CURRICULUM VITAE

Updated September 4, 2007

Personal Data

Name: Jan Larsen
Date of Birth: June 25, 1965, Stege, Denmark.
Dept. Address: Informatics and Mathematical Modelling, Technical University of Denmark, Richard Petersens Plads, Bulding 321, DK-2800, Kongens Lyngby, Denmark. Phone: (+45) 45253923. Email: jl@imm.dtu.dk
Webpage: www.imm.dtu.dk/~jl

Education

1995 Course in Teaching and Learning, Dept. of Technology and Social Sciences, Techn. Univ. of Denmark, March 13–15, 1995.

1993 Matriculated as Ph.D. student at the Technical University of Denmark, Feb. 1, 1990. Thesis: "Design of Neural Network Filters". Completed March 1, 1993. Degree awarded Feb. 21, 1994.

1989 M.Sc.E.E. degree from the Technical University of Denmark, Aug. 31, 1989. Master Thesis: "Knowledge-Based Adaptive Signal Processing" (in Danish).

1984 Graduated from Vordingborg Gymnasium, June 23, 1984.

Employments

1998– Associate Professor of Digital Signal Processing at Informatics and Mathematical Modelling, Technical University of Denmark.

1996 Visiting Scholar at Department of Electrical Engineering, University of Washington, Seattle, USA, with Prof. Jenq-Neng Hwang.

1996–1997 Assistant Professor of Digital Signal Processing at Department of Mathematical Modelling, Technical University of Denmark.

1995–1996 Assistant Professor of Digital Signal Processing at Electronics Institute, Technical University of Denmark.

1994–1995 Assistant Research Professor at Electronics Institute, Technical University of Denmark granted by The Radio-Parts Foundation.

1993–1994 Post Doctoral Scientist at CONNECT, Electronics Institute, Technical University of Denmark.

1992–1993 Scientist at Electronics Institute, Technical University of Denmark granted by the Computational Neural Network Center (CONNECT).

1990–1992 Ph.D. scholarship at Electronics Institute, Technical University of Denmark.

1989–1990 Introductory scholarship at Electronics Institute, Technical University of Denmark.

1987–1988 Assistant instructor in Analog Electronics at Electronics Institute, Technical University of Denmark.

Professional Activities

Research Interests

- Application of machine learning technologies for signal/image processing, multimedia, monitoring, biomedical, data/web-mining and pattern recognition.
- Statistical methods for performance validation and estimation of adaptive systems (generalization ability).
- Development of algorithms for learning in adaptive system architectures.

Teaching

- Lecturer in undergraduate courses on statistical signal processing and learning based methods.
- Lecturer in graduate courses on advanced digital signal processing and medical image processing.
- Supervisor and co-supervisor for 24 Ph.D. students.
- Supervisor and co-supervisor for 50 M.Sc. projects.
- Supervision of numerous independent course students.

Research Program Participation

- Participation in Intelligent Sound - Search and Retrieval in Dynamic Sound Databases. Supported by the Danish Research Councils, 2005-2008.
- Participation in Pattern Analysis, Statistical Modelling and Computational Learning (PASCAL). Network of Excellence under the European Commission's sixth IST framework program, contract no. 506778.
- Participation in AE-WATT: Marine Power Plant Management and Monitoring using Acoustic Emission, supported by EU under the Competitive and Sustainable Growth Program, 2002-2005.
- Participation in Signal and Images Processing for Telemedicine (SITE) supported by the Danish Research Councils.
- Deputy head of Center for Neuroinformatics, IMM, DTU, supported by the Danish Research Councils.
- Participation in establishment of the Computational Neural Network Center (CONNECT) supported by the Danish Research Councils since 1991. Participation in CONNECT's activities within neural signal processing and medical applications.
- Partial participation in programs on brain scan analysis supported by the American Human Brain Project, EU MAPOWAMO, EU BIOMED2 and the Danish Research Councils.
- Humanitarian Demining Laboratory (HDL), IMM, Ørsted.DTU and Danish Defence Research Establishment.
- Statistical Signal Processing for Mine Clearance, Ørsted.DTU, IMM and Danish Defence Research Establishment, 2004–2007.
- Participation in Center for Multimedia's Distributed Multimedia Technologies and Applications supported by the Danish Research Councils.

Invited Talks and Lectures

- *Statistical Decision Making for Mine Action*, tutorial presented at Nordic Demining Forum Post Graduate Weekend Seminar, Hevring, Denmark, October 29, 2006.
- *Basics of Bayesian Learning - Basically Bayes*, tutorial presented at IEEE Workshop on Machine Learning for Signal Processing, Maynooth, Ireland, September 8, 2006.
- *New applications of learning machines*, summer school on Frontiers in Information Processing and Telecommunications, Real Academia de Ingeniería, July 14, 2006.
- *Search for Sound - a Machine Learning Approach*, CS&EE Dept., University of Maryland Baltimore County, March 10, 2006.

- *Independent Component Analysis in Multimedia Modeling*, invited lecture at Fourth International Symposium on Independent Component Analysis and Blind Source Separation, Nara, Japan, April 3, 2003.
- *Learning Methods for World Wide Web Analysis*, invited lecture at Departo de Teoría de la Señal y Comunicaciones, Universidad Carlos III de Madrid, February 7, 2003.
- *Web Mining: A Learning Based Approach*, invited lecture at Università di Urbino, Rome, Italy, Oct. 20, 2001.
- *Web Mining: A Learning Based Approach*, tutorial at the course Statistical Methods for Datamining, Società Italiana di Statistica, Rome, Italy, Oct. 19, 2001.
- *Neural Networks: A Learning Based Approach*, tutorial at the course Statistical Methods for Datamining, Società Italiana di Statistica, Rome, Italy, Oct. 18, 2001.
- *Hierarchical Clustering for Datamining*, Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies, KES'2001, Osaka and Nara, Japan, September 6, 2001.
- *Webmining: Learning from the World Wide Web*, International meeting on Nonlinear Methods and Datamining 2000, Rome, Italy, September 26, 2000.
- *Signal Processing for GPR Signal/Clutter Improvement*, Nordic Demining Reserach Forum Workshop, Bergen, Norway, August 24, 2000.
- *Introduction to Neural Networks*, Oticon A/S, Copenhagen, February 15, 2000.
- *Statistical Learning and Detection in Mine Clearance*, Nordic Demining Reserach Forum Workshop, Eksjö, Sweden, June 9, 1999.
- *Introduction to Neural Networks*, SimCorp A/S, Copenhagen, May 12, 1999.
- *Adaptive Regularization and Robust Classification Using An Empirical Generalization Framework*, International Seminar on Statistical Physics of Neural Networks, Max Planck Institute, Dresden, Germany, March 2, 1999.
- *Neural Networks for Medical Image Analysis*, The Danish Society for Biomedical Engineering, Herlev, Denmark. May 5, 1998.
- *Neural Networks: A Modern Technique for Complex Learning*, Danish Society of Pharmacology and Toxicology meeting, Gl. Avernæs, Ebberup, Denmark, February 21, 1998.
- *Artificial Intelligence and Neural Networks*, Roskilde Katedralskole, Roskilde, Oct. 1, 1997.
- *Neural Networks: A Modern Technique for Signal and Image Modelling*, IDA's Electrical Engineering Group meeting, Copenhagen, April 3, 1997.
- *Adaptation and Regularization of Neural Networks*, Interdisciplinary Inversion Workshop 4, DTU, Sept. 24, 1996.
- *Neural Networks: A Modern Technique for Solving Complex Problems*, Seminar for the IDA Electrical Engineering Group, Helsingør, Denmark, Oct. 10, 1995.
- *Aspects on Optimizing Neural Network Architectures for Time Series Applications*, Department of Electrical Engineering, Linkping University, Linkping, Sweden, June 17, 1994.
- *Optimizing Neural Network Architectures for Time Series Applications*, 14th Annual International Symposium on Forecasting, Stockholm, Sweden, June 14, 1994.
- *Supervised Learning* and *Neural Network Architectures*, Institute of Biology, University of Odense, Odense, Denmark, May 16–17, 1994. Co-instructor at the open workshop: "Pattern Recognition by Artificial Neural Networks".
- *Optimizing Neural Network Architectures using Generalization Error Estimators*, The Russian Neural Network Society Workshop on Algorithms for Information Processing in Neural-Type Systems, Nizhny Novgorod, Russia, Sept. 14, 1993.

