. 10021 LNAI, Springer-Verlag, pp. 256-271, European Conference on Logics in Artificial Intelligence, Larnaca, Cyprus, 9- 11 November. DOI: 10.1007/978-3-319-48758-8_17
43. Gillberg, L, Marttinen, P, Pirinen, M, Kangas, AJ, Soininen, P, Ali, M, Havulinna, AS, Järvelin, MR, Alakorpela, M & Kaski, S 2016, 'Multiple output regression with latent noise' Journal of Machine Learning Research, vol 17, pp. 1-35.
44. Gutmann, MU & Corander, J 2016, 'Bayesian optimization for likelihood-free inference of simulator-based statistical models' Journal of Machine Learning Research, vol 17, pp. 1-47.
45. Haidar, MA & Kurimo, M 2016, Recurrent neural network language model with incremental updated context information generated using bag-of-words representation. in Proceedings of the Annual Conference of the International Speech Communication Association: Interspeech'16, San Francisco, USA, Sept. 8-12, 2016. vol. 08-12-September-2016, Proceedings of the Annual Conference of the

International Speech Communication Association, International Speech Communication Association, pp. 3504-3508, INTERSPEECH, San Francisco, United States, 8-12 September. DOI: 10.21437/Interspeech.2016-375

46. Harms, K, Lunnan, A, Hüter, N, Mourier, T, Vinner, L, Andam, CP, Marttinen, P, Fridholm, H, Hansen, AJ, Hanage, WP, Nielsen, KM, Willerslev, E & Johnsen, PJ 2016, 'Substitutions of short heterologous DNA segments of intragenomic or extragenomic origins produce clustered genomic polymorphisms' *Proceedings of the National Academy of Sciences of the United States of America*, vol 113, no. 52, pp. 15066-15071. DOI: 10.1073/pnas.1615819114
47. Heikkilä, T & Roos, T (toim) 2016, *Digital Scholarship in the Humanities: Special Issue on Studia Stemmatologica. Digital Scholarship in the Humanities*, Nro 3, Vuosikerta / volyyymi. 31, Vuosikerta / volyyymi. 31:3, Oxford University Press.
48. Heikkilä, T & Roos, T 2016, 'Thematic Section on Studia Stemmatologica' *Digital Scholarship in the Humanities : DSH* , Vuosikerta / volyyymi 31, Nro 3, Sivut 520-522. DOI: 10.1093/lrc/fqw038
49. Heinävaara, O, Leppä-Aho, J, Corander, J & Honkela, A 2016, 'On the inconsistency of ℓ_1 -penalised sparse precision matrix estimation' *BMC Bioinformatics*, Vuosikerta / volyyymi 17, Nro Suppl 16, Sivut 99-107. DOI: 10.1186/s12859-016-1309-x
50. Honkela, AJH & Rattray, M 2016, 'RNA Production Delays Shape Transcriptional Response Dynamics' *Cell Systems*, Vuosikerta / volyyymi 2, Nro 5, Sivut 291. DOI: 10.1016/j.cels.2016.05.001
51. Hyttinen, AJ, Plis, SM, Järvisalo, MJ, Eberhardt, F & Danks, D 2016, Causal Discovery from Subsampled Time Series Data by Constraint Optimization.
52. Hyvönen, VO, Pitkänen, T, Tasoulis, S, Jääsaari, EB, Tuomainen, R, Wang, L, Corander, JI & Roos, TT 2016, 'Fast Nearest Neighbor Search through Sparse Random Projections and Voting' *julkaisussa Proceedings of the 2016 IEEE Conference on Big Data*.
53. Ishikawa, S & Laaksonen, J 2016, Comparing and combining unimodal methods for multimodal recognition. in *2016 14th International Workshop on Content-Based Multimedia Indexing*, CBMI 2016. vol. 2016-June, 7500253, IEEE Computer Society, International Workshop on Content-Based Multimedia Indexing, Bucharest, Romania, 15-17 June. DOI: 10.1109/CBMI.2016.7500253
54. Janhunen, T, Tasharrofi, S & Ternovska, E 2016, SAT-to-SAT: Declarative Extension of SAT Solvers with New Propagators. in *Proceedings of the Thirtieth AAAI Conference on Artificial Intelligence (AAAI-16)*. AAAI PRESS, pp. 978-984, AAAI Conference on Artificial Intelligence, Phoenix, United States, 12-17 February.
