

# Curriculum Vitae: Morten Mørup

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CURRENT POSITION	Associate Professor, Section for Cognitive Systems, DTU Compute
PERSONAL	Born 12 January 1978, married to Sara Bohnstedt Mørup, father to Hannibal, Jonathan, and Nikolaj.
CONTACT INFORMATION	<b>Home</b> Slotsvænget 26 2800 Kgs. Lyngby Denmark <i>phone:</i> +45 27 29 29 75 <i>e-mail:</i> morten.morup@gmail.com <i>www:</i> www.mortenmorup.dk <b>Work</b> Cognitive Systems, DTU Compute Richard Petersens Plads, bld. 321/118 DK-2800 Kgs. Lyngby <i>phone:</i> +45 45 25 39 00 <i>e-mail:</i> mmor@dtu.dk <i>www:</i> www.mortenmorup.dk
SCIENTIFIC FOCUS AREA	My field of research is machine learning and data science where I research methods for unsupervised learning and pattern recognition applied to the life-sciences. Current research interests include multi-way data analysis, complex network modeling and non-parametric Bayesian inference with application to neuroimaging and the modeling of brain connectivity.
EDUCATION AND RESEARCH EXPERIENCE	<b>Copenhagen University</b> Bio-physics and Mathematics: (Fall 1999 - Summer 2001) <b>Washington State University</b> Exchange student following courses within Computational Neuroscience (Spring 2004) <b>Technical University of Denmark</b> Cand. Polyt. Applied Mathematics (February 2005) PhD Intelligent Signal Processing Group at DTU Informatics (September 2008) Dissertation title: Decomposition Methods for Unsupervised Learning. PostDoc Intelligent Signal Processing Group at DTU Informatics (2008-2009) Project: PERCEPT: Perceptual Consciousness - Explication and Testing Assistant Professor, Section for Cognitive Systems, DTU Informatics (2010-2012) Associate Professor, Section for Cognitive Systems, DTU Compute (2012-) (Current position) <b>Stanford University</b> Visiting Ph.D. Student at Department for Scientific Computing (Summer 2006 - Fall 2006) Host: Professor Gene H. Golub <b>UC Berkeley</b> Visiting Ph.D. Student at Department of Mathematics (Fall 2007) Host: Morrey Assistant Professor Lek-Heng Lim
PERIODS OF LEAVE	Paternity leave (2/3/2014-16/3/2014 (2 weeks) + 27/10/2014-16/1/2015 (12 weeks) +27/6/2016-10/7/2016 (2 weeks)) + 29/5/2017-18/8/2017(12 weeks).
FUNDING AND AWARDS	Best student paper (PhD J. L. Hinrich) at IEEE International Workshop on Machine Learning for Signal Processing 2018. H.K.H. Prinsgemalens Fond (His Royal Highness The Prince's Foundation) 2013 (15.000 DKK) Lundbeck Foundation Fellowship 2012 (10 mio. DKK) Best Teacher at DTU Informatics 2011 (awarded 2012) Best Thesis Award: Direktør Peter Gorm-Petersens Mindelegat 2008 (14.000 DKK) Elite Research Travel Scholarship 2007: Danish Ministry of Science (250.000 DKK) Travel Award: Organization for Human Brain Mapping 2005
MANAGEMENT EXPERIENCE	Principal investigator of the Lundbeck Foundation funded project (10 Mio. DKK, 2012-2017): Non-parametric Relational Modeling of Functional and Structural Brain Connectivity, see also <a href="http://brainconnectivity.compute.dtu.dk">brainconnectivity.compute.dtu.dk</a> . Completed in 2016 the Project Management Program for managers of research projects offered by Implement Consulting Group. Completed in 2016 the DTU Leadership Programme.