Conferences

Participation in 86 national and international conferences, workshops, and meetings on neural network, machine learning and signal processing related topics. Numerous oral presentations have been given.

- Program Committee member of Cognitive Information Processing Juen 9-10, Santorini, Greece, 2008.

- Program Committee member of International Conference on Machine Learning 2007.
- Technical Chair of the IEEE Workshop on Machine Learning for Signal Processing, 2007, Thessaloniki, Greece, Aug. 27–29, 2007.
- Program committee member of the The Eighth IASTED International Conference on Signal and Image Processing, SIP 2006, August 14–16, 2006, Honolulu, Hawaii, USA.
- Technical committee member of the Nordic Signal Processing Conference (NORSIG), Reykjavik, Iceland, June 7–9, 2006.
- Program Chair of the IEEE Workshop on Machine Learning for Signal Processing, 2006, Maynooth, Ireland, Sept. 6–8, 2006.
- Program committee member of the The Second International Workshop on Biosignal Processing and Classification, BPC 2006, August 1-2, 2006, Setúbal, Portugal.
- Program committee member of the The First International Workshop on Biosignal Processing and Classification, BPC 2005, 13–14 September 2005, Barcelona, Spain.
- Program committee member of the 2nd Joint Joint Workshop on Multimodal Interaction and Related Machine Learning Algorithms, 11–13 July 2005, Royal College of Physicians, Edinburgh, UK.
- Co-organizer of Symposium on Nonlinear Compensation of Loudspeakers, Dec. 2, 2004, IMM, DTU. Orginzed by IMM, Ørsted.DTU DTU in collaboration with IEEE Denmark Section and AES Denmark Section.
- Co-organizer of NIPS Workshop on Multimodal Signal Processing, Dec. 17, 2004.
- Program Chair of the IEEE Workshop on Machine Learning for Signal Processing, 2005, Mystic, Connecticut, USA, Sept. 28–30, 2005.
- Program Chair of the IEEE Workshop on Machine Learning for Signal Processing, 2004, São Luís, Brazil, Sept. 22–24, 2004.
- Program committee member of the Joint AMI/PASCAL/M4/IM2 Workshop on Machine Learning for Multimodal Interfaces Centre du Parc, Martigny, Switzerland, June 21–23, 2004.
- Member of advisory board of the Multi-Intelligent Knowledge Systems Conferences MISKC-2004 and International Conference on Intelligent Knowledge Systems: Artificial Intelligence and Neural Networks IKS-AINN 2004, August 16-20, Kusadasi, Turkey, 2004.
- Member of International Advisory Board of the International Conference on Artificial Intelligence and Information Processing, ICAIIP 2004, 26–28 April 2004, Assos, Turkey.
- Program committee member Nordic Demining Research Forum summer conference, 2003, 2004, 2005, 2006.
- Program Chair of the IEEE Workshop on Neural Networks for Signal Processing, 2003, Toulouse, France, Sept. 17–19, 2003.
- Member of the technical committee of the Seventh International Symposium on Signal Processing and its Applications ISSPA 2003, Paris, France, July 1–4, 2003.
- Program Chair of the IEEE Workshop on Neural Networks for Signal Processing, 2002, Martigny, Valais, Switzerland.
- Program Chair of the IEEE Workshop on Neural Networks for Signal Processing, 2001, Falmouth, Massachusetts, USA.
- Program Chair of the IEEE Workshop on Neural Networks for Signal Processing, 2000, Sydney, Australia.
- Member of the Program Committee of 2000 International Symposium on Multimedia Information Processing, Sydney, Australia.
- Program Chair of the IEEE Workshop on Neural Networks for Signal Processing, 1999, Madison, Wisconsin.
- Program committee member of the IEEE International Workshop on Multimedia Signal Processing, 1999, Copenhagen, Denmark.
- Program committee member of the IEEE Workshop on Neural Networks for Signal Processing, 1998, Cambridge, England.
- Co-chair at the SPIE conference: Photonics Taiwan ’98: I/O and Imaging Technology, July 9-11, Taipei,

Taiwan, 1998.

- Co-chair of evening panel *Beyond Toy-Problems; Employing Neural Networks in Practice*, IEEE Workshop on Neural Networks for Signal Processing, Kyoto, Japan, Sept. 4, 1996.
- Session chair at
  - Nordic Demining Research Forum, 2005,2006.
  - IEEE Workshop on Neural Networks for Signal Processing, 1996,1997,1998.
  - IEEE Workshop on Machine Learning for Signal Processing 2004,2005,2006.
  - IEEE International Conference on Acoustics, Speech and Signal Processing, 1997,1998,2001,2002,2003,2006.
  - IEEE International Conference on Neural Networks, 1996.
- Organizer of the special session *ICA/BSS for Multimedia Signal Processing* at 4th International Symposium on Independent Component Analysis and Blind Signal Separation, ICA2003, April 3, 2003, Nara, Japan.
- Organizer of the special session *Beyond Toy-Problems: Real-World Signal Processing Applications using Neural Networks* at the IEEE International Conference on Acoustics, Speech and Signal Processing, 1998.

Editorial

- Editorial Board Member of Signal Processing, Elsevier, 2006-2007.
- Guest editor of special issue of Journal of VLSI Signal Processing Systems on Machine Learning for Signal Processing, 2005.
- Guest editor of special issue of Journal of VLSI Signal Processing Systems on Machine Learning for Signal Processing, vol. 37, no. 2,3, 2004.
- Member of the editorial board of the International Journal of Computational Intelligence.
- Member of the editorial board of the International Journal of Signal Processing.
- Member of the editorial Board of the International Journal of Intelligent Systems and Information Processing.
- Guest editor of special issue of Neurocomputing on Neural Networks and Machine Learning for Signal Processing, 2005.
- Guest editor of special issue of Neurocomputing on Machine Learning for Signal Processing, 2006.
- Guest editor of special issue of *IEEE Transactions on Neural Networks* on Intelligent Multimedia Processing, vol. 13, no. 4, July 2002.
- Guest editor of special issue of Journal of VLSI Signal Processing Systems on Neural Networks for Signal Processing, vol. 31, no. 1, May 2002.

