

CURRICULUM VITAE – Rasmus Larsen – 2008.9.15

Rasmus Larsen, date of birth, March 14th 1966 in Brørup, Denmark.

Married to Inge Kristensen, children: Astrid Larsen, born August 7th 1998; Sigrid Elisabeth Larsen, born February 18th 2001; Dagmar Agnete Balling Larsen, born February 27th 2004.

Address: Ermelundsvej 123, DK-2820 Gentofte, Denmark

Education

- Danish 'Matematisk-fysisk studentereksamen', Aalborg Katedralskole, June 1984.
- Cand. polyt. (M.Sc.(Eng)) specializing in statistical image analysis, Institute of Mathematical Statistics and Operations Research (IMSOR), Technical University of Denmark. Supervisors: Professor Knut Conradsen and Associate Professor Bjarne K. Ersbøll, August 1991
- Ph.D. specializing in statistical image analysis, Department of Mathematical Modelling, Technical University of Denmark. Supervisors: Professor Knut Conradsen and Associate Professor Bjarne K. Ersbøll, May 1994

Employment

- Military service, Danish Medical Corps, January 1985-June 1986
- Teaching Assistant at the Department of Mathematics, Technical University of Denmark, 1987-1990.
- Teaching Assistant at the Institute of Mathematical Statistics and Operations Research (IMSOR), Technical University of Denmark, 1989-1991
- Enrolment as Ph.D. student at Department of Mathematical Modelling, Technical University of Denmark, 1991-1994.
- Assistant Research Professor at the Department of Mathematical Modelling, Technical University of Denmark, 1994-1997.
- Teaching Assistant, Department of Pharmacy, Royal Danish School of Pharmacy, 1994-1997.
- Expert Statistician at Novo Nordisk A/S, 1998-1999.
- Associate Professor of medical image analysis at Informatics and Mathematical Modelling (IMM), Technical University of Denmark, 2000-2007
- Professor in image analysis, DTU Informatics, Technical University of Denmark, 2008-

External research

- Visiting Scholar at the Computer Vision Laboratory, Department of Electrical Engineering, University of Linköping, Sweden, 2 months, 1993, host professor Gösta Granlund
- Visiting Scholar at the Scripps Institution of Oceanography, University of California, San Diego, California, USA, 6 months, 1995, host professor James Simpson
- Visiting Scholar at the Statistics Department, Stanford University, California, USA, 12 months, 2003-2004, host professor Trevor Hastie

Administrative and management duties

- Elected member of IMM department board, 2001-2004
- Appointed member of IMM executive management and division head for statistics, image analysis, digital signal processing, computer graphics, and geoinformatics, 2001-2003
- Section leader image analysis and computer graphics, DTU Informatics, 2008-
- Management committee member BIOP consortium (DTU-Risø collaboration)
- Elected member of the Ph.D program committee for Mathematics, Informatics, and Physics, 2002-2005, 2007-
- Appointed chairman of the Ph.D program committee for Mathematics, Informatics, and Physics, 2005-
- Elected member of the DTU Ph.D. study board, 2005-2007

- Member of the coordinating committee for PhD education, DTU, 2008-

Honorary duties

- Elected økonomiseniør (treasurer) of Studenterforeningen, a student club with 1.600 members, 1990-1992
- Elected ledende senior (chairman) of Studenterforeningen, 1992-1993
- Elected board member of DIP – The Danish Pension Fund for Engineers, a pension fund with 16.000 members, 2006-

Awards

- Statoil Prize for internationally recognized research 2008, 100.000 DKK

Teaching

Supervision

- 23 Ph.D projects (current and past)
- >60 Master's thesis projects

PhD schools

- CISP - Copenhagen Image and Signal Processing graduate school - teacher
- BIOP – Biomedical Optics and new Laser Systems graduate school – school board, and management committee
- ITMAN – IMM graduate school – school leader
- DTU Informatics, head of PhD School

Ph.D./M.Sc./B.Sc. courses

- 02503 Advanced image analysis - design of present course including lecture notes in 2000, taught it 2001, 2002, lectures (notes+articles), matlab computer exercises
- 02505 Medical image analysis – design of present course in 2004, taught it since, text book, matlab computer exercises
- 02581 Computational Data Analysis –co-design of course in 2003, co-taught it in 2003, 2005 co-redesigned course in 2006, co-taught it since, textbook, matlab computer exercises
- Statistical image analysis – PhD/ECMI summer school, designed including lecture notes and taught in University of Kaiserslautern, 1994, Chalmers, 1996
- ITMAN seminar series – design of series with monthly seminars for ITMAN PHD students in patenting, communication, dissemination of knowledge, venture, innovation
- CISP PhD summer school 2003 – lectures in statistical shape analysis
- 02915 Advanced Shape Analysis 2005, Phd course, 10 lectures
- BIGSS '08: Biophotonics and Imaging Graduate Summer School– The Irish National Biophotonics and Imaging Platform - Ballyvaughan, Ireland, 2008
- Lectures in a series of other courses