55. Janhunen, T & Niemelä, I 2016, 'The Answer Set Programming Paradigm' *AI MAGAZINE*, vol 37, no. 3, pp. 13-+.
56. Jansen, J, Bogaerts, B, Devriendt, J, Janssens, G & Denecker, M 2016, Relevance for SAT(ID). in *Proceedings of the Twenty-Fifth International Joint Conference on Artificial Intelligence, {IJCAI} 2016*. AAAI PRESS, pp. 596-602, International Joint Conference on Artificial Intelligence, New York City, United States, 9-16 July.
57. Jansen, J, Bogaerts, B, Devriendt, J, Janssens, G & Denecker, M 2016, 'Implementing a Relevance Tracker Module' Paper presented at *Workshop on Answer Set Programming and Other Computing Paradigms*, New York City, United States, 16/10/2016 - 16/10/2016.,.
58. Jantunen, T, Mesch, J, Puupponen, A & Laaksonen, J 2016, On the rhythm of head movements in Finnish and Swedish sign language sentences. in *Proceedings of the International Conference on Speech Prosody: 8th Speech Prosody 2016*. vol. 2016-January, *Speech prosody : an international conference*, International Speech Communications Association, pp. 850-853, International Conference on Speech Prosody, Boston, United States, 31-3 June.
59. Jantunen, T, Pippuri, O, Wainio, T, Puupponen, A & Laaksonen, J 2016, Annotated Video Corpus on FinSL with Kinect and Computer-Vision Data. in *Proceedings of the 7th Workshop on the Representation and Processing of Sign Languages: Corpus Mining: Language Resources and Evaluation Conference (LREC)*. EUROPEAN LANGUAGE RESOURCES ASSOCIATION, pp. 93-100, International Conference on Language Resources and Evaluation, Portorož, Slovenia, 28 May.

60. Jokinen, E, Remes, U & Alku, P 2016, The use of read versus conversational Lombard speech in spectral tilt modeling for intelligibility enhancement in near-end noise conditions. in Proceedings of the Annual Conference of the International Speech Communication Association: Interspeech'16, San Francisco, USA, Sept. 8-12, 2016. Proceedings of the Annual Conference of the International Speech Communication Association, International Speech Communication Association, pp. 2771-2775, INTERSPEECH, San Francisco, United States, 8-12 September. DOI: 10.21437/Interspeech.2016-143
61. Järvenpää, M, Gutmann, M, Vehtari, A & Marttinen, P 2016, 'Gaussian process modeling in approximate Bayesian computation to estimate horizontal gene transfer in bacteria' ANNALS OF APPLIED STATISTICS.
62. Järvisalo, MJ 2016, Boolean Satisfiability and Beyond: Algorithms, Analysis, and AI Applications.
63. Järvisalo, M 2016, SAT-Based Approaches to Reasoning about Argumentation Frameworks.
64. Kaae Sønderby, C, Raiko, T, Maaløe, L, Kaae Sønderby, S & Winther, O 2016 'How to Train Deep Variational Autoencoders and Probabilistic Ladder Networks'.
65. Kaae Sønderby, C, Raiko, T, Maaløe, L, Kaae Sønderby, S & Winther, O 2016, Ladder Variational Autoencoders. in Advances in Neural Information Processing Systems. vol. 29, Advances in neural information processing systems, vol. 29, Neural Information Processing Systems Foundation, Conference on Neural Information Processing Systems (NIPS), Canada, Barcelona, Spain, 5-10 December.
66. Kangasrääsiö, A, Chen, Y, Głowacka, D & Kaski, S 2016, Interactive modeling of concept drift and errors in relevance feedback. in UMAP 2016 - Proceedings of the 2016 Conference on User Modeling Adaptation and Personalization. Association for Computing Machinery, Inc, pp. 185-193, ACM International Conference on User Modeling, Adaptation, and Personalization, Halifax, Canada, 13-17 July. DOI: 10.1145/2930238.2930243
67. Kangasrääsiö, A, Głowacka, D & Kaski, S 2016, Personalization of Search Results using Interactive Intent Modeling. in ICML 2016 Workshop on Computational Frameworks for Personalization. ICML Workshop on Computational Frameworks for Personalization, New York, United States, 24 June.