Reviews

- Advances in Computational Mathematics, 1995.
- Advances in Neural Information Processing Systems (NIPS), 1998, 2001, 2002, 2006, 2007.
- Cambridge University Press, New York, USA, 1997, 1998.
- European Signal Processing Conference, EUSIPCO, 2007.
- European Commission, IST, ESPRIT, FP6 and FP7 program reviews, 2002, 2003, 2004, 2005, 2007.
- Engineering and Physical Sciences Research Council (EPSRC), United Kingdom, 2003, 2004.
- Fund for Scientific Research - Flanders (F.W.O.), Belgium, 2002, 2003, 2004, 2005, 2006, 2007.
- Norwegian Research Council, 2004.
- IEEE Transactions on Biomedical Engineering, 1998.
- IEEE Transactions on Circuits and Systems for Video Technology, 1998.
- IEEE Transactions on Geoscience and Remote Sensing, 1999.
- IEEE Transactions on Neural Networks, 1996, 1997, 1998, 1999, 2003.
- IEEE Transactions on Signal Processing, 1996, 1997.

- IEEE International Conference on Acoustics, Speech and Signal Processing, 1997, 1998, 1999, 2001, 2002, 2003, 2004, 2005, 2006, 2007.
- IEEE International Symposium on Circuits and Systems, 2001.
- International Conference on Artificial Neural Networks, 1998, 1999.
- International Conference on Machine Learning, 2007.
- IEEE Workshop on Multimedia Signal Processing, 1999.
- International Conference on Neural Networks, 1995.
- International Journal on Neural Systems, 1995.
- International Journal of Refrigeration, 1999.
- 15th Scandinavian Conference on Image Analysis (SCIA), 2007.
- Seventh International Symposium on Signal Processing and its Applications ISSPA, 2003.
- IEEE Workshop on Neural Networks for Signal Processing, 1997, 1998.
- Pattern Recognition, 2002.
- Special Issue of the VLSI Signal Processing Systems Journal, 1999.
- The Wellcome Trust, UK, 1998.

Committees

- Member of the executive committee of the DeFuse project of the Nordic Demining Research Forum, 2007-.
- Member of the Technical Committee 14: Signal Analysis for Machine Intelligence of the International Association for Pattern Recognition, 2006-.
- Steering committee member of the Audio Signal Processing Network in Denmark, 2006-.
- Member of planning committee of the *FOSS Challenge* student competition 2005-2006.
- Chairman of IEEE Denmark Section's Signal Processing Chapter, 2002-.
- Chairman of the Ph.D. committee for Rasmus Kongsgaard Olsson's dissertation entitled: "Algorithms for Source Separation - with Cocktail Party Applications," Technical University of Denmark, September 2007.
- Chairman of the Ph.D. committee for Sune Lehmann Jrgensen's dissertation entitled: "The Structure of Complex Networks," Technical University of Denmark, June 2007.
- Chairman of the Ph.D. committee for Mads Dyrholms's dissertation entitled: "Independent Component Analysis in a Convoluted World," Technical University of Denmark, June 2006.
- Chairman of the Ph.D. committee for Esben Høgh-Rasmussen's dissertation entitled: "Tomographic Reconstruction using Anatomy and Regularization," Technical University of Denmark, February 2006.
- Chairman of the Ph.D. committee for Jan Vistisen's dissertation entitled " Risk Assessments of Minefields in Humanitarian Mine Action - a Bayesian Approach," Technical University of Denmark, January 2006.
- Chairman of the Ph.D. committee for Kaare Brandt Petersen's dissertation entitled: "Mean Field ICA," Technical University of Denmark, November 2005.
- Member of the examination committee of Temujin Gautama's Ph.D. Thesis entitled: "Motion Processing in Macaque Middle Temporal Areas: Computational Principles, Models and Data Analysis," K.U. Leuven, Belgium, March 2003.
- Chair of the Machine Learning for Signal Processing Technical Committee of the IEEE Signal Processing Society (formerly the Neural Networks Signal Processing Technical Committee), 2005.
- Chairman of IEEE Denmark Section's Signal Processing Chapter, 2002-.
- Chairman of the Ph.D. committee for Thomas Fabricius's dissertation entitled: "Multiuser Detection and Channel Estimnation: Exact and Approximate Methods," Technical University of Denmark, August 2003.
- Chairman of the Ph.D. committee for Irene K. Andersen's dissertation entitled: "Dynamic Contrast Enhanced MRI for Perfusion Quantification," Technical University of Denmark, December 2002.
- Chairman of the Ph.D. committee for Karam Sidaros' dissertation entitled: "Slice Profile Effects in MR Perfusion Imaging Using Pulsed Arterial Spin Labeling," Technical University of Denmark, June 2002.

- Chairman of the Ph.D. committee for Maarten Keijzer's dissertation entitled: "Scientific Discovery using Genetic Programming," Technical University of Denmark, February 2002.
- Chairman of the Ph.D. committee for Preben Kidmose's dissertation entitled: "Blind Separation of Heavy Tail Signals," Technical University of Denmark, January 2002.
- Chairman of associate professor evaluation committee, IMM, DTU, 2001.
- Member of the Neural Networks for Signal Processing Technical Committee of the IEEE Signal Processing Society (1996–1999, 2001–).
- Accountant and member of the executive committee of Nordic Demining Research Forum.
- Member of the Advisory Committee of the IEEE Signal Processing Society's On-line History Project.
- Member of the Nominating Committee for IEEE Denmark Section's Signal Processing Chapter, 1997, 1998, 2000.
- Examiner of Lester S.H. Ngia's Ph.D. Thesis entitled: "System Modeling Using Basis Functions and Application to Echo Cancelation," Chalmers University of Technology, Sweden, November, 2000.
- Examiner of Hau San Wongs's Ph.D. Thesis entitled: "Adaptive Image Processing Using Computational Intelligence Techniques," University of Sydney, March 1999.
- Chairman of the Ph.D. committee for Niels J.S. Mørch's dissertation entitled: "A Multivariate Approach to Functional Neuro Modeling," Technical University of Denmark, July 1998.
- Member of the Ph.D. committee (examinateur) for Cyril Goutte's dissertation entitled: "Statistical Learning and Regularisation in Regression: Application to System Identification and Time Series Modelling," Paris 6 University, France, 1997.
- Member of the Steering Committee for EUREKA-project THALAMUS, 1996.
- Observer in the Ph.D. program committee of Electrical Engineering, Techn. Univ. of Denmark, 2002.

Grants

- Visiting Professor Grant from Techn. University of Denmark for Prof. Tülay Adali, Univ. of Maryland at Baltimore County, 2000.
- Visiting Professor Grant from Techn. University of Denmark for Prof. Jenq-Neng Hwang, Univ. of Washington, 1996.
- Radio-Parts Foundation, 1994, 480 kDKK.
- Otto Mønsteds Foundation (travel support).
- Tranes Foundation (travel support).