Project Funding

- [PROJ1] Process Visualisation and Analysis Endoscope System (PROVAEN), 2008, EU FP6 STREP, kr. 1.600.000 (total budget 3MEuro)
- [PROJ2] IT Everywhere – IMM graduate school co-funded Phd project programme, 2009-2012, kr. 3.700.000
- [PROJ3] The Computerized radiologist (ComRad), FTP, kr. 2.400.000; DTU, Glostrup Hospital
- [PROJ4] IMM graduate school ITMAN, 2005-2010, Forskeruddannelsesrådet, kr. 7.000.000 kr; DTU kr. 2.000.000; Danske Slagterier, Hvidovre Hospital, DHI, Risø kr. 2.000.000
- [PROJ5] Action Tracking and Recognition using Time-of-Flight Sensors, 2006, EU FP6 STREP, WP leader, kr. 3.100.000 (total budget 2.7 MEuro)

- [PROJ6] Virtuelle Slagter, 2006-2009, Fødevareministeriet Innovationslovsprojekt, Danske Slagterier, kr. 1.800.000 (total budget 8 Mkr)
- [PROJ7] Quantitative Shape Modelling of Biomedical Images, 2005-2008, STVF Forskningskonsortium kr. 500.000; Danske Slagterier kr 500.000; DTU 500.000, WP leader (total budget 6 Mkr)
- [PROJ8] Generative Interpretation of Medical Images, 2004-2006, IT-FORSK, kr. 1.700.000
- [PROJ9] Mathematical Modelling of Mandibular Metamorphosis, 2002-2003, STVF, kr. 1.300.000

Conference organisation

- TOF-CV workshop in conjunction with CVPR 2008, Anchorage, Alaska, chairman of organising committee
- MICCAI – Int'l Conference on Medical Image Computing and Computer-assisted Intervention 2005 (Palm Springs, program committee), 2006 (executive committee and program chair), 2007 (Brisbane, program committee), 2009 (London, Program Committee member)
- CAFIA – Computer Assisted Fundus Image Analysis 2001 (Copenhagen) & 2003 (Torino) – organisation and scientific committee
- GMBV – Int'l workshop on Generative Model Based Vision 2002 (with ECCV in Copenhagen) & 2004 (with CVPR in Washington, D.C.) – co-organiser and program co-chair
- DTU Visiondays – organiser and chairman of the annual medical DTU visionday workshop and exhibition since its beginning in 2000
- ERIM organised Third International Airborne Remote Sensing Conference and Exhibition 1997 (Copenhagen) – host committee
- SCIA - Scandinavian Conference on Image Analysis (2003, Gothenberg) – program committee and invited speaker

Reviewing and Assessment Assignments

- Editorial Board member – Medical Image Analysis, Elsevier
- Scientific reviewer for major image analysis journals (IEEE T-PAMI, CVIU, MEDIA, PRL, IVC, IJCV) and leading conferences (MICCAI, ECCV, CVPR, IPMI, SCIA, SPIE MI)
- Scientific reviewer for research councils (Iceland, Holland, UK, Sweden)
- PhD examination committees (Lund University, Aalborg University, Århus University, Linköping University, Dublin City University, IT-University of Copenhagen, DTU). Assessment committees for scientific positions (Aalborg University, University of Copenhagen, IT University of Copenhagen, DTU).
- External examination for M.Sc programs in engineering and computer science in Denmark (Århus University, Aalborg University, IT-University of Copenhagen, University of Copenhagen, Roskilde University)

Ph.D. Students, funding, and affiliation

- [PHD1] Henrik Aanæs, DTU, 2000-2003
- [PHD2] Rasmus R. Paulsen, Erhvervsforsker, Oticon, 2001-2004
- [PHD3] Mikkel Stegmann, SSF, co-supervisor, 2001-2004
- [PHD4] Brian Lading, BIOP, 2003-2007
- [PHD5] Karl Sjöstrand, DTU, 2003-2007
- [PHD6] Hildur Olafsdottir, DTU, co-supervisor, 2004-2008,
- [PHD7] Sune Darkner, Oticon, erhvervsforsker, 2005-2008
- [PHD8] David Holm, BIOP forskerskole, Hvidovre Hospital, DTU, 2005-2008
- [PHD9] Martin Vester-Christensen, QSMBI, Danske Slagterier, DTU, 2005-2008
- [PHD10] Søren G. Erbou, DTU, Danske Slagterier, co-supervisor, 2005-2008
- [PHD11] Mads Fogtmann Hansen, ITMAN, Danske Slagterier, DTU, 2006-2009
- [PHD12] Arnold Skimminge, ITMAN, Hvidovre Hospital, DTU, 2006-2009