68. Kangasrääsiö, A, Lintusaari, J, Skyten, K, Järvenpää, M, Vuollekoski, H, Gutmann, M, Vehtari, A, Corander, J & Kaski, S 2016, 'ELFI: Engine for Likelihood-Free Inference' Paper presented at NIPS 2016 Workshop on Advances in Approximate Bayesian Inference, Barcelona, Spain, 09/12/2016 - 09/12/2016,.
69. Karhila, R, Rouhe, A, Smit, P, Mansikkaniemi, A, Kallio, H, Lindroos, E, Hildén, R, Vainio, M & Kurimo, M 2016, Digitala: An augmented test and review process prototype for high-stakes spoken foreign language examination. in Proceedings of the Annual Conference of the International Speech Communication Association: Interspeech'16, San Francisco, USA, Sept. 8-12, 2016. vol. 08-12-September-2016, Proceedings of the Annual Conference of the International Speech Communication Association, International Speech Communication Association, pp. 784-785, INTERSPEECH, San Francisco, United States, 8-12 September.
70. Khan, S, Leppäaho, E & Kaski, S 2016, 'Bayesian multi-tensor factorization' Machine Learning, vol 105, no. 2, pp. 233- 253. DOI: 10.1007/s10994-016-5563-y
71. Klami, AO & Jitta, A 2016, Probabilistic Size-constrained Microclustering.
72. Klouche, K, Ruotsalo, T, Micallef, L, Andolina, S & Jacucci, G 2016, Relevance Mapping and Re-ranking for Visual Information Retrieval. [Patents]
73. Kurimo, M, Enarvi, S, Tilk, O, Varjokallio, M, Mansikkaniemi, A & Alumäe, T 2016, 'Modeling under-resourced languages for speech recognition' LANGUAGE RESOURCES AND EVALUATION, pp. 1-27. DOI: 10.1007/s10579-016-9336-9
74. Laaksonen, J, PicSOM Content-Based Information Retrieval System: software source release version 0.34, 2016, Software.
75. Lees, JA, Vehkala, M, Välimäki, N, Harris, SR, Chewapreecha, C, Croucher, NJ, Marttinen, P, Davies, MR, Steer, AC, Tong, SYC, Honkela, A, Parkhill, J, Bentley, SD & Corander, J 2016, 'Sequence element enrichment analysis to determine the genetic basis of bacterial phenotypes' NATURE COMMUNICATIONS, vol 7, 12797. DOI: 10.1038/ncomms12797

76. Lietzen, N, Cheng, L, Oikarinen, S, Goo, YA, Goodlett, D, Toppari, J, Ilonen, J, Veijola, R, Knip, M, Lähdesmäki, H, Hyöty, H & Lahesmaa, R 2016, 'Enterovirus-associated changes in plasma proteome of children with genetic susceptibility to type 1 diabetes' *SCANDINAVIAN JOURNAL OF IMMUNOLOGY*, vol 83, no. 5, pp. 381-381.
77. Lintusaari, J, Gutmann, M, Kaski, S & Corander, J 2016, 'On the identifiability of transmission dynamic models for infectious diseases' *GENETICS*, vol 202, no. 3, pp. 911-918. DOI: 10.1534/genetics.115.180034
78. Lintusaari, J, Gutmann, M, Dutta, R, Kaski, S & Corander, J 2016, 'Fundamentals and Recent Developments in Approximate Bayesian Computation' *SYSTEMATIC BIOLOGY*. DOI: 10.1093/sysbio/syw077
79. Lu, Y 2016, Unsupervised Learning on Neural Network Outputs: with Application in Zero-shot Learning. in S Kambhampati (ed.), *Proceedings of the Twenty-Fifth International Joint Conference on Artificial Intelligence*: New York, New York, USA, 9–15 July 2016. International Joint Conferences on Artificial Intelligence, AAAI PRESS, pp. 3432-3428, International Joint Conferences on Artificial Intelligence, New York, United States, 9-15 July.