MEETINGS AND SPECIAL SESSIONS ORGANIZED	2009 European Workshop on Challenges in Modern Massive Data Sets, Organizer (with L.-H. Lim, M. Mahoney, L.K. Hansen, G. Carlsson), Technical University of Denmark, Lyngby, Denmark, July 1-4, 2009. ( <a href="http://mmds.imm.dtu.dk">http://mmds.imm.dtu.dk</a> ) 2012 Special Session on Social Network Analysis, IEEE Workshop on Machine Learning and Signal Processing, Organizer (with Lars Kai Hansen), Santander, Spain, September 25th, 2012 2013 Satellite Symposium on Complex Networks meet Machine Learning in conjunction with NetSci2013, Organizer (with M. N. Schmidt, T. Herlau, and L. K. Hansen), Technical University of Denmark, June 4th, 2013. ( <a href="http://www.imm.dtu.dk/tuhe/cnmml">www.imm.dtu.dk/tuhe/cnmml</a> ) 2017 Programme Committee member of The Brain Prize Meeting Rewarding Neuroscience ( <a href="http://www.thebrainprize.org/flx/outreach/the_brain_prize_meeting_2017/">http://www.thebrainprize.org/flx/outreach/the_brain_prize_meeting_2017/</a> )
PROFESSIONAL ACTIVITIES	Member of the Machine Learning for Signal Processing Technical Committee of the IEEE Signal Processing Society (2009-2015). Guest editor: Special issue on "Recent Advances in Tensor Based Signal and Image Processing" for EURASIP Journal on Advances in Signal Processing. Guest editor: Special issue on "Advances in Nonnegative Matrix and Tensor Factorization", Computational Intelligence and Neuroscience, 2008. Research scientist/consultant for FOSS (November 2012 - October 2014). Editorial Member of IEEE Transactions on Signal Processing (2015-2016).
INTERNATIONAL RELATIONS	Current collaborators include Yee Whye Teh (Oxford University), Marcel Van Gerven (Radboud University), Nathan Churchill (St. Michaels Hospital, Toronto), David Dunson (Duke University). Past collaborators include Tamara G. Kolda (Sandia National Laboratories), Lek-Heng Lim (University of Chicago), Ryota Tomioka (Microsoft Research).

SELECTED INVITED TALKS (SINCE 2010) Directional statistics and Bayesian inference for the modelling of functional neuroimaging data, Machine Learning and Molecules, Copenhagen, 2017  
Tensor Applications in Neuroscience, Dagstuhl Perspectives Workshop 16152 Tensor Computing for Internet of Things, Schloss Dagstuhl, Germany, 2016  
Modelling Neuroimaging Data Using Tensor Decompositions, TDA2016 Workshop on Tensor Decompositions and Applications, Leuven, Belgium, 2016  
Non-parametric Bayesian Modeling of Relational Data, SIMBAD 3rd International Workshop on Similarity-Based Pattern Analysis and Recognition, Copenhagen, 2015  
Non-parametric Bayesian Modeling of Functional and Structural Brain Connectivity, ICML Workshop on Statistics, Machine Learning and Neuroscience (Stamlins), Lille, France 2015  
Lineært er ikke altid bedst, Dansk Selskab for Kemometri (DSK) webinar, Copenhagen, 2015  
Modeling Neuroimaging Data using Tensor Decompositions, Seminar at the Artificial Intelligence Department at Radboud University Nijmegen, January 2014  
Multivariate statistical methods to integrate imaging data from different imaging modalities, PhD course: Multimodal brain imaging - interfacing neuroimaging and computational methods, Danish Research Centre for Magnetic Resonance, Hvidovre Hospital, October 2013  
Application of tensor decomposition for the modeling of neuroimaging data, Modles Tensoriels et Applications, Séminaire I3S, Nice, October 2013  
Tensor Decompositions for Machine Learning and the Modelling of Neuroimaging Data, ECML/PKDD workshop on Tensor Methods for Machine Learning, Prague, September 2013  
Social network analysis by non-parametric bayesian relational models, Vision Day at DTU Compute, 2013  
Bayesian Approaches to Decomposing Tensors, JSM2013 session on The Intersection of Tensor Analysis and Statistics, Montreal Canada, 2013  
Tensor Decomposition Approaches for the Modeling of Multi-Graphs, TRICAP 2012, Brücke, Netherlands  
Non-parametric Bayesian Models for Complex Networks, Vision Day at DTU Compute 2012  
Bayesian Models for Complex Networks, BioComplexity Meetings and Special Lectures 2012, NBI, Copenhagen University  
Psychology and Brain 2011 symposium on Applying Trilinear Component Analysis to ERP and fMRI data, Heidelberg, Germany, June 2011  
Inaugurational Symposium of the Contact project granted by the Lundbeck Foundation, Charlottenlund, May 2011  
NIPS workshop on Tensors Kernels and Machine Learning, Canada 2010  
BIT50 - Trends in Numerical Computing, Lund, Sweden, June 2010  
Machine Learning Seminar, TU Berlin, 2010  
Institute for Computing and Information Sciences Radboud University Nijmegen, 2010.