- [PHD13] Michael Sass Hansen, DTU, 2006-2009
- [PHD14] Sigurjon A. Gudmundsson, EU, BIOP, co-supervisor, 2006-2009
- [PHD15] Vesselin Perfanov, DTU, 2007-2010
- [PHD16] Peter Stanley Jørgensen, SERC, Risø-DTU, 2007-2010
- [PHD17] Allan Lyckegaard, Risø-DTU, co-supervisor, 2007-2010
- [PHD18] Morten Arngren, Foss Analytical, erhvervsforsker, 2008-2011, co-supervisor
- [PHD19] Thomas Mosbech, ITMAN, Danske Slagterier, DTU, 2008-2010, co-supervisor
- [PHD20] Katarzyna Gebal, DTU, 2008-2011, co-supervisor
- [PHD21] Oline V. Olesen, Siemens, erhvervsforsker, 2008-2011
- [PHD22] Signe Strann Thorup, DTU, 2008-2011
- [PHD23] Flemming Møller, Danisco, 2008-2011

Current Industrial Collaborators

- Danske Slagterier, Slagteriernes Forskningsinstitut (Virtual Slaughter)
- Oticon (ear canal shape modelling)
- iMotions – Emotion Technology (face/eye tracking)
- Visiopharm (microscopy image analysis)
- Hvidovre Hospital, MR- dept. (cardiac and neuro morphometry)
- Glostrup Hospital, MR- dept. (cardiac image analysis)
- Steno Diabetes Hospital/Glostrup Hospital, Radiology dept. (fat quantification)
- School of Dentistry, 3D lab – 3D image analysis
- Rigshospitalet – PET scanning
- Mesa Imaging – time-of-flight camera technology
- Videometer – multispectral image analysis
- Foss - multispectral image analysis of food
- Danisco - multispectral image analysis of food
- Siemens – PET scanning

Scientific dissemination to the general public

- Billedanalyser hjælper Læger og Industri, *Aktuel Naturvidenskab* nr. 4, 2008, Interview med Rasmus Larsen
- R.Larsen, Opinion, *Højteknologi er sagen*, Berlingske Tidende, 2007
- R. Larsen, I. Kristensen, Læserbrev, *Forskningen skal centraliseres*, Politiken, 2004
- Øjet styrer computeren, *Aktuel Naturvidenskab*, No. 1, pp. 10-13, 2005
- Flæskestegen ind i IT alderen, *DYNAMO*, no. 1, 2007, pp. 24-25
- Når Hjernen bliver Ældre, *DYNAMO*, no 3, 2007. pp. 41-42 (to appear)
- Lasere og 3D-billeder giver hurtig og præcis diagnostik, *Aktuel Naturvidenskab*, 2007
- Face recognition, and animation, Future & Technology, exhibition, Copenhagen Airport departure area, 2004
- Shh – Fjenden Lytter, Post & Telemuseet, face recognition, computer based exhibition 2001

Peer reviewed scientific papers

2009

- [1] ToF-Sensors in Computer Graphics, Andreas Kolb, Erhardt Barth, Reinhard Koch & Rasmus Larsen, Eurographics, STAR – State of The Art Report (accepted)
- [2] Curl-gradient Image Warping: Introducing Deformation Potentials for Medical Image registration using Helmholtz Decomposition, Hansen, Michael Sass ; Christensen, Niels Vorgaard ; Larsen, Rasmus, International Conference on Computer Vision Theory and Applications, 2009 (accepted)

- [3] Generating Quality Tetrahedral Meshes from Binary Volumes Mads Fogtmann Hansen, Rasmus Larsen & Jakob Andreas Bærentzen, International Conference on Computer Vision Theory and Applications, 2009 (accepted)
- [4] AUTOMATIC ASSESSMENT OF CRANIOFACIAL GROWTH IN A MOUSE MODEL OF CROUZON SYNDROME, 66th annual meeting of the American Cleft Palate - Craniofacial Association, S. S. Thorup, T. A. Darvann, N. V. Hermann, H. Ólafsdóttir, P. Larsen, R. Larsen, R. R. Paulsen, C. A. Perlyn, S. Kreiborg (accepted)
- [5] Virtual Dissection of Pig Carcasses, Vester-Christensen, Martin ; Erbou, Søren Gylling Hemmingsen ; Hansen, Mads Fogtmann ; Olsen, Eli Vibeke ; Christensen, Lars Bager ; Hviid, Marchen ; Ersbøll, Bjarne Kjær ; Larsen, Rasmus, Meat Science (ISSN: 0309-1740), 2009, Elsevier