80. Luketina, J, Berglund, M, Greff, K & Raiko, T 2016, Scalable gradient-based tuning of continuous regularization hyperparameters. in *33rd International Conference on Machine Learning, ICML 2016*. vol. 6, International Machine Learning Society (IMLS), pp. 4333-4341, International Conference on Machine Learning, New York City, United States, 19-24 June.
81. Luukkonen, P, Koskela, M & Floreen, P 2016, LSTM-Based Predictions for Proactive Information Retrieval.
82. Malmi, E, Takala, P, Toivonen, H, Raiko, T & Gionis, A 2016, DopeLearning: A computational approach to rap lyrics generation. in *KDD 2016 - Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*. vol. 13-17-August-2016, ASSOCIATION FOR COMPUTING MACHINERY, pp. 195-204, ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, San Francisco, United States, 13-17 August. DOI: 10.1145/2939672.2939679
83. Mansikkaniemi, A, Kurimo, M & Lindén, K 2016, In-document adaptation for a human guided automatic transcription service. in *Proceedings of the 18th International Conference on Speech and Computer, SPECOM 2016*. vol. 9811, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), vol. 9811, Springer-Verlag, pp. 395-402, International Conference on Speech and Computer, Budapest, Hungary, 23-27 August. DOI: 10.1007/978-3-319-43958-7_47
84. Marino, R, Eichhorn, R & Aurell, E 2016, 'Entropy production of a Brownian ellipsoid in the overdamped limit' *PHYSICAL REVIEW E*, vol 93, no. 1, 012132, pp. 1-15. DOI: 10.1103/PhysRevE.93.012132
85. Marino, R & Aurell, E 2016, 'Advection-diffusive motion on large scales from small-scale dynamics with an internal symmetry' *PHYSICAL REVIEW E*, vol 93, no. 6, 062147, pp. 1-15. DOI: 10.1103/PhysRevE.93.062147
86. Matveinen, J, Laakso, T, Santillán Martínez, G, Dou, J, Takala, P, Chen, H-H & Pinjamaa, N 2016, University Education in 2035: Paving the Way for a Digital Future. in *Bit Bang 8: Digitalization*. Aalto Universitys Multidisciplinary Institute of Digitalisation and Energy (MIDE), pp. 111-130.
87. Micallef, L 2016, Graduate symposium. in *Diagrammatic Representation and Inference - 9th International Conference, Diagrams 2016, Proceedings*. vol. 9781, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), vol. 9781, Springer-Verlag, International Conference on the Theory and Applications of Diagrams, Philadelphia, United States, 7-10 August.
88. Micallef, L (ed.) 2016, Graduate Symposium of the 9th International Conference on the Theory and Application of Diagrams, Philadelphia, USA, August 9, 2016, Proceedings. Luana Micallef.
89. Mirzaei, S, Milhorat, P, Boudy, J, Chollet, G & Kurimo, M 2016, Experiments on adaptation methods to improve acoustic modeling for French speech recognition. in *ICPRAM 2016 - Proceedings of the 5th International Conference on Pattern Recognition Applications and Methods*. SciTePress, pp. 278-282, International Conference on Pattern Recognition Applications and Methods, Rome, Italy, 24-26 February.

90. Määttä, J, Schmidt, DF & Roos, T 2016, 'Subset Selection in Linear Regression using Sequentially Normalized Least Squares: Asymptotic Theory' Scandinavian Journal of Statistics, Vuosikerta / volyyymi 43, Nro 2, Sivut 382-395. DOI: 10.1111/sjos.12181
91. Määttä, J & Roos, T 2016, Robust Sequential Prediction in Linear Regression with Student's t-distribution.
92. Määttä, J & Roos, T 2016, 'Maximum Parsimony and the Skewness Test: A Simulation Study of the Limits of Applicability' PLoS One, Vuosikerta / volyyymi 11, Nro 4, e0152656. DOI: 10.1371/journal.pone.0152656
93. Niinimäki, T, Parviainen, P & Koivisto, M 2016, 'Structure discovery in Bayesian networks by sampling partial orders' Journal of Machine Learning Research, vol 17.