Other

- Member of the International International Intelligent Knowledge Systems Society.
- Senior Member of The Institute of Electrical and Electronics Engineers, Inc.
- Private consultant, in particular neural network and machine learning technology.

Publications

Journal Papers, Book Chapters and Edited Volumes (with review)

1. K. Diamantaras, T. Adali, I. Pitas, J. Larsen, T. Papadimitriou, and S. Douglas:*Proceedings of IEEE Machine Learning for Signal Processing Workshop XVII*, ISBN 1-4244-1566-7, Piscataway, New Jersey: IEEE, 2007.
2. M.S. Pedersen, D. Wang, J. Larsen, U. Kjems: "Two-microphone Separation of Speech Mixtures," accepted for publication IEEE Transactions on Neural Networks, 2007.
3. A. Meng, P. Ahrendt, J. Larsen, L.K. Hansen: "Feature Integration for Music Genre Classification," accepted for publication IEEE Transactions on Audio, Speech and Language Processing, 2007.

4. M.S. Pedersen, J. Larsen, U. Kjems, and L.C. Parra: "A Survey of Convolutive Blind Source Separation Methods," to appear in J. Benesty et al. (eds.) *Multichannel Speech Processing Handbook*, 2007.
5. S. McLoone, T. Adali, J. Larsen, M. Van Hulle, A. Rogers and S.C. Douglas: *Proceedings of IEEE Machine Learning for Signal Processing Workshop XVI*, ISBN 1-4244-0657-9, Piscataway, New Jersey: IEEE, 2006.
6. A. Szkymkowiak Have, Mark A. Girolami and J. Larsen: "Clustering via Kernel Decomposition," *IEEE transactions on Neural Networks*, vol. 17, no. 1, pp. 256–264, January 2006.
7. V. Calhoun, T. Adali, J. Larsen, D. Miller, S. Douglas: *Proceedings of IEEE Machine Learning for Signal Processing Workshop XV*, ISBN 0-7803-9518-2, Piscataway, New Jersey: IEEE, 2005.
8. N.H. Pontoppidan, S. Sigurdsson, J. Larsen: "Condition monitoring with Mean field independent components analysis," *Mechanical systems and signal processing: Special issue on blind source separation*, vol. 19(6), pp. 1337-1347, Elsevier, 2005
9. A.K. Barros, J. Principe, J. Larsen, T. Adali and S. Douglas: *Proceedings of IEEE Workshop on Machine Learning for Signal Processing XIV*, ISBN 0-7803-8609-4, Piscataway, New Jersey: IEEE, 2004.
10. C. Molina, T. Adali, J. Larsen, M. Van Hulle, S. Douglas and J. Rouat: *Proceedings of the 2003 IEEE Workshop on Neural Networks for Signal Processing*, ISBN 0-7803-8178-5, Piscataway, New Jersey: IEEE, 2003.
11. S. Sigurdsson, P.A. Philipsen, L.K. Hansen, J. Larsen, M. Gniadecka, H.C. Wulf: "Detection of Skin Cancer by Classification of Raman Spectra," accepted for *IEEE transactions on Biomedical Engineering*, vol. 51, no. 10, pp. 1784–1793, 2004.
12. H. Bourlard, T. Adali, S. Bengio, J. Larsen, and S. Douglas: *Proceedings of the 2002 IEEE Workshop on Neural Networks for Signal Processing*, ISBN 0-7803-7616-1, Piscataway, New Jersey: IEEE, 2002.
13. L.K. Hansen, F.Aa. Nielsen and J. Larsen: "Exploring fMRI Data for Periodic Signal Components," in *Artificial Intelligence in Medicine*, vol. 25, pp. 35–44, 2002.
14. D. Miller, T. Adali, J. Larsen, M. Van Hulle and S. Douglas: *Proceedings of the 2001 IEEE Workshop on Neural Networks for Signal Processing*, ISBN 0-7803-7196-8, Piscataway, New Jersey: IEEE, 2001.
15. J. Larsen, A. Szymkowiak and L.K. Hansen: "Probabilistic Hierarchical Clustering with Labeled and Unlabeled Data," invited submission for *International Journal of Knowledge-Based Intelligent Engineering Systems*, vol. 6, no. 1, pp. 56–63, January 2002.
16. J. Larsen and L.K. Hansen: "Comments for: Rivals, I., & Personnaz L. (2000). Construction of confidence intervals for neural networks based on least squares estimation, Neural Networks, 13, 463-484 ", accepted for *Neural Networks*, vol. 15/1, pp. 141–142, April 2002.
17. J. Larsen, L.K. Hansen, A. Szymkowiak, T. Christiansen & T. Kolenda: "Webmining: Learning from the World Wide Web," in special issue of *Computational Statistics and Data Analysis*, vol. 38, pp. 517–532, 2002.
18. * M. Hintz-Madsen, L.K. Hansen, J. Larsen and K.T. Drzewiecki: "A Probabilistic Neural Network Framework for Detection of Malignant Melanoma," in R.N.G. Naguib and G.V. Sherbet (eds.) *Artificial Neural Networks in Cancer Diagnosis, Prognosis and Patient Management*, CRC Press, ISBN 0-8493-9692-1, Chap. 13, pp. 141–183, 2001.
19. B. Widrow, L. Guan, K. Paliwa, T. Adali, J. Larsen, E. Wilson and S. Douglas: *Proceedings of the 2000 IEEE Workshop on Neural Networks for Signal Processing*, ISBN 0-7803-6278-0, Piscataway, New Jersey: IEEE, 2000.
20. L. Guan, S.Y. Kung and J. Larsen: *Multimedia Image and Video Processing*, CRC Press, ISBN 0-8493-3492-6, September 2000.
21. L.K. Hansen, J. Larsen and T. Kolenda "On Independent Component Analysis for Multimedia Signals," in L. Guan, S.Y. Kung and J. Larsen (eds.) *Multimedia Image and Video Processing*, CRC Press, Ch. 7, pp. 175–199, 2000.
22. Y.H. Hu, J. Larsen, E. Wilson and S. Douglas: *Proceedings of the 1999 IEEE Workshop on Neural Networks for Signal Processing*, Piscataway, New Jersey: IEEE, ISBN 0-7803-5673-X, 1999.
23. C. Goutte and J. Larsen: "Adaptive Metric Kernel Regression," in special isuue of *Journal of VLSI Signal*

*In collaboration with own Ph.D. students.

Processing, vol. 26, pp. 155–167, 2000.