2008

- [6] Analysis of Surfaces Using Constrained Regression Models, Darkner, Sune ; Sabuncu, Mert R. ; Golland, Polina ; Paulsen, Rasmus Reinhold ; Larsen, Rasmus, Lecture Notes in Computer Science, Medical Image Computing and Computer assisted Intervention (ISBN:) , pages: 842-849, 2008, Springer Verlag
- [7] Adaptive Parametrization of Multivariate B-splines for Image Registration, Hansen, Michael Sass ; Glocker, Benjamin ; Navab, Nassir ; Larsen, Rasmus, Proceedings of CVPR, 2008
- [8] Computing Minimal Deformations: Application to Construction of Statistical Shape Models, Zikic, Darko ; Hansen, Michael Sass ; Glocker, Benjamin ; Kameme, Ali ; Larsen, Rasmus ; Navab, Nassir, Proceedings of CVPR, 2008
- [9] Guðmundsson, Sigurjón Árni, Larsen, Rasmus, Aanæs, Henrik, Casas, Josep Ramon, Pardàs, Montse, TOF Imaging in Smart Room Environments towards Improved People Tracking, Proceedings of the CVPR Workshop on Time of Flight Camera based Computer Vision, 2008
- [10] Dan Hansen, Mads Hansen, Martin Kirschmeyer, Rasmus Larsen, and Davide Silvestre. Cluster Tracking with Time-of-Flight Cameras. In proceedings of the CVPR Workshop on Time of Flight Camera based Computer Vision, 2008.
- [11] Larsen, R., L1 Generalized Procrustes 2D Shape Alignment, *Journal of mathematical imaging and vision*, vol: 31, issue: 2-3, pages: 189-194, 2008
- [12] Hansen, Mads Fogtmann ; Hansen, Michael Sass ; Larsen, Rasmus, Conditional Statistical Model Building, International Symposium on Medical Imaging 2008
- [13] Hansen, Michael Sass ; Holm, David ; Sjöstrand, Karl ; Ley, Karsten Dan ; Rowland, Ian John ; Larsen, Rasmus, Multiscale Hierarchical Support Vector Clustering, International Symposium on Medical Imaging 2008, SPIE Medical Imaging

2007

- [14] Sjöstrand, Karl ; Rostrup, Egill ; Ryberg, Charlotte ; Larsen, Rasmus ; Studholme, Colin ; Baezner, Hansjoerg ; Ferro, Jose ; Fazekas, Franz ; Pantoni, Leonardo ; Inzitari, Domenico ; Waldemar, Gunhild, Sparse Decomposition and Modeling of Anatomical Shape Variation, *IEEE Transactions on Medical Imaging* (ISSN:) , vol: 26, issue: 12, pages: 1625-1635, 2007
- [15] T. L. Nielsen, C. Hagen, K. Wraae, K. Brixen, P. H. Petersen, E. Haug, R. Larsen, M. Andersen, Visceral and Subcutaneous Adipose Tissue Assessed by Magnetic Resonance Imaging in Relation to Circulating Androgens, SHBG, and LH in Young Men, *Journal of Clinical Endocrinology and Metabolism*, 2007
- [16] R. Larsen, M. B. Stegmann, S. Darkner, S. Forchhammer, T. F. Cootes, B. K. Ersbøll, Texture Enhanced Appearance Models, *Computer Vision and Image Understanding*, vol. 106, pp. 20-30, Elsevier, 2007
- [17] A. E. C. Pece, R. Larsen, Generative-model based vision, *Computer Vision and Image Understanding*, vol. 106, pp. 3-4, Elsevier, 2007