94. Niskanen, AJA, Wallner, JP & Järvisalo, MJ 2016, Optimal Status Enforcement in Abstract Argumentation. Pakota (version 2016-06-06): A system for extension and status enforcement in abstract argumentation based on constraint optimization AFSynth (version 2016-08-10): Synthesizing Argumentation Frameworks from Examples
95. Niskanen, A, Wallner, JP & Järvisalo, M 2016, Synthesizing Argumentation Frameworks from Examples. DOI: 10.3233/978-1-61499-672-9-551
96. Niskanen, A, Wallner, JP & Järvisalo, M 2016, Pakota: A System for Enforcement in Abstract Argumentation. DOI: 10.1007/978-3-319-48758-8_25
97. Numminen, E, Gutmann, M, Shubin, M, Marttinen, P, Méric, G, van Schaik, W, Coque, TM, Baquero, F, Willems, RJL, Sheppard, SK, Feil, EJ, Hanage, WP & Corander, J 2016, 'The impact of host metapopulation structure on the population genetics of colonizing bacteria' JOURNAL OF THEORETICAL BIOLOGY, vol 396, pp. 53-62. DOI: 10.1016/j.jtbi.2016.02.019
98. Parviainen, P & Kaski, S 2016, Bayesian Networks for Variable Groups. in JMLR: Workshop and Conference Proceedings. vol. 52, JMLR: Workshop and Conference Proceedings, JMLR, pp. 380-391, International Conference on Probabilistic Graphical Models, Lugano, Switzerland, 6-9 September.
99. Peltonen, J & Lin, Z 2016, Peacock bundles: Bundle coloring for graphs with globality-locality trade-off. in Graph Drawing and Network Visualization - 24th International Symposium, GD 2016, Revised Selected Papers. vol. 9801 LNCS, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), vol. 9801 LNCS, Springer-Verlag, pp. 52-64, International Symposium on Graph Drawing and Network Visualization, Athens, Greece, 19-21 September. DOI: 10.1007/978-3-319-50106-2_5
100. Piironen, J & Vehtari, A 2016, 'Comparison of Bayesian predictive methods for model selection' STATISTICS AND COMPUTING, pp. 1-25. DOI: 10.1007/s11222-016-9649-y
101. Piironen, J & Vehtari, A 2016, Projection predictive model selection for Gaussian processes. in Machine Learning for Signal Processing (MLSP), 2016 IEEE 26th International Workshop on. IEEE International Workshop on Machine Learning for Signal Processing, IEEE Xplore digital library, IEEE International Workshop on Machine Learning for Signal Processing, Salerno, Italy, 13-16 September. DOI: 10.1109/MLSP.2016.7738829
102. Piironen, J & Vehtari, A 2016 'On the Hyperprior Choice for the Global Shrinkage Parameter in the Horseshoe Prior'.
103. Pyykkö, J, Kaski, S, Glowacka, D & Daee, P 2016, Interactive Intent Modeling from Multiple Feedback Domains. DOI: 10.1145/2856767.2856803
104. Remes, U, Ramírez López, A, Juvela, L, Palomäki, K, Brown, GJ, Alku, P & Kurimo, M 2016, 'Comparing human and automatic speech recognition in a perceptual restoration experiment' COMPUTER SPEECH AND LANGUAGE, vol 35, pp. 14-31. DOI: 10.1016/j.csl.2015.06.005
105. Remes, S, Mononen, T & Kaski, S 2016, Classification of weak multi-view signals by sharing factors in a mixture of Bayesian group factor analyzers. in I Rish, L Wehbe, G Langs, M Grosse-Wentrup, B Murphy & G Cecchi (eds), Proceedings of the 5th Workshop on Machine Learning and Interpretation in Neuroimaging (MLINI) at NIPS 2015. <https://arxiv.org/abs/1605.04435>, Workshop on Machine Learning and Interpretation in Neuroimaging, Montreal, Canada, 11-12 December.

