

Marleen de Bruijne
Date of Birth: 3 September 1972
Nationality: Dutch

Academic background

March 1998 — June 2003:

Ph.D. in medical image analysis
Institute of Information and Computing Sciences, Utrecht University, The Netherlands
Thesis: Model-based Segmentation of Vascular Images

September 1990 — January 1997:

M.Sc. in physics
Utrecht University, The Netherlands
Thesis: Tangential Thomson scattering at the RTP tokamak
Propaedeutic exams in Physics (1992) and in Astronomy (1992)

Employment

January 2011 — Present:

Associate professor at the Biomedical Imaging Group Rotterdam, Departments of Medical Informatics and Radiology of Erasmus MC - University Medical Center Rotterdam, the Netherlands

January 2007 — Present:

Associate professor, Department of Computer Science, University of Copenhagen, Denmark

April 2007 — December 2010:

Assistant professor at the Biomedical Imaging Group Rotterdam, Departments of Medical Informatics and Radiology of Erasmus MC - University Medical Center Rotterdam, the Netherlands

January 2007 — June 2008:

Research Scientist at Nordic Bioscience A/S, Herlev, Denmark

October 2006 — December 2006:

Associate professor, IT University of Copenhagen, Denmark

August 2003 — September 2006:

Assistant professor, IT University of Copenhagen, Denmark

April 2003 — June 2003:

Research associate at the Division of Vascular Surgery, University Medical Center Utrecht, Utrecht, The Netherlands

Awards and grants

October 2014 — December 2018

NIMBLE: Novel Imaging Biomarkers of the Lung

Principal investigator

YDUN personal grant awarded by Danish Council for Independent Research (DFF), Technology and Production Sciences (FTP)

7.325.437 DKK (984 K€) of which 6.466.946 DKK (869 K€) from DFF

September 2014 — 2019

Imaging Dementia: Brain Matters

Co-principal investigator

Innovative Medical Devices Initiative (IMDI) of The Netherlands Organisation for Health Research and Development

2013

LungAnalysis: A Core Laboratory for Centralized Automated Image Analysis of Chest Images from CF patients

Co-applicant with prof. H. Tiddens

USD 100K granted by Vertex Investigator-Initiated Studies Program

2011 — 2014

Standardization and further validation of chest computed tomography as an outcome measure in infants and young children with cystic fibrosis

Co-principal investigator with prof. H. Tiddens

145 K€ to my group funded by Nederlandse Cystic Fibrosis Stichting

April 2011

Aspasia grant, funded by the Netherlands Organization for Scientific Research (NWO), in connection to my VIDI award

(100 K€)

October 2010 — 2015

Transfer learning in biomedical image analysis

Principal Investigator

VIDI award of the Innovational Research Incentives Scheme, funded by the Netherlands Organization for Scientific Research (NWO)

(800 K€)

October 2010 — December 2013

Big3.dk - Extension of the Danish lung cancer screening trial/CBQ study to increase the understanding of smoking related disease phenotypes

Co-Principal Investigator

Collaboration with The Heart Center, Rigshospitalet, Copenhagen; Department of Pulmonary Medicine, Gentofte Hospital, Hellerup; and Astra Zeneca. Funded by Astra Zeneca. 908,455 USD of which 405,425 USD to Department of Computer Science

September 2009 — December 2012

Cooperative Advanced REsearch for User-centric health care (Care4U)

Co-applicant

Funded by SenterNovem - Point One

June 2009 — September 2012

Cooperative Advanced