- [18]K. Sjöstrand, M. S. Hansen, H. B. W. Larsson, R. Larsen, *A Path Algorithm for the Support Vector Domain Description and its Application to Medical Imaging* (to appear), *Medical Image Analysis*, Elsevier, 2007
- [19]S. Darkner, R. R. Paulsen, R. Larsen, *Analysis of Deformation of the Human Ear and Canal Caused by Mandibular Movement*, MICCAI 2007, Brisbane Australia, Springer Lecture Notes, 2007
- [20]S. Á. Guðmundsson, R. Larsen, B. K. Ersbøll, *Robust Pose Estimation using the SwissRanger SR-3000 Camera*, Scandinavian Conference on Image Analysis 2007, vol. 4522, pp. 968--975, Springer, 2007
- [21]M. S. Hansen, K. Sjöstrand, H. Ólafsdóttir, H. B. W. Larsson, M. B. Stegmann, R. Larsen, *Robust Pseudo-Hierarchical Support Vector Clustering*, Scandinavian Conference on Image Analysis 2007, Springer, 2007
- [22]M. F. Hansen, S. G. Erbou, M. Vester-Christensen, R. Larsen, L. B. Christensen, *Surface-to-surface registration using level sets*, SCIA 2007
- [23]S. Lanche, T. A. Darvann, H. Ólafsdóttir, N. V. Hermann, A. E. Van Pelt, D. Govier, M. J. Tenenbaum, S. Naidoo, P. Larsen, S. Kreiborg, R. Larsen, A. A. Kane, *A Statistical Model of Head Asymmetry in Infants with Deformational Plagiocephaly*, Scandinavian Conference on Image Analysis 2007, 2007
- [24]H. Ólafsdóttir, M. S. Hansen, K. Sjöstrand, T. A. Darvann, N. V. Hermann, E. Oubel, B. K. Ersbøll, R. Larsen, A. P. Larsen, C. A. Perlynn, G. M. Morriss-Kay, S. Kreiborg, *Sparse Statistical Deformation Model for the Analysis of Craniofacial Malformations in the Crouzon Mouse*, Scandinavian Conference on Image Analysis 2007, Springer, 2007
- [25]H. Ólafsdóttir, S. Lanche, T. A. Darvann, N. V. Hermann, R. Larsen, B. K. Ersbøll, E. Oubel, A. F. Frangi, P. Larsen, C. A. Perlyn, G. M. Morriss-Kay, S. Kreiborg, *A Point-Wise Quantification of Asymmetry Using Deformation Fields. Application to the Study of the Crouzon Mouse Model*, Medical Image Computing and Computer-Assisted Intervention (to appear), 2007
- [26]F. Kahraman, M. Gokmen, S. Darkner, R. Larsen, *An Active Illumination and Appearance (AIA) Model for Face Alignment*, Proceedings of the CVPR 2007, IEEE Computer Society Workshop on Biometrics, IEEE Computer Society, 2007
- [27]M. S. Hansen, H. Ólafsdóttir, T. A. Darvann, N. V. Hermann, E. Oubel, R. Larsen, B. K. Ersbøll, A. F. Frangi, P. Larsen, C. A. Perlyn, G. M. Morris-Kay, S. Kreiborg, *Estimation of independent non-linear deformation modes for analysis of craniofacial malformations in crouzon mice*, 2007 IEEE International Symposium on Biomedical Imaging, IEEE, 2007
- [28]S. Darkner, M. V. Christensen, R. Larsen, R. R. Paulsen, *Evaluating a method for automated rigid registration*, International Symposium on Medical Imaging 2007, SPIE Medical Imaging, 2007
- [29]M. S. Hansen, H. Ólafsdóttir, K. Sjöstrand, H. B. Larsson, M. B. Stegmann, R. Larsen, *Ischemic Segment Detection using the Support Vector Domain Description*, International Symposium on Medical Imaging, 2007
- [30]M. F. Hansen, M. R. Blas, R. Larsen, *Mahalanobis Distance Based Iterative Closest Point*, Spie - Medical Imaging, 2007
- [31]H. Ólafsdóttir, T. A. Darvann, B. K. Ersbøll, N. V. Hermann, E. Oubel, R. Larsen, A. F. Frangi, P. Larsen, C. A. Perlyn, G. M. Morriss-Kay, S. Kreiborg, *Craniofacial Statistical Deformation Models of Wild-type mice and Crouzon mice*, International Symposium on Medical Imaging 2007, San Diego, CA, 2007
- [32]M. Vester-Christensen, S. G. Erbou, S. Darkner, R. Larsen, *Accelerated 3D image registration*, International Symposium on Medical Imaging 2007, San Diego, {CA}, 2007

2006

- [33]K. Sjöstrand, R. Larsen, *The entire regularization path for the support vector domain description*, Proceedings of the 9th International Conference on Medical Image

Computing and Computer-Assisted Intervention (MICCAI), LNCS Vol. 1 pp – BEST PAPER AWARD in category "image analysis"