REVIEWING EXPERIENCE Statistics in Medicine, ISCAS, Computational Intelligence and Neuroscience, EURASIP JASP, IEEE Transactions on Biomedical Engineering, Journal of Neuroscience Methods, Computer Physics Communication, Signal Processing, Journal of Chemometrics, EUSIP, Neural Processing Letters, Data Mining and Knowledge Discovery, IEEE workshop on Machine Learning for Signal Processing (MLSP), Latent Variable Analysis and Signal Separation (LVA/ICA), IEEE International Conference on Acoustics Speech and Signal Processing (ICASSP), NeuroImage, The Journal of Neuroscience, Human Brain Mapping (Wiley), Transactions on Pattern Analysis and Machine Intelligence (TPAMI), Neural Computation, Linear Algebra and its Applications, ICANN, MICCAI, NeuroComputing, IEEE Transactions on Signal Processing, ICONIP, Cognitive Information Processing (CIP), SIMAX, PLoS ONE, Physics Letters A, SDM, NIPS, Nature Methods, Proceedings of the IEEE, IEEE Transactions on Image Processing Journal, IEEE Journal of Selected Topics in Signal Processing, Journal of Machine Learning Research, ICML, ICLR, AISTATS.

TEACHING EXPERIENCE AND SUPERVISION OF STUDENTS At DTU Compute I have been involved in the following courses:  
02450: Introduction to Machine Learning and Data Mining (since Spring 2010),  
02582: Computational Data Analysis (since Spring 2010),  
02901: Advanced Topics in Machine Learning (since Summer 2008),  
02910: PhD course on Computational Data Analysis (since Summer 2012),  
02405: Probability Theory (2005-2007),  
02409: Multivariate Statistics (2004-2005),  
02701: Introduction to Operations Research (2002-2003).  
Given lectures or assisted in the following courses: 02451 Digital Signal Processing, 02457 Non-linear signal processing, 02459 Machine Learning for Signal Processing, 02460 Advanced Machine Learning.  
Supervised special courses, bachelor and master student projects.  
Current supervisor or co-supervisor of 5 PhD students (Completed PhD supervised/co-supervised: 8, completed PostDocs supervised 6).

PEER REVIEWED PUBLICATIONS **More than seventyfive journal and conference contributions accumulated.**  
*Total of 2657 Google Scholar (H-index 24) and 965 ISI citations (H-index 14) as of 30th September 2018.*  
*(The H-index is calculated as the largest number H such that at least H articles are each cited at least H times.)*  
Orcid: <https://orcid.org/0000-0003-4985-4368>

## Articles

1. M. N. Schmidt, **M. Mørup**, 2019, Efficient computation for Bayesian comparison of two proportions, *Statistics & Probability Letters* Vol. 145, pp. 57-62
2. C.S. Musaeus, K. Engedal, P. Høgh, V. Jelic, **M. Mørup**, M. Naik, A.-R. J. Snaedal, L.-O. Wahlund, G. Waldemar, B. B. Andersen, 2018, EEG Theta Power Is an Early Marker of Cognitive Decline in Dementia due to Alzheimers Disease, *Journal of Alzheimer's Disease*, vol. 64, no. 4, pp. 1359-1371.
3. L. Frølich, T.S. Andersen, **M. Mørup**, 2018, Rigorous optimisation of multilinear discriminant analysis with Tucker and PARAFAC structures, *BMC bioinformatics* 19 (1), 197.
4. S. F. V Nielsen, M. N. Schmidt, K. H. Madsen, **M. Mørup**, 2018, Predictive assessment of models for dynamic functional connectivity, *NeuroImage* 171, pp. 116-134.