24. L.K. Hansen, J. Larsen, F.Å. Nielsen, S.C. Strother, E. Rostrup, R. Savoy, N. Lange, J. Sidtis, C. Svarer & O.B. Paulson: "Generalizable Patterns in Neuroimaging: How Many Principal Components?," *NeuroImage*, vol. 9, pp. 534–544, 1999.
25. Y.T. Tsai, T.-M. Kung & J. Larsen (eds.): *Proceedings of SPIE: Input/Output and Imaging Technologies*, vol. 3422, ISBN 0-8194-2876-0, 1998.
26. J. Larsen, C. Svarer, L. Nonboe Andersen & L.K. Hansen: "Adaptive Regularization in Neural Network Modeling," in G.B. Orr, K. Müller (eds.) *Neural Networks: Tricks of the Trade*, Lecture Notes in Computer Science 1524, Germany: Springer-Verlag, Chapter 5, pp. 113–132, 1998.
27. * M. Hintz-Madsen, L.K. Hansen, J. Larsen, M.W. Pedersen & M. Larsen: "Design and Evaluation of Neural Classifiers," *Neural Networks*, vol. 11, no. 9, pp. 1659–1670 Dec. 1998.
28. J. Larsen & L.K. Hansen: "Generalization: The Hidden Agenda of Learning" in J.-N. Hwang, S.Y. Kung, M. Niranjan & J.C. Principe (eds.) The Past, Present, and Future of Neural Networks for Signal Processing, *IEEE Signal Processing Magazine*, pp. 43–45, Nov. 1997.
29. L.K. Hansen & J. Larsen: "Linear Unlearning for Cross-Validation," *Advances in Computational Mathematics*, vol. 5, pp. 269–280, 1996.
30. K.V. Hansen & J. Larsen: "An Algorithm for Successive Identification of Reflections," *IEEE Transactions on Image Processing*, vol. 3, no. 3, pp. 281–291, May 1994.
31. J. Larsen: "Optimizing Neural Network Architectures Using Generalization Error Estimators," *Radiophysics* (Russian), vol. 37, no. 9, pp. 1131–1147, 1994.

Journal Papers (general scientific subjects)

1. B. Karlsen, H.B.D. Sørensen, J. Larsen and K.B. Jackobsen: "Statistical Signal Processing in Humanitarian Mine Clerance Systems," *DSP Tidende*, Dansk Selskab for Anvendt Digital Signalbehandling, no. 13, October 2002 (in Danish).

Conference Papers (invited/with review)

1. * M.N. Schmidt, J. Larsen, F.-T. Hsiao: "Wind Noise Reduction using Sparse Non-negative Matrix Factorization," in Proc. IEEE International Workshop on Machine Learning for Signal Processing 2007, pp. 431–436, 2007.
2. J. Arenas-García, A. Meng, K.B. Petersen, T. Lehn-Schiøler, L.K. Hansen, J. Larsen: "Unveiling Music Structure via PLSA Similarity Fusion," in Proc. IEEE International Workshop on Machine Learning for Signal Processing 2007, pp. 419–424, 2007.
3. L.K. Hansen, T. Lehn-Schiøler, K.B. Petersen, J. Arenas-Garcia, J. Larsen, S.H. Jensen: "Learning and Clean-up in a Large Scale Music Database," accepted for EUSIPCO 2007, 2007.
4. J. Arenas-Garca, J. Larsen, L.K. Hansen, A. Meng: "Optimal filtering of dynamics in short-time features for music organization," 7th International Conference on Music Information Retrieval (ISMIR 2006), 2006.
5. * L.P.B. Christensen, J. Larsen, "On Data and Parameter Estimation Using the Variational Bayesian EM-algorithm for Block-fading Frequency-selective MIMO Channels," in *Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing*, Vol. IV, pp. 465–468, 2006.
6. *M.S. Pedersen, D. Wang, J. Larsen, U. Kjems: "Separating Underdetermined Convolutive Speech Mixtures," in Independent Component Analysis and Blind Signal Separation (ICA 2006): Lecture Notes in Computer Science, Springer Berlin/Heidelberg, vol. 3889, pp. 674–681, 2006.
7. * M.S. Pedersen, T. Lehn-Schiøler, J. Larsen: "BLUES from Music: BLind Underdetermined Extraction of Sources from Music," in Independent Component Analysis and Blind Signal Separation (ICA 2006): Lecture Notes in Computer Science, Springer Berlin/Heidelberg, vol. 3889, pp. 392–399, 2006.
8. * T. Lehn-Schiøler, L.K. Hansen, J. Larsen: "Mapping from Speech to Images Using Continuous State Space Models," Lecture Notes in Computer Science, vol. 3361, pp. 136–145, Springer, 2005.

9. P. Ahrendt, C. Goutte, J. Larsen: "Co-occurrence Models in Music Genre Classification," in *Proceedings of IEEE International workshop on Machine Learning for Signal Processing*, pp. 247-252, 2005.
10. M.S. Pedersen, D. Wang, J. Larsen, U. Kjems: "Overcomplete Blind Source Separation by Combining ICA and Binary Time-Frequency Masking," in *Proceedings of IEEE International workshop on Machine Learning for Signal Processing*, pp. 15–20, 2005.
11. S. Sigurdsson, N.H. Pontoppidan, J. Larsen: "Supervised and unsupervised condition monitoring of non-stationary acoustic emission signals," in *Proceedings of the 18th International Congress on Condition Monitoring and Diagnostic Engineering Management (COMADEM)*, pp. 535–541, Cranfield University Press, 2005.
12. L.K. Hansen, P. Ahrendt, J. Larsen: "Towards Cognitive Component Analysis," in proceedings *AKRR'05 -International and Interdisciplinary Conference on Adaptive Knowledge Representation and Reasoning*, Pattern Recognition Society of Finland, Finnish Artificial Intelligence Society, Finnish Cognitive Linguistics Society, 2005.
13. * N.H. Pontoppidan, J. Larsen, S. Sigurdsson: "Non-stationary Condition Monitoring of Large Diesel Engines with the AEWATT toolbox," *59th meeting of the Society for Machinery Failure Prevention Technology*, Society for Machinery Failure Prevention Technology, 2005.
14. A. Morgenstjerne, B. Karlsen, B., J. Larsen, H.B. Sørensen, K.B. Jakobsen: "A Comparative and Combined Study of EMIS and GPR Detectors by the use of Independent Component Analysis," in proceedings *2005 Detection and Remediation Technologies for Mines and Mine-Like Targets, AeroSense 2005*, 2005.
15. * A. Meng, P. Ahrendt, J. Larsen: "Improving Music Genre Classification by Short-Time Feature Integration," *IEEE International Conference on Acoustics, Speech, and Signal Processing*, Philadelphia, USA, vol. V, pp. 497-500, March 2005.
16. * M.S. Pedersen, J. Larsen, U. Kjems; "On the difference between updating the mixing matrix and updating the separation matrix," *IEEE International Conference on Acoustics, Speech, and Signal Processing*, Philadelphia, USA, vol. V, pp. 297–300, March 2005.
17. R.E. Madsen, J. Larsen and L.K. Hansen: "Part-Of-Speech Enhanced Context Recognition", in A.K. Barros, J. Principe, J. Larsen, T. Adali, S. Douglas (eds.) *Proceedings of IEEE Workshop on Machine Learning for Signal Processing XIV*, São Luís, Brazil, Sept. 29–Oct. 1, 2004, pp. 635–644.
18. * N.H. Pontoppidan and J. Larsen: "Non-Stationary Condition Monitoring Through Event Alignment," in A.K. Barros, J. Principe, J. Larsen, T. Adali, S. Douglas (eds.) *Proceedings of IEEE Workshop on Machine Learning for Signal Processing XIV*, São Luís, Brazil, Sept. 29–Oct. 1, 2004, pp. 499–508.
19. R.E. Madsen, S. Sigurdsson, L.K. Hansen and J. Larsen: "Text Categorization with Relevance Pruned Vocabularies", in *Proceedings IJCNN 2004 - International Joint Conference on Neural Networks*, Budapest, Hungary, July 25-29, 2004.
20. * P. Ahrendt, A. Meng and J. Larsen: "Decision Time Horizon for Music Genre Classsification using Short Time Features ", in *Proceddings of EUSIPCO-2004* Sept. 7–10, Vienna, Austria, 2004, pp. 1293–1296.
21. * N.H. Pontoppidan and J. Larsen: "Unsupervised Condition Change Detection In Large Diesel Engines," accepted for C. Molina, T. Adali, J. Larsen, M. Van Hulle, S. Douglas, J. Rouat (eds.) *Proceedings of IEEE Workshop on Neural Networks for Signal Processing XIII*, Toulouse, France, Sept. 17-19, 2003, pp. 565–574.
22. * B. Karlsen, H.B.D. Sørensen, J. Larsen and K.B. Jakobsen: "GPR Detection of Buried Symmetrically Shaped Mine-like Objects using Selective Independent Component Analysis," in *Proceedings of the 2003 Detection and Remediation Technologies for Mines and Mine-like Targets, AeroSense 2003*, Orlando FL, vol. 5089, pp. 375–386, April 2003.
23. * N.H. Pontoppidan, J. Larsen and T. Fog: "Independent Component Analysis for Detection of Condition Changes in Large Diesels", in *Proceedings of COMADEM 2003*, August 27–29, Växjö University, Sweden, no. 16, pp. 493–502, 2003.
24. V.D. Calhourn, T. Adali, L.K. Hansen, J. Larsen and J.J. Pekar: "ICA of Functional MRI Data: An Overview," invited contribution for *Fourth International Symposium on Independent Component Analysis and Blind Source Separation*, Nara, Japan, April 1-4, pp. 281–288, 2003.