- [34]S. Darkner, M. Vester-Christensen, R. Larsen, C. Nielsen, R. R. Paulsen, Automated 3D Rigid Registration of Open 2D Manifolds, MICCAI 2006 Workshop "From Statistical Atlases to Personalized Models", pp. 19-22
- [35]J. Thomadsen, T. M. Jørgensen, U. Christensen, K. Krøyer, B. K. Ersbøll, R. Larsen, *Characterization of pre- and postoperative macular holes from retinal OCT*, MICCAI 2006 Workshop on Biophotonics Imaging, pp. 61-68
- [36]B. Lading, R. Larsen, K. Åström, *3D Face Appearance Model*, Proceedings of the 7th Nordic Signal Processing Symposium (NORSIG)
- [37]K. Sjöstrand, T. E. Lund, K. H. Madsen, R. Larsen, *Sparse PCA, a new method for unsupervised analyses of fMRI data*, Proc. International Society of Magnetic Resonance In Medicine - ISMRM 2006, Seattle, Washington, USA
- [38]S. G. Erbou, R. Larsen, B. K. Ersbøll, *Registration and shape modelling of porcine bone structures via CT*, Proceedings of the 21st Nordic Conference on Mathematical Statistics
- [39]R. Engholm, A. Dubinskiy, R. Larsen, L. G. Hanson, B. Ø. Christoffersen, *An Adipose Segmentation and Quantification Scheme for the Abdominal Region in Minipigs*, The International Society for Optical Engineering (SPIE), International Symposium on Medical Imaging, vol. 6144
- [40]K. Sjöstrand, M. B. Stegmann, R. Larsen, *Sparse Principal Component Analysis in Medical Shape Modeling*, The International Society for Optical Engineering (SPIE), International Symposium on Medical Imaging vol. 6144
- [41]K. Sjöstrand, A. Ericsson, R. Larsen, *On the Alignment of Shapes Represented by Fourier Descriptors*, The International Society for Optical Engineering (SPIE), International Symposium on Medical Imaging, vol. 6144,
- [42]M. B. Stegmann, K. Sjöstrand, R. Larsen, *Sparse Modeling of Landmark and Texture Variability using the Orthomax Criterion*, The International Society for Optical Engineering (SPIE), International Symposium on Medical Imaging, vol. 6144
- [43]M. F. Hansen, R. Larsen, B. Ersbøll, L. B. Christensen, *Coupled Shape Model Segmentation in Pig Carcasses*, Proceedings of the IEEE International Conference on Pattern Recognition (ICPR)
- [44]A. Lyckegaard, R. Larsen, L. B. Christensen, M. V. Christensen, E. V. Olsen, *Contextual Analsis of CT Scanned Pig Carcasses*, 52nd International Congress of Meat Science and Technology (ICoMST),, pp. 207-208

2005

- [45]R. Larsen, *Functional 2D Procrustes Shape Analysis*, Proceedings of the 14th Scandinavian Conference on Image Analysis, vol. 3540, pp. 205-213, Springer
- [46]R. Larsen, A. A. Nielsen, *Functional Maximum Autocorrelation Factors*, Proceedings of the 9th Scandinavian Conference on Chemometrics, Reykjavik, Iceland
- [47]R. Larsen, *Non-linear Shape Decomposition using ISOMAP*, Proceedings of the 9th Scandinavian Conference on Chemometrics, University of Iceland

2004

- [48]S. Darkner, R. Larsen, M. B. Stegmann, B. K. Ersbøll, *Wedgelet Enhanced Appearance Models*, IEEE Conference on Computer Vision and Pattern Recognition, 2nd International Workshop on Generative Model Based Vision (GMBV), Washington, D. C., July, 2nd
- [49]R. R. Paulsen, C. Nielsen, S. Laugesen, R. Larsen, *Using a Shape Model in the Design of Hearing Aids*, The International Society for Optical Engineering (SPIE), International Symposium on Medical Imaging
- [50]K. B. Hilger, R. R. Paulsen, R. Larsen, *Markov Random Field Restoration of Point Correspondences for Active Shape Modelling*, The International Society for Optical Engineering (SPIE), International Symposium on Medical Imaging

- [51]M. B. Stegmann, R. Larsen, H. B. W. Larsson, *Unsupervised Correction of Physiologically-induced Slice-offsets in 4D Cardiac MRI*, Journal of Cardiovascular Magnetic Resonance (SCMR 7th Annual Meeting, Barcelona, Spain), vol. 6(1), pp. 451-452, Dekker