5. K. M. Larsen, **M. Mørup**, M. R. Birknow, E. Fischer, O. Hulme, A. Vangkilde, H. Schmock, W. Frans C. Baaré, M. Didriksen, L. Olsen, T. Werge, H. R. Siebner, M. I. Garrido, 2018, Altered auditory processing and effective connectivity in 22q11. 2 deletion syndrome, *Schizophrenia Research* Vol. 197, pp. 328-336.
6. K. M. Larsen, G. Pellegrino, M. R. Birknow, T. N. Kjær, W. F. C. Baaré, M. Didriksen, L. Olsen, T. Werge, **M. Mørup**, H. R. Siebner, 2017, 22q11. 2 Deletion Syndrome Is Associated With Impaired Auditory Steady-State Gamma Response, *Schizophrenia Bulletin*, sbx058.
7. R. E. Røge, K. H. Madsen, M. N. Schmidt, **M. Mørup**, 2017, Infinite von MisesFisher Mixture Modeling of Whole Brain fMRI Data, *Neural Computation* Vol. 29(10), pp. 2712-2741.
8. M. Hinne, A. Meijers, R. Bakker, P. H. E. Tiesinga, **M. Mørup**, M. A. J. van Gerven, 2017, The missing link: Predicting connectomes from noisy and partially observed tract tracing data, *PLOS Computational Biology*, <http://dx.doi.org/10.1371/journal.pcbi.1005374>
9. F. K. Glückstad, M.N. Schmidt, **M. Mørup**, 2017, Examination of heterogeneous societies: Identifying subpopulations by contrasting cultures, *Journal of Cross-Cultural Psychology* 48 (1), 39-57
10. K. H. Madsen, N. W. Churchill, **M. Mørup**, 2017, Quantifying functional connectivity in multi-subject fMRI data using component models, *Human Brain Mapping* Vol. 38(2), pp 882899.
11. N. W. Churchill, K. Madsen, **M. Mørup**, 2016, The Functional Segregation and Integration Model: Mixture Model Representations of Consistent and Variable Group-Level Connectivity in fMRI, *Neural Computation* Vol. 28(10), pp.2250-2290.
12. J. L. Hinrich, S. E. Bardenfleth, R. E. Røge, N. W. Churchill, K. H. Madsen, **M. Mørup**, 2016, Archetypal Analysis for Modeling Multisubject fMRI Data, in *IEEE Journal of Selected Topics in Signal Processing*, vol. 10(7), pp. 1160-1171.
13. H. Schmock, A. Vangkilde, K. M. Larsen, E. Fischer, M. R. Birknow, J. R. M. Jepsen, C. Olesen, F. Skovby, K. J. Plessen, **M. Mørup**, O. Hulme, W. F. C. Baaré, M. Didriksen, H. R. Siebner, T. Werge, L. Olsen, 2015, The Danish 22q11 research initiative, *BMC psychiatry* vol. 15(1), 220.
14. L. Frølich, T. S. Andersen, **M. Mørup**, 2015, Classification of independent components of EEG into multiple artifact classes, *Psychophysiology* vol 52(1), pp. 32-45.
15. S. M. Arnfred, A. Raballo, **M. Mørup**, J. Parnas, 2015, Self-Disorder and Brain Processing of Proprioception in Schizophrenia Spectrum Patients: A Re-Analysis, *Psychopathology*, vol. 48, pp. 60-64.
16. T. Herlau, M. N. Schmidt, **M. Mørup**, 2014, Infinite-degree-corrected stochastic block model, *Physical Review E*, vol 90(3), 032819.
17. K. W. Andersen, K. H. Madsen, H. R. Siebner, M. N. Schmidt, **M. Mørup**, L. K. Hansen, 2014, Non-parametric Bayesian graph models reveal community structure in resting state fMRI, *NeuroImage*, vol. 100, pp. 301-315.
18. F. K. Glückstad, T. Herlau, M. N. Schmidt, **M. Mørup**, 2014, Cross-categorization of legal concepts across boundaries of legal systems: in consideration of inferential links, *Artificial Intelligence and Law*, vol. 22, pp. 61-108.