106. Rezazadegan Tavakoli, H & Laaksonen, J 2016, Bottom-up Fixation Prediction Using Unsupervised Hierarchical Models. in Workshop on Assistive Vision in conjunction with Asian Conference on Computer Vision 2016, Taipei. 1 edn, vol. 10116, SPRINGER, Asian Conference on Computer Vision , Taipei, Taiwan, Republic of China, 20-24 November.
107. Rezazadegan Tavakoli, H, Poostchimohammabadi, H, Peltonen, J, Laaksonen, J & Kaski, S 2016, Preliminary studies on personalized preference prediction from gaze in comparing visualizations. in Advances in Visual Computing: 12th International Symposium, ISVC 2016, Las Vegas, NV, USA, December 12-14, 2016, Proceedings, Part II. Lecture Notes in Computer Science, vol. 10073, SPRINGER, pp. 576-585, International Symposium on Visual Computing, Las Vegas, United States, 12-14 December. DOI: 10.1007/978-3-319-50832-0_56
108. Rissanen, JJ, Leppä-Aho, JLA, Roos, TT & Myllymäki, PJ (toim) 2016, Proceedings of the Ninth Workshop on Information Theoretic Methods in Science and Engineering. Series of Publications B, Vuosikerta / volyyymi. B-2016-1, University of Helsinki, Department of Computer Science, Helsinki.
109. Rodgers, P, Stapleton, G, Alsallakh, B, Micallef, L, Baker, R & Thompson, S 2016, 'A task-based evaluation of combined set and network visualization' *Information Sciences*, vol 367-368, pp. 58-79. DOI: 10.1016/j.ins.2016.05.045
110. Roos, TT 2016, 'Tekoäly etsii ratkaisuja ja oppii: Tutkijan pöydältä' Chydenius, Vuosikerta / volyyymi 2016, Nro 3, Sivut 39-39.
111. Roos, T 2016, Minimum Description Length Principle. julkaisussa C Sammut & G Webb (toim), Encyclopedia of Machine Learning and Data Mining. Springer Science+Business Media, New York. DOI: 10.1007/978-1-4899-7502-7_894-1
112. Ruokolainen, T, Kohonen, O, Sirts, K, Grönroos, SA, Kurimo, M & Virpioja, S 2016, 'A comparative study of minimally supervised morphological segmentation' COMPUTATIONAL LINGUISTICS, vol 42, no. 1, pp. 91-120. DOI: 10.1162/COLI_a_00243
113. Saikko, PHA, Wallner, JP & Järvisalo, MJ 2016, Implicit Hitting Set Algorithms for Reasoning Beyond NP. AbHS: A propositional abduction solver based on the implicit hitting set paradigm