2003

- [52]M. B. Stegmann, R. Larsen, Multi-band Modelling of Appearance, *Image and Vision Computing*, vol. 21(1), pp. 61-67, Elsevier Science
- [53]K. B. Hilger, R. Larsen, M. Wrobel, Growth Modeling of Human Mandibles using Non-Euclidean Metrics, *Medical Image Analysis*, vol. 7, pp. 425-433, Elsevier
- [54]R. Larsen, K. B. Hilger, Statistical shape analysis using non-Euclidean metrics, *Medical Image Analysis*, vol. 7(4), pp. 417-423
- [55]M. B. Stegmann, B. K. Ersbøll, R. Larsen, FAME - A Flexible Appearance Modelling Environment, *IEEE Transactions on Medical Imaging*, vol. 22(10), pp. 1319-1331, Institute of Electrical and Electronics Engineers (IEEE)
- [56]H. Aanæs, R. Larsen, J. A. Bærentzen, *PDE Based Surface Estimation for Structure from Motion*, Proceedings of the 13th Scandinavian Conference on Image Analysis, Gothenburg, Sweden, LNCS vol. 2749, pp. 632-639, Springer
- [57]R. Larsen, K. B. Hilger, *Probabilistic Generative Modelling*, Proceedings of the 13th Scandinavian Conference on Image Analysis (SCIA) , Gothenburg, Sweden, LNCS vol. 2749, pp. 861-868, Springer
- [58]R. Larsen, K. B. Hilger, K. Skoglund, S. Darkner, R. R. Paulsen, M. B. Stegmann, B. Lading, H. Thodberg, H. Eiriksson, *Some Issues of Biological Shape Modelling with Applications (invited contribution)*, Proceedings of the 13th Scandinavian Conference on Image Analysis (SCIA), Gothenburg, Sweden, LNCS vol. 2749, pp. 509-519, Springer
- [59]K. B. Hilger, R. Larsen, S. Kreiborg, S. Krarup, T. Darvann, J. Marsh, *Active Shape Analysis of Mandibular Growth*, Proceedings of the 6th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), LNCS, Springer

2002

- [60]R. Larsen, Decomposition using Maximum Autocorrelation Factors, *Journal of Chemometrics*, vol. 16(8-10), pp. 427-435, John Wiley & Sons
- [61]R. Larsen, K. B. Hilger, M. C. Wrobel, *Statistical 2D and 3D shape analysis using Non-Euclidean Metrics*, Proceedings of the 5th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), Tokyo, Japan, LNCS, Springer
- [62]R. R. Paulsen, R. Larsen, S. Laugesen, C. Nielsen, B. K. Ersbøll, *Building and Testing a Statistical Shape Model of the Human Ear Canal*, Proceedings of the 5th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), Tokyo, Japan, LNCS, Springer
- [63]K. B. Hilger, M. B. Stegmann, R. Larsen, *A Noise Robust Statistical Texture Model*, Proceedings of the 5th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), Tokyo, Japan, LNCS vol. 2488(2), pp. 444-451, Springer
- [64]R. Larsen, H. Eiriksson, *L1 Generalized Procrustes 2D Shape Alignment*, Eleventh International Workshop on Matrices and Statistics, Informatics and Mathematical Modelling, Technical University of Denmark
- [65]K. B. Hilger, A. A. Nielsen, R. Larsen, K. Conradsen, *Linear and Nonlinear Multiset Canonical Correlation Analysis*, Eleventh International Workshop on Matrices and Statistics, invited contribution, Informatics and Mathematical Modelling, Technical University of Denmark
- [66]R. R. Paulsen, R. Larsen, B. K. Ersbøll, C. Nielsen, S. Laugesen, *Testing for Gender Related Size and Shape Differences of the Human Ear canal using Statistical methods*,

Eleventh International Workshop on Matrices and Statistics, Informatics and Mathematical Modelling, Technical University of Denmark

- [67] M. B. Stegmann, R. Larsen, *Multi-band Modelling of Appearance*, European Conference on Computer Vision, First International Workshop on Generative Model-Based Vision - GMBV, pp. 101-106, DIKU, 2002

2001

- [68] R. Larsen, H. Eiriksson, M. B. Stegmann, *Q-MAF Shape Decomposition*, Proceedings of the 4th Int. Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), Utrecht, The Netherlands, LNCS vol. 2208, pp. 837-844, Springer
- [69] N. Guilbert, H. Aanæs, R. Larsen, *Integrating prior knowledge and structure from motion*, Proceedings of the 12th Scandinavian Image Analysis (SCIA'01), pp. 477-481
- [70] R. Larsen, *Shape Modelling Using Maximum Autocorrelation Factors*, Proceedings of the 12th Scandinavian Image Analysis Conference (SCIA'01), pp. 98-103
- [71] K. B. Hilger, A. A. Nielsen, R. Larsen, *A Scheme for Initial Exploratory Data Analysis of Multivariate Image Data*, Proceedings of the 12th Scandinavian Conference on Image Analysis (SCIA), pp. 717-724
- [72] R. Larsen, *Decomposition of spectra using maximum autocorrelation factors*, Proceedings of the 7th Scandinavian Symposium on Chemometrics