19. N. Wangdong, L. Nørgaard, **M. Mørup**, 2014, Non-linear calibration models for NIR spectroscopy, *Analytica Chimica Acta*, vol. 813, pp. 1-14.
20. J. C. Thøgersen, **M. Mørup**, S. Damkiær, S. Molin, L. Jelsbak, 2013, Archetypal analysis of diverse *Pseudomonas aeruginosa* transcriptomes reveals adaptation in cystic fibrosis airways, *BMC Bioinformatics*, vol. 14(279).
21. M. N. Schmidt, **M. Mørup**, 2013, Non-parametric Bayesian modeling of complex networks, *IEEE Signal Processing Magazine*, vol 30(3), pp. 110-128.
22. **M. Mørup**, M. N. Schmidt, 2012, Bayesian Community Detection, *Neural Computation* vol. 24(9), pp. 2434-56. This publication comes with an errata: **M. Mørup**, M. N. Schmidt, 2014, Errata to Bayesian Community Detection, *Neural computation* 26(6) pp. 1236-1237.
23. **M. Mørup**, L. K. Hansen, 2012, Archetypal Analysis for Machine Learning and Data Mining, *NeuroComputing* vol. 80, pp. 54-63.
24. **M. Mørup**, 2011, Applications of tensor (multi-way array) factorizations and decompositions in data mining, *Wiley DMKD* vol. 1(1), pp. 24-40.
25. C. Stahlhut, **M. Mørup**, O. Winther, L. K. Hansen, 2010, Simultaneous EEG Source and Forward Model Reconstruction (SOFOMORE) using a Hierarchical Bayesian Approach, *Journal of Signal Processing Systems*, pp. 1-14.
26. E. Acar, D. M. Dunlavy, T. G. Kolda, **M. Mørup**, 2010, Scalable tensor factorizations for incomplete data, in press *Chemometrics and Intelligent Laboratory Systems*.
27. S. M. Arnfred, **M. Mørup**, J. Thalbitzera, L. Janssona, J. Parnas, 2010, Attenuation of beta and gamma oscillations in schizophrenia spectrum patients following hand posture perturbation, *Psychiatric Research*, vol. 185(1-2), pp. 215-224.
28. I. Griskova, **M. Mørup**, Josef Parnas, Osvaldas Rukšen, Sidse M. Arnfred, 2009, Two discrete components of the 20 Hz steady-state response are distinguished through the modulation of activation level. *Clinical Neurophysiology*, vol. 120, pp. 904-909.
29. **M. Mørup**, L.K. Hansen, 2009, Automatic Relevance Determination for multi-way models, *Journal of Chemometrics*, vol. 23(7-8), pp. 352-363.
30. **M. Mørup**, L.K. Hansen, S.M. Arnfred, L.-H. Lim, K.M. Madsen, 2008, Shift Invariant Multilinear Decomposition of Neuroimaging Data. *NeuroImage* vol. 42(4), pp.1439-50.
31. **M. Mørup**, L. K. Hansen, S. M. Arnfred, 2008, Algorithms for Sparse Nonnegative Tucker Decomposition. *Neural Computation*, vol. 20 no. 8, pp. 2112-2131.
32. S. M. Arnfred, L. K. Hansen, J. Parnas, **M. Mørup**, 2008, Regularity increases middle latency evoked and late induced beta brain response following proprioceptive stimulation. *Brain Research*, vol. 1218, pp. 114-131.
33. I. Griskova, **M. Mørup**, J. Parnas, O. Rukšen, O., S.M. Arnfred, 2007, The amplitude and phase precision of 40 Hz auditory steady-state response depend on the level of arousal. *Experimental Brain Research*, vol. 183(1), pp. 133-138.

34. **M. Mørup**, L.K. Hansen, S.M. Arnfred, 2007, ERPWAVELAB A toolbox for multi-channel analysis of time-frequency transformed event related potentials. *Journal of Neuroscience Methods*, vol. 161, pp. 361-368.
35. S.M. Arnfred, L.K. Hansen, L. K., J. Parnas, **M. Mørup**, 2007, Proprioceptive Evoked Gamma Oscillations. *Brain Research*, vol. 1147, pp. 167-174.
36. **M. Mørup**, L. K. Hansen, C. S. Hermann, J. Parnas, S. M. Arnfred, 2006, Parallel Factor Analysis as an exploratory tool for wavelet transformed event-related EEG. *NeuroImage*, vol. 29(3), pp. 938-947.
37. F. Calamante, **M. Mørup**, L. K. Hansen, 2004, Defining a local arterial input function for perfusion MRI using independent component analysis, *Magnetic Resonance in Medicine*, vol. 2(4), pp. 789-797.

#### Refereed Proceedings

1. J. L. Hinrich, S. F.V. Nielsen, K. H. Madsen, **M. Mørup**, 2018, Variational Bayesian Partially Observed Non-negative Tensor Factorization, *IEEE 28th International Workshop on Machine Learning for Signal Processing (MLSP)* (received a best paper award).
2. S. F. V. Nielsen, D. Vidaurre, K. H. Madsen, M. N. Schmidt, **M. Mørup**, 2018, Testing group differences in state transition structure of dynamic functional connectivity models, *International Workshop on Pattern Recognition in Neuroimaging (PRNI)*, 1-4.
3. S. F. V. Nielsen, Y. Levin-Schwartz, D. Vidaurre, T. Adali, V. D. Calhoun, K. H. Madsen, L. K. Hansen, **M. Mørup**, 2018, Evaluating Models of Dynamic Functional Connectivity Using Predictive Classification Accuracy, *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pp. 2566-2570.
4. R. Bonnevie, M. N. Schmidt and **M. Mørup**, 2017, Difference-of-Convex optimization for variational kl-corrected inference in dirichlet process mixtures, *IEEE 27th International Workshop on Machine Learning for Signal Processing (MLSP)*, Tokyo, 2017, pp. 1-6.
5. A. Mohebbi, T. B. Aradttir, A. R. Johansen, H. Bengtsson, M. Fraccaro, **M. Mørup**, 2017, A deep learning approach to adherence detection for type 2 diabetics, *Engineering in Medicine and Biology Society (EMBC), 2017 39th Annual International Conference of the IEEE*.
6. R. Røge, K.S. Ambrosen, K.J. Albers, C.T. Eriksen, M.G. Liptrot, M.N. Schmidt, K.H.Madsen, **M. Mørup**, 2017, Whole brain functional connectivity predicted by indirect structural connections, *Pattern Recognition in Neuroimaging (PRNI), 2017 International Workshop on*.
7. S. F. V. Nielsen, K.H. Madsen, M.N. Schmidt, **M. Mørup**, 2017, Modeling dynamic functional connectivity using a wishart mixture model, *Pattern Recognition in Neuroimaging (PRNI), 2017 International Workshop on*.
8. V. Beliveau, G. Papoutsakis, J. L. Hinrich, **M. Mørup**, 2016, Sparse Probabilistic Parallel Factor Analysis for the Modeling of PET and Task-fMRI Data, *Medical Computer Vision and Bayesian and Graphical Models for Biomedical Imaging*, pp. 186-198.
9. T. Herlau, ; M. N. Schmidt, **M. Mørup**, 2016, Completely random measures for modelling block-structured sparse networks, *Neural Information Processing Systems (NIPS2016)*.
10. K. J. Albers, M. Mørup, M. N. Schmidt, 2016, The influence of hyper-parameters in the infinite relational model, *IEEE Workshop on Machine Learning for Signal Processing (MLSP2016)*.
11. P. H. Jørgensen, M. Mørup, M. N. Schmidt, T. Herlau, 2016, Bayesian latent feature modeling for modeling bipartite networks with overlapping groups, *IEEE Workshop on Machine Learning for Signal Processing (MLSP2016)*.
12. J. L. Hinrich, S. Føns Vind Nielsen, K. H. Madsen, **M. Mørup**, 2016, Variational group-PCA for intrinsic dimensionality determination in fMRI data, *2016 International Workshop on Pattern Recognition in Neuroimaging (PRNI), Trento*, pp. 1-4.
13. A. M. E. Engberg, K. W. Andersen, **M. Mørup** and K. H. Madsen, 2016, Independent vector analysis for capturing common components in fMRI group analysis, *2016 International Workshop on Pattern Recognition in Neuroimaging (PRNI), Trento*, pp. 1-4.