25. J. Larsen, L.K. Hansen, T. Kolenda and F.A. Nielsen: "Independent Component Analysis in Multimedia Modeling," invited contribution for *Fourth International Symposium on Independent Component Analysis and Blind Source Separation*, Nara, Japan, April 1-4, pp. 687–696, 2003.
26. J. Quiñonero Candela, A. Girard, J. Larsen, and C.E. Rasmussen: "Propagation of Uncertainty in Bayesian Kernels Models - Application to Multiple-Step Ahead Forecasting," in *Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing*, Hong Kong, China, April 6-10, vol. 2, pp. 701-704, 2003.
27. T. Kolenda, L.K. Hansen, J. Larsen and O. Winther: "Independent Component Analysis for Understanding Multimedia Content," in H. Bourlard, T. Adali, S. Bengio, J. Larsen, and S. Douglas (eds.) *Proceedings of IEEE Workshop on Neural Networks for Signal Processing XII* Matigny, Valais, Switzerland, Sept. 4–6, 2002, pp. 757–766.
28. * A. Szymkowiak-Have, J. Larsen, L.K. Hansen, P.A. Philipsen, E. Thieden and H.C. Wulf: "Clustering of Sun Exposure Measurements," in H. Bourlard, T. Adali, S. Bengio, J. Larsen, and S. Douglas (eds.) *Proceedings of IEEE Workshop on Neural Networks for Signal Processing XII* Matigny, Valais, Switzerland, Sept. 4–6, 2002, pp. 727–735.
29. * B. Karlsen, H.B.D. Sørensen, J. Larsen and K.B. Jakobsen: "Independent Component Analysis for Clutter Reduction in Ground Penetrating Radar Data," appears in *Proceedings of the SPIE, AeroSense 2002*, Orlando FL, vol. 4742, pp. 378–389, April 2002.
30. *S. Sigurdsson, J. Larsen, L.K. Hansen, P.A. Philipsen and H.C. Wulf: "Outlier estimation and detection: Application to Skin Lesion Classification", in proceedings of ICASP'2002, Orlando, Florida, USA, May 13-17, vol. I, pp. 1049–1052, 2002.
31. *T. Kolenda, L.K. Hansen and J. Larsen: "Signal Detection using ICA: Application to Chat Room Topic Spotting", in proceedings of ICA'2001, San Diego, USA, December 9–13, 2001, pp. 540–545.
32. *B. Karlsen, J. Larsen, H.B.D. Sørensen and K.B. Jakobsen: "Comparison of PCA and ICA based Clutter Reduction in GPR Systems for Anti-Personal Landmine Detection," *Proceedings of the 11th IEEE Workshop on Statistical Signal Processing*, Singapore, Aug. 6–8, 2001, pp. 146–149.
33. * A. Szymkowiak, J. Larsen and L.K. Hansen: "Hierarchical Clustering for Datamining," Special Session on Neural Networks and Datamining in N. Babs, L.C. Jain, R.J. Howlett (eds.) *Proc. KES-2001 Fifth International Conference on Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies*, Osaka and Nara, Japan, September 6–8, 2001, pp. 261–265.
34. * A. Szymkowiak, P.A. Philipsen, J. Larsen, L.K. Hansen, E. Thieden and H.C. Wulf: "Imputating Missing Values in Diary Records of Sun-exposure Study," in D. Miller, T. Adali, J. Larsen, M. Van Hulle, S. Douglas (eds.) *Proceedings IEEE Workshop on Neural Networks for Signal Processing XI* Falmouth, Massachusetts, Sept. 10–12, 2001, pp. 489–498.
35. J. Hørlyck, J. Larsen, L.K. Hansen, and T. Christiansen: "Are All E-comstumers Alike?" in *1st Nordic Workshop on Electronic Commerce*, Halmstad, May 28-29, 2001.
36. * B. Karlsen, K.B. Jakobsen, J. Larsen and H.B.D. S'ørensen: "Mine Detection using SF-GPR: A Signal Processing Approach for Resolution Enhancement and Clutter Reduction," in *Proceedings of AeroSense 2001*, Vol. 4394-94, Orlando FL, April 2001.
37. L.K. Hansen, J. Larsen, T. Kolenda: "Blind Detection of Independent Dynamic Components," in *Proceedings IEEE ICASSP'2001*, Salt Lake City, Utah, USA, Vol. 5, pp. 3197–3200, 2001.
38. J. Larsen, L.K. Hansen, A. Szymkowiak, T. Christiansen & T. Kolenda: "Webmining: Learning from the World Wide Web," invited contribution for *Proceedings of Nonlinear Methods and Data Mining 2000*, Rome, Italy, Sept. 25–26, 2000, pp. 106–125.
39. * S. Sigurdsson, J. Larsen and L.K. Hansen: "On Comparison of Adaptive Regularization Methods," in B. Widrow, L. Guan, K. Paliwa, T. Adali, J. Larsen, E. Wilson, S. Douglas (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing X*, Piscataway, New Jersey: IEEE. Sydney, Australia, Dec. 11–13, 2000, pp. 221–230.
40. C. Helbo, J. Larsen, P. Møller and P. Leisner: "The Use of Mathematical Modelling in Optimisation of the Pulse Plating of Copper on Printed Circiut Boards," *15th World Interfinish Congress and Exhibition*, Garmish-Partenkirchen, Germany, Sept. 13–15, 2000.