114. Saikko, P, Berg, J & Järvisalo, M 2016, LMHS: A SAT-IP Hybrid MaxSAT Solver. DOI: 10.1007/978-3-319-40970-2_34
115. Sakaya, JH & Klami, AO 2016, Re-using gradient computation in automatic variational inference.
116. Sankar, A, Malone, BM, Bayliss, SC, Pascoe, B, Méric, G, Hitchings, MD, Sheppard, SK, Feil, EJ, Corander, JI & Honkela, AJH 2016, 'Bayesian identification of bacterial strains from sequencing data' *Microbial Genomics*, Vuosikerta / volyyymi 2, Nro 8. DOI: 10.1099/mgen.0.000075
117. Shetty, R, Rezazadegan Tavakoli, H & Laaksonen, J 2016, Exploiting Scene Context for Image Captioning. in Proceedings of the 2016 ACM workshop on Vision and Language Integration Meets Multimedia Fusion . ACM, pp. 1-8, ACM Multimedia Conference, Amsterdam, Netherlands, 15-19 October. DOI: 10.1145/2983563.2983571
118. Shetty, R & Laaksonen, J 2016, Frame-and segment-level features and candidate pool evaluation for video caption generation. in MM 2016 - Proceedings of the 2016 ACM Multimedia Conference. Association for Computing Machinery, Inc, pp. 1073-1076, ACM Multimedia Conference, Amsterdam, Netherlands, 15-19 October. DOI: 10.1145/2964284.2984062
119. Sieberts, SK, Zhu, F, García-García, J, Stahl, E, Pratap, A, Pandey, G, Pappas, D, Aguilar, D, Anton, B, Bonet, J, Eksi, R, Fornés, O, Guney, E, Li, H, Marín, MA, Panwar, B, Planas-Iglesias, J, Poglajen, D, Cui, J, Falcao, AO, Suver, C, Hoff, B, Balagurusamy, VSK, Dillenberger, D, Neto, EC, Norman, T, Aittokallio, T, Ammad-Ud-Din, M, Azencott, CA, Bellón, V, Boeva, V, Bunte, K, Chheda, H, Cheng, L, Corander, J, Dumontier, M, Goldenberg, A, Gopalacharyulu, P, Hajiloo, M, Hidru, D, Jaiswal, A, Kaski, S, Khalfaoui, B, Khan, SA, Kramer, ER, Marttinen, P, Mezlini, AM, Molparia, B, Pirinen, M, Saarela, J, Samwald, M, Stoven, V, Tang, H, Tang, J, Torkamani, A, Vert, JP, Wang, B, Wang, T, Wennerberg, K, Wineinger, NE, Xiao, G, Xie, Y, Yeung, R, Zhan, X, Zhao, C, Greenberg, J, Kremer, J, Michaud, K, Barton, A, Coenen, M, Mariette, X, Miceli, C, Shadick, N, Weinblatt, M, De Vries, N, Tak, PP, Gerlag, D, Huizinga, TWJ, Kurreeman, F, Allaart, CF, Louis Bridges, S, Criswell, L, Moreland, L, Klareskog, L, Saevarsdottir, S, Padyukov, L, Gregersen, PK, Friend, S, Plenge, R, Stolovitzky, G, Oliva, B, Guan, Y & Mangravite, LM 2016, 'Crowdsourced assessment of common genetic contribution to predicting anti-

TNF treatment response in rheumatoid arthritis' NATURE COMMUNICATIONS, vol 7, 12460, pp. 1-9.
DOI: 10.1038/ncomms12460

- 120.Silfverberg, M, Ruokolainen, T, Lindén, K & Kurimo, M 2016, 'FinnPos: an open-source morphological tagging and lemmatization toolkit for Finnish' LANGUAGE RESOURCES AND EVALUATION, vol 50, no. 4, pp. 863-878. DOI: 10.1007/s10579-015-9326-3
- 121.Sjöberg, M, Chen, H-H, Floreen, P, Koskela, M, Kuikkanemi, K, Lehtiniemi, T & Peltonen, J 2016, 'Digital Me: Controlling and Making Sense of My Digital Footprint' Paper presented at International Workshop on Symbiotic Interaction, Padova, Italy, 29/09/2016 - 30/09/2016.,
- 122.Sjöberg, M, Chen, H-H, Floreen, P, Koskela, M, Kuikkanemi, K, Lehtiniemi, T & Peltonen, J 2016, Digital Me: Controlling and Making Sense of My Digital Footprint. in Proceedings of Symbiotic 2016, The 5th International Workshop on Symbiotic Interaction. SPRINGER, International Workshop on Symbiotic Interaction, Padova, Italy, 29-30 September.
- 123.Smit, P, Leinonen, J, Jokinen, K & Kurimo, M 2016, Automatic Speech Recognition for Northern Sámi with comparison to other Uralic Languages. in TA Pirinen, E Simon, FM Tyers & V Vincze (eds), Proceedings of the Second International Workshop on Computational Linguistics for Uralic Languages., 9, University of Szeged, Szeged, Hungary, pp. 80-91, International Workshop on Computational Linguistics for the Uralic Languages, Szeged, Hungary, 20-21 January.
- 124.Soare, M, Ammad-Ud-Din, M & Kaski, S 2016, 'Regression with n->1 by Expert Knowledge Elicitation' Paper presented at IEEE International Conference on Machine Learning and Applications, Anaheim, United States, 18/12/2016 - 20/12/2016.,
- 125.Soliman, M, Rezazadegan Tavakoli, H & Laaksonen, J 2016, Towards Gaze-based Video Annotation. in International Conference on Image Processing Theory, Tools and Applications. IEEE, International Conference on Image Processing Theory, Tools and Applications, Oulu, Finland, 12-15 December.