14. R. Røge, K. H. Madsen, M. N. Schmidt, **M. Mørup**, 2015, Unsupervised Segmentation of Task Activated Regions in fMRI, *IEEE Workshop on Machine Learning for Signal Processing (MLSP2015)*.
15. **M. Mørup**, F. K. Glückstad, T. Herlau, M.N.Schmidt, 2014, Nonparametric Statistical Structuring of Knowledge Systems Using Binary Feature Matches. *IEEE Workshop on Machine Learning for Signal Processing (MLSP2015)*.
16. S. F. V. Nielsen, **M. Mørup**, Non-negative Tensor Factorization with Missing Data for the Modeling of Gene Expressions in the Human Brain. *Machine Learning for Signal Processing (MLSP), 2014 IEEE Workshop on*.
17. M. N. Schmidt, T. Herlau, **M. Mørup**, 2014, Discovering Hierarchical Structure In Normal Relational Data. *4th International Workshop on Cognitive Information Processing, CIP2014*.
18. K. S. Ambrosen, K. J. Albers, T. Dyrby, M. N. Schmidt and **M. Mørup**. 2014, Nonparametric Bayesian Clustering of Structural Whole Brain Connectivity in Full Image Resolution. *4th International Workshop on Pattern Recognition in NeuroImaging (PRNI2014)*.
19. K. J. Albers, A. L. A. Moth, **M. Mørup**, M. N. Schmidt, 2013, Large Scale Inference In The Infinite Relational Model: Gibbs Sampling Is Not Enough, *IEEE Workshop on Machine Learning for Signal Processing (MLSP2013)*.
20. F. K. Glückstad, T. Herlau, M. N. Schmidt, and **M. Mørup**, 2013 Analysis of Conceptualization Patterns across Groups of People. In: *Technologies and Applications of Artificial Intelligence, Conference on (TAAI2013)*.
21. F. K. Glückstad, T. Herlau, M. N. Schmidt, and **M. Mørup**, 2013, Analysis of Subjective Conceptualizations Towards Collective Conceptual Modelling. In: *Japanese Society for Artificial Intelligence, Conference of the (JSAI2013)*.
22. F. K. Glückstad, T. Herlau, M. N. Schmidt, and **M. Mørup**, 2013, Unsupervised knowledge structuring. In: *Signal Image Technology and Internet based Systems, International Conference on (SITIS2013)*.
23. T. Herlau, **M. Mørup**, M. N. Schmidt, 2013, Modeling Temporal Evolution and Multiscale Structure in Networks, *International Conference on Machine Learning (ICML2013)*
24. K. S. Ambrosen, T. Herlau, T. Dyrby, M. N. Schmidt and **M. Mørup**, 2013 Comparing Structural Brain Connectivity by the Infinite Relational Model, *3rd International Workshop on Pattern Recognition in NeuroImaging (PRNI2013)*
25. J. E. Larsen, P. Sapiezynski, A. Stopczynski, **M. Mørup**, R. Theodorsen, 2013, Crowds, bluetooth, and rock'n'roll: understanding music festival participant behavior, *PDM '13 Proceedings of the 1st ACM international workshop on Personal data meets distributed multimedia*, pp. 11-18.
26. K. W. Andersen, K. H. Madsen, H. Siebner, L. K. Hansen, **M. Mørup**, 2012, Identification of Functional Clusters in the Striatum Using Infinite Relational Modeling, *Machine Learning and Interpretation in Neuroimaging, Lecture Notes in Computer Science*, pp 226-233.
27. T. Herlau, **M. Mørup**, M. N. Schmidt, L. K. Hansen, 2012, Modelling Dense Relational Data, *IEEE Workshop on Machine Learning for Signal Processing (MLSP2012)*.
28. K. W. Andersen, **M. Mørup**, H. Siebner, K. H. Madsen, L. K. Hansen, 2012, Identifying Modular Relations In Complex Brain Networks, *IEEE Workshop on Machine Learning for Signal Processing (MLSP2012)*.