41. L.K. Hansen, S. Sigurdsson, T. Kolenda, F.Å. Nielsen, U. Kjems and J. Larsen: "Modeling Text with Generalizable Gaussian Mixtures," in *Proceedings of IEEE ICASSP'2000*, Istanbul, Turkey, June 5-9, 2000, vol. VI, pp. 3494–3497.
42. * B. Karlsen, J. Larsen, K.B. Jakobsen, H.B.D. Sørensen and S. Abrahamson: "Antenna Characteristics and Air-Ground Interface Deembedding Methods for Stepped-Frequency Ground Penetrating Radar Measurements," in A.C. Dubey, J.F. Harvey, J.T. Broach, R.E. Dugan (eds.) *Proceedings of SPIE, AeroSense 2000: Detection and Remediation Technologies for Mines and Minelike Targets V*, vol. 4038, Orlando Fl, April 24-28, 2000, pp. 1420–1430.
43. J. Larsen and C. Goutte: "On Optimal Data Split for Generalization Estimation and Model Selection," in Y.H. Hu, J. Larsen, E. Wilson, S. Douglas (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing IX*, Piscataway, New Jersey: IEEE, pp. 225–234, 1999.
44. * L.N. Andersen, W. Au, J. Larsen and L.K. Hansen: "Discrimination of Cylinders with Different Wall Thicknesses using Neural Networks and Simulated Dolphin Sonar Signals," in Y.H. Hu, J. Larsen, E. Wilson, S. Douglas (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing IX*, Piscataway, New Jersey: IEEE, pp. 477–486, 1999.
45. T.L. Fog, L.K. Hansen, J. Larsen, H.S. Hansen, L.B. Madsen, P. Sørensen, E.R. Hansen and P.S. Pedersen: "On Condition Monitoring of Exhaust Values in Marine Diesel Engines," in Y.H. Hu, J. Larsen, E. Wilson, S. Douglas (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing IX*, Piscataway, New Jersey: IEEE, pp. 554–563, 1999.
46. * L.N. Andersen, W. Au, J. Larsen, L.K. Hansen: "Sonar discrimination of cylinders from different angles using neural networks," in *Proceedings of IEEE ICASSP'99*, Phoenix, AZ, March 15-19, vol. 2, pp. 1121–1124, 1999.
47. J.A. Benediktsson, J. Larsen, J.R. Sveinsson & L.K. Hansen: "Optimized Combination, Regularization, and Pruning in Parallel Consensual Neural Networks," in *Proceedings of European Symposium on Remote Sensing*, vol. 3500, Barcelona, Spain, 21–25, Sept. 1998.
48. L.K Hansen & J. Larsen: "Soruce Separation in Short Image Sequences using Delayed Correlation," in *Proceedings of NORSIG'98*, Vigsø, Denmark, pp. 253–256, ISBN-87-985750-8-2, June 1998.
49. C. Goutte & J. Larsen: "Optimal Cross-Validation Split Ratio: Experimental Investigation," *Proceedings of ICANN'98*, Sweden, Sept. 1998, pp. 681-686.
50. C. Goutte & J. Larsen: "Adaptive Metric Kernel Regression," in T. Constantinides, S.-Y. Kung, M. Niranjan & E. Wilson (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing VIII*, Piscataway, New Jersey: IEEE, pp. 184–193, 1998.
51. J. Larsen, L.N. Andersen, M. Hintz-Madsen & L.K. Hansen: "Design of Robust Neural Network Classifiers," in *Proceedings of IEEE ICASSP'98*, vol. 2, pp. 1205–1208, Seattle, USA, May 1998.
52. C. Goutte & J. Larsen: "Adaptive Regularization of Neural Networks using Conjugate Gradient," in *Proceedings of IEEE ICASSP'98*, vol. 2, pp. 1201–1204, Seattle, USA, May 1998.
53. * M.W. Pedersen & J. Larsen: "Interpretation of Recurrent Neural Networks," in J. Principe, L. Giles, N. Morgan & E. Wilson (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing VII*, Piscataway, New Jersey: IEEE, pp. 82–91, 1997.
54. * L. Nonboe Andersen, J. Larsen, L.K. Hansen & M. Hintz-Madsen: "Adaptive Regularization of Neural Classifiers," in J. Principe, L. Giles, N. Morgan & E. Wilson (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing VII*, Piscataway, New Jersey: IEEE, pp. 24–33, 1997.
55. L.K. Hansen, J. Larsen & T. Fog: "Early Stop Criterion from the Bootstrap Ensemble" in *Proceedings of IEEE ICASSP'97*, vol. 4, pp. 3205–3208, Munich, Germany, April 1997.
56. J. Larsen, L.K. Hansen & C. Svarer: "Regularization of Neural Networks," in Per Christian Hansen (ed.), *Proceedings of the 4th Interdisciplinary Workshop*, Techn. Univ. of Denmark, Sept. 24, 1996, ISBN 87-88306-24-0, pp. 59–66.
57. P. Sørensen, M. Nørgård, L.K. Hansen & J. Larsen: "Cross-Validation with LULOO," in S.I. Amari, L.W. Chan, I. King & K.S. Leung (eds.) *Proceedings of 1996 International Conference on Neural Information Processing, ICONIP'96*, Hong Kong, Sept. 24–27, vol. 2, pp. 1305–1310, 1996.
58. J. Larsen L.K. Hansen, C. Svarer & M. Ohlsson: "Design and Regularization of Neural Networks: The

Optimal Use of a Validation Set," in S. Usui, Y. Tohkura, S. Katagiri & E. Wilson (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing VI*, Piscataway, New Jersey: IEEE, pp. 62–71, 1996.