2000

- [73] R. Larsen, *3D Bayesian contextual classifiers*, *IEEE Transactions on Image Processing*, vol. 10(3), pp. 518-524
- [74] H. Flesche, A. A. Nielsen, R. Larsen, *Supervised Mineral Classification with Semi-automatic Training and Validation Set Generation in Scanning Electron Microscope Energy Dispersive Spectroscopy Images of Thin Sections*, *Mathematical Geology*, vol. 32(3), pp. 337-366
- [75] R. Larsen, A. A. Nielsen, H. Flesche, *Sensitivity study of a semiautomatic supervised classifier applied to minerals from x-ray mapping images*, *Pattern Recognition Letters*, vol. 21(13-14), pp. 1175-1182

1999

- [76] R. Larsen, A. A. Nielsen, H. Flesche, *Sensitivity study of a semiautomatic supervised classifier applied to minerals from x-ray mapping images*, Proceedings of the 11th Scandinavian Image Analysis Conference, SCIA'99, Kangerlussuaq, Greenland, 7--11 June 1999, pp. 785-792

1998

- [77] R. Larsen, K. Conradsen, B. K. Ersbøll, *Estimation of Dense Image Flow Fields in Fluids*, *IEEE Transactions on Geoscience and Remote Sensing*, vol. 36(1), pp. 256-264
- [78] A. A. Nielsen, H. Flesche, R. Larsen, J. M. Rykkje, M. Ramm, *Semi-automatic supervised classification of minerals from x-ray mapping images*, Proceedings of the Fourth Annual Conference of the International Association for Mathematical Geology (IAMG'98), pp. 473-478
- [79] H. Flesche, A. A. Nielsen, R. Larsen, J. M. Rykkje, M. Ramm, *Automatic Classification of Minerals from SEM EDS Images*, Mineralogical Society Winter Meeting: Microbeam Techniques in the Geosciences. Burlington House, Piccadilly, London

1997

- [80] L. Bjørndal, T. Darvann, M. Bro-Nielsen, R. Larsen, A. Thylstrup, *Automated Image Analysis in Undetermined Sections of Human Permanent Third Molars*, *Archives of Oral Biology*, vol. 42(4), pp. 329-332
- [81] R. Larsen, *A 3-D Contextual Classifier*, Proceedings of the 7th Scandinavian Conference on Image Analysis (SCIA'97), pp. 9--12

[82]R. Larsen, A. A. Nielsen, K. Conradsen, *Restoration of Hyperspectral Push-Broom Scanner Data*, Proceedings of the 17th EARSeL Symposium on Future Trends in Remote Sensing. Lyngby, Denmark, pp. 157-162

[83]A. A. Nielsen, R. Larsen, H. Skriver, *Change Detection in Bi-temporal EMISAR Data from Kalø, Denmark, by Means of Canonical Correlations Analysis*, Third International Airborne Remote Sensing Conference and Exhibition, vol. 1, pp. 281-287

1996

[84]R. Larsen, *Estimation of Airflow in Livestock Buildings using Image Analysis*, Proceedings of the 5th International Conference on Air distribution in Rooms (ROOMVENT 96), vol. 1, pp. 49-54

1995

[85]A. A. Nielsen, R. Larsen, *Restoration of GERIS Data Using the Maximum Noise Fractions Transform*, Proceedings from the First International Airborne Remote Sensing Conference and Exhibition, vol. 2, pp. 557-568

Books

Editorship

[86]R. Larsen, M. Nielsen, J. Sparring, *Medical Image Computing and Computer-Assisted Intervention – MICCAI 2006*, 9th International Conference Copenhagen, Denmark, October 1-6, 2006, Springer, 2006

[87]A. E. C. Pece, R. Larsen, A. Yuille, *Proceedings of the Second International workshop on Generative-Model Based Vision*, IEEE Computer Society, 2004

[88]A. E. C. Pece, R. Larsen, Y. N. Wu, *Proceedings of the First International Workshop on Generative-Model-Based Vision*, DIKU, University of Copenhagen, 2002

Academic theses

[89]R. Larsen, *Estimation of visual motion in image sequences*, pp. xiv+143 pp., Department of Mathematical Modelling, Technical University of Denmark, DTU, 1994 (Ph.D. thesis)

[90]R. Larsen, *MAF and other transformations applied to remote sensing*, pp. xii+130+205, Institute for Mathematical statistics and Operations Research (IMSOR), Technical University of Denmark, DTU, 1991 (master's thesis)