29. D. K. Wind, **M. Mørup**, 2012, Link Prediction In Weighted Networks, *IEEE Workshop on Machine Learning for Signal Processing (MLSP2012)*.

30. F. K. Glückstad, **M. Mørup**, 2012, Application of the Infinite Relational Model combined with the Bayesian Model of Generalization for Effective Cross-Cultural Knowledge Transfer, Proceedings of the 26th Annual Conference of the Japanese Society for Artificial Intelligence.
31. F. K. Glückstad, **M. Mørup**, 2012, Feature-based Ontology Mapping from an Information Receivers Viewpoint Proceedings of the 9th International Workshop on Natural Language Processing and Cognitive Science, (NLPCS2012), pp. 34-43.
32. F. K. Glückstad, **M. Mørup**, 2012, Flexible or Strict Taxonomic Organization? Impact on Culturally-specific Knowledge Transfer. Proceedings of the 10th Terminology and Knowledge Engineering Conference: New Frontiers in the Constructive Symbiosis of Terminology and Knowledge Engineering, pp. 65-80.
33. T. Herlau, **M. Mørup**, M. N. Schmidt, L. K. Hansen, 2012, Detecting Hierarchical Structure in Networks, Cognitive Information Processing (CIP2012).
34. R. Tomioka, **M. Mørup**, 2012, A Bayesian Analysis of the Radioactive Releases of Fukushima, Proceedings of the 15th International Conference on Artificial Intelligence and Statistics (AISTATS2012).
35. **M. Mørup**, M.N. Schmidt, 2011, Transformation Invariant Sparse Coding, Accepted for publication, IEEE Workshop on Machine Learning for Signal Processing (MLSP2011).
36. T.J. Hansen, **M. Mørup**, L.K. Hansen, Non-Parametric, 2011, Co-Clustering Of Large Scale Sparse Bipartite Networks On The GPU, IEEE Workshop on Machine Learning for Signal Processing (MLSP2011).
37. **M. Mørup**, K. H. Madsen, L. K. Hansen, 2011, Modeling Latency and Shape Changes in Trial Based Neuroimaging Data, Signals, Systems and Computers (ASILOMAR2011) Conference Record of the Forty Fifth Asilomar Conference on, pp. 439-443.
38. **M. Mørup**, K. H. Madsen, L. K. Hansen, 2011, Frequency Constrained ShifCP Modeling of Neuroimaging Data, Signals, Systems and Computers (ASILOMAR2011), Conference Record of the Forty Fifth Asilomar Conference on, pp. 127-131.
39. **M. Mørup**, K. H. Madsen, A. M. Dogonowski, H. Siebner, L. K. Hansen, 2010, Infinite Relational Modeling of Functional Connectivity in Resting State fMRI, Neural Information Processing Systems 23, pp. 1750-1758.
40. **M. Mørup**, M. N. Schmidt, L. K. Hansen, 2011, Infinite Multiple Membership Relational Modeling for Complex Networks, (first presented at NIPS Workshop on Networks Across Disciplines in Theory and Application, 2010.), IEEE Workshop on Machine Learning for Signal Processing (MLSP2011).
41. M. N. Schmidt, **M. Mørup**, 2010, Infinite non-negative matrix factorization, European Signal Processing Conference (EUSIPCO2010), pp. 905-909.
42. \* **M. Mørup**, L. K. Hansen, 2010, Archetypal Analysis for Machine Learning, IEEE Workshop on Machine Learning for Signal Processing (MLSP2010), pp. 172-177.
43. M. K. Petersen, **M. Mørup**, L. K. Hansen, 2010, Latent Semantics As Cognitive Components, 2nd International Workshop on Cognitive Information Processing (CIP2010), pp. 434-439.
44. E. Acar, D. Dunlavy, T. G. Kolda, **M. Mørup**, 2010, Scalable Tensor Factorizations with Missing Data, Proceedings of the 2010 SIAM International Conference on Data Mining (SDM2010), pp. 701-712.
45. M. K. Petersen, **M. Mørup**, L. K. Hansen, 2009, Sparse but emotional decomposition of lyrics, 3rd International Workshop on Learning Semantics of Audio Signals (LSAS2009).
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#### Patents

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