59. * M. Hintz-Madsen, M.W. Pedersen, L.K. Hansen & J. Larsen: "Design and Evaluation of Neural Network Classifiers," in S. Usui, Y. Tohkura, S. Katagiri & E. Wilson (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing VI*, Piscataway, New Jersey: IEEE, pp. 223–232, 1996.
60. * M. Hintz-Madsen, L.K. Hansen, J. Larsen, E. Olesen & K.T. Drzewiecki: "Detection of Malignant Melanoma using Neural Classifiers," in A.B. Bulsari, S. Kallio & D. Tsaptsinos (eds.) *Solving Engineering Problems with Neural Networks, Proceedings of EANN'96*, London, UK, June 17–19, pp. 395–398, 1996.
61. L.K. Hansen & J. Larsen: "Unsupervised Learning and Generalization," in *Proceedings of IEEE International Conference on Neural Networks*, Washington DC, vol. 1, pp. 25–30, June 1996.
62. L.K. Hansen, L.N. Andersen, U. Kjems & J. Larsen: "Revisiting Bolzmann Learning: Parameter Estimation in Markov Fields," in *Proceedings of IEEE ICASSP'96*, Atlanta, GA, vol. 6, pp. 3395–3398, 1996.
63. * M.W. Pedersen, L.K. Hansen & J. Larsen: "Pruning with Generalization Based Weight Saliencies: γOBD, γOBS," in D.S. Touretzky, M.C. Mozer & M.E. Hasselmo (eds.) *Advances in Neural Information Processing Systems 8, Proceedings of the 1995 Conference*, Cambridge, Massachusetts: MIT Press, pp. 521–528, 1996.
64. T.L. Fog, J. Larsen & L.K. Hansen: "Training and Evaluation of Neural Networks for Multi-Variate Time Series Processing," in *Proceedings of 1995 IEEE International Conference on Neural Networks*, Perth, Australia, Nov. 27–Dec. 1, vol. 2, pp. 1194–1199, 1995.
65. J. Larsen & L.K. Hansen: "Empirical Generalization Assessment of Neural Network Models," in F. Girosi, J. Makhoul, E. Manolakos & E.
Wilson (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing V*, Piscataway, New Jersey: IEEE, pp. 30–39, 1995.
66. * M. Hintz-Madsen, L.K. Hansen, J. Larsen, E. Olesen & K.T. Drzewiecki: "Design and Evaluation of Neural Classifiers Application to Skin Lesion Classification," in F. Girosi, J. Makhoul, E. Manolakos & E.
Wilson (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing V*, Piscataway, New Jersey: IEEE, pp. 484–493, 1995.
67. J. Larsen & L.K. Hansen: "Generalization Performance of Regularized Neural Network Models," in J. Vlontzos, J.-N. Hwang & E. Wilson (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing IV*, Piscataway, New Jersey: IEEE, pp. 42–51, 1994.
68. L.K. Hansen, C.E. Rasmussen, C. Svarer & J. Larsen: "Adaptive Regularization," in J. Vlontzos, J.-N. Hwang & E. Wilson (eds.) *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing IV*, Piscataway, New Jersey: IEEE, pp. 78–87, 1994.
69. C. Svarer, L.K. Hansen, J. Larsen & C.E. Rasmussen: "Designer Networks for Time Series Processing," in C.A. Kamm, G.M. Kuhn, B. Yoon, R. Chellappa & S.Y. Kung (eds.), *Proceedings of the IEEE Workshop on Neural Networks for Signal Processing III*, Piscataway, New Jersey: IEEE, pp. 78–87, 1993.
70. C. Svarer, L.K. Hansen & J. Larsen: "On Design and Evaluation of Tapped-Delay Neural Architectures," in *Proceedings of the IEEE International Conference on Neural Networks*, San Francisco, California, USA, vol. 1, pp. 46–51, 1993.
71. J. Larsen: "A Generalization Error Estimate for Nonlinear Systems," in S.Y. Kung, F. Fallside, J. Aa. Sørensen & C.A. Kamm (eds.) *Neural Networks for Signal Processing II: Proceedings of the 1992 IEEE-SP Workshop*, Piscataway, New Jersey: IEEE, pp. 29–38, 1992.
72. N. Hoffmann & J. Larsen: "A Neural Architecture for Nonlinear Adaptive Filtering of Time Series," in B.H. Juang, S.Y. Kung & C.A. Kamm (eds.) *Proceedings of the first IEEE Workshop on Neural Networks for Signal Processing*, Piscataway, New Jersey: IEEE, pp. 533–542, 1991.

Conference Abstracts

1. L.K. Hansen, C. Svarer, J. Larsen & C. E. Rasmussen: "Designer Networks for Forecasting," abstract in *Proceedings of the 14th Annual International Symposium on Forecasting*, Stockholm, Sweden, June 12–15, 1994.
2. J. Larsen: "Optimizing Neural Network Architectures for Time Series Applications," abstract in *Proceedings of the 14th Annual International Symposium on Forecasting*, Stockholm, Sweden, June 12–15, 1994.
3. J. Larsen: "Optimizing Nonparametric Regression Models Using Generalization Error Estimators," poster abstract in *Proceedings NATO Advanced Study Institute: From Statistics to Neural Networks*, Les Arcs, Bourg-Saint-Maurice, France, June 20–July 2, 1993.

Dissertations

1. J. Larsen: *Design of Neural Network Filters*, Ph.D. Thesis, Electronics Institute, Technical University of Denmark, March 1993, (435 p.) Second Edition Jan. 1996.
2. N. Hoffmann & J. Larsen: *Videnbaseret Adaptiv Signalbehandling*, M.Sc. Thesis (in Danish) Electronics Institute, Technical University of Denmark, vol. 1 (162 p.), vol. 2, (202 p.), vol. 3 (534 p.), August 1989.

Technical Reports and Lecture Notes

1. S. Sigurdsson, J. Larsen, P.A. Philipsen, M. Gniadecka, H.C. Wulf, L.K. Hansen: "Estimating and Suppressing Background in Raman Spectra with an Artificial Neural Network," Technical Report *Informatics and Mathematical Modelling, Technical University of Denmark*, IMM-Technical report-2003-20, 2003.
2. N.H. Pontoppidan, J. Larsen, S. Sigurdsson, J. Steel, R. Douglas, T. Fog and E. Brown: "Data Acquisition Strategy and Signal Preprocessing," Technical Report *Informatics and Mathematical Modelling, Technical University of Denmark*, 2003.
3. J. Larsen: "Distribution of the Density of a Gaussian Mixture," Technical report *IMM, Technical University of Denmark*, Feb. 2003.
4. J. Larsen: "Gaussian Integrals," Technical report *IMM, Technical University of Denmark*, Jan. 2003.
5. K.V. Hansen & J. Larsen: "Classification of Seismic Reflections Using Neural Networks," Technical report *Electronics Institute, Technical University of Denmark*, Jan. 1994.
6. N. Hoffmann & J. Larsen: "Algorithms for Model Order Reduction in Nonlinear Filters," Technical report *Electronics Institute, Technical University of Denmark*, Feb. 1992.
7. J. Larsen: *Introduction to Artificial Neural Networks*, lecture note for Course 04361, IMM, Technical University of Denmark, 1st edition, 1999, (51 p.).
8. J. Larsen: *Correlation Functions and Power Spectra*, lecture note for Course 04361, IMM, Technical University of Denmark, 4rd Edition, Sept. 1999, (22 p.)
9. J. Larsen & J.Aa. Sørensen: *Problems for Course 04362 Digital Signal Processing*, IMM, Technical University of Denmark, 3rd Edition, Sept. 1998, (33 p.)
10. J. Larsen & J.Aa. Sørensen: *Problem Solutions for Course 04362 Digital Signal Processing*, IMM, Technical University of Denmark, 3rd Edition, Sept. 1998, (58 p.)
11. J. Larsen: *Course 04362 Digital Signal Processing: Solutions to Problems in Proakis and Manolakis, Digital Signal Processing, 3rd Edition*, IMM, Technical University of Denmark, 3rd Edition, Sept. 1998, (14 p.)
12. J. Larsen: *Feed-Forward Neural Networks*, exercise note for Course c0466, IMM, Technical University of Denmark, March 1997, (5 p.)
13. J. Larsen: *Neural Classifier 1.0 Software Documentation*, IMM, Technical University of Denmark, 3rd Edition, Sept. 1998, (14 p.)
14. J. Larsen: *Egenskaber ved Korrelationsfunktioner og Effektspektre* (in Danish), note for Course c4232, EI, DTU, 1995, (4 p.)