- 126.Sundin, I, Micallef, L, Marttinen, P, Ammad-Ud-Din, M, Peltola, T, Soare, M, Jacucci, G & Kaski, S 2016, 'Interactive user intent modeling for eliciting priors of a normal linear model' Paper presented at Future of Interactive Learning Machines, Barcelona, Spain, 05/12/2016 - 10/12/2016, pp. 1-5.
- 127.Takala, P 2016, Word embeddings for morphologically rich languages. in ESANN 2016 - 24th European Symposium on Artificial Neural Networks. i6doc.com publication, pp. 177-182, European Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning, Bruges, Belgium, 27-29 April.
- 128.Thimm, M & Wallner, JP 2016, Some Complexity Results on Inconsistency Measurement.
- 129.Topa, H & Honkela, A 2016, 'Analysis of differential splicing suggests different modes of short-term splicing regulation' Bioinformatics, Vuosikerta / volyyymi 32, Nro 12, Sivut 147-155. DOI: 10.1093/bioinformatics/btw283
- 130.Van Hertum, P, Cramer, M, Bogaerts, B & Denecker, M 2016, Distributed Autoepistemic Logic and its Application to Access Control. in Proceedings of the Twenty-Fifth International Joint Conference on Artificial Intelligence, IJCAI 2016. AAAI PRESS, International Joint Conference on Artificial Intelligence, New York City, United States, 9-16 July.
- 131.Varjokallio, M, Kurimo, M & Virpioja, S 2016, Class n-gram models for very large vocabulary speech recognition of Finnish and Estonian. in Proceedings of the 4th International Conference on Statistical Language and Speech Processing, SLSP 2016. vol. 9918 LNCS, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), vol. 9918 LNCS, Springer-Verlag, pp. 133-144, International Conference on Statistical Language and Speech Processing, Pilsen, Czech Republic, 11-12 October. DOI: 10.1007/978-3-319-45925-7_11
- 132.Vehtari, A, Mononen, T, Tolvanen, V, Sivula, T & Winther, O 2016, 'Bayesian leave-one-out cross-validation approximations for Gaussian latent variable models' Journal of Machine Learning Research, vol 17, pp. 1-38.
- 133.Virtanen, S, Afrabandpey, H & Kaski, S 2016, Visualizations relevant to the user by multi-view latent variable factorization. in ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings. vol. 2016-May, 7472120, Institute of Electrical and Electronics Engineers Inc., pp. 2464-2468, IEEE International Conference on Acoustics, Speech and Signal Processing, Shanghai, China, 20-25 March. DOI: 10.1109/ICASSP.2016.7472120

134. Wallner, JP, Niskanen, A & Järvisalo, M 2016, Complexity Results and Algorithms for Extension Enforcement in Abstract Argumentation.
135. Wang, L, Tasoulis, S, Roos, T & Kangasharju, J 2016, 'Kvasir: Scalable Provision of Semantically Relevant Web Content on Big Data Framework' IEEE Transactions on Big Data, Vuosikerta / volyyymi 2, Nro 3, Sivut 219-233. DOI: 10.1109/TB DATA.2016.2557348
136. Wang, H, Raiko, T, Lensu, L, Wang, T & Karhunen, J 2016, Semi-Supervised Domain Adaptation for Weakly Labeled Semantic Video Object Segmentation. in Proc. of the 13th Asian Conference on Computer Vision (ACCV'16), Taipei, Taiwan, November 20-24, 2016. Asian Conference on Computer Vision, Taipei, Taiwan, Republic of China, 20-24 November.
137. Zhao, Y, Tasoulis, S & Roos, T 2016, Manifold Visualization via Short Walks. DOI: 10.2312/eurovisshort.20161166
138. Zou, Y & Roos, T 2016, Sparse Logistic Regression with Logical Features. DOI: 10.1007/978-3-319-31753-3_26
139. Zou, Y, Pensar, J & Roos, TT 2016, 'Representing local structure in Bayesian networks by Boolean functions' Pattern Recognition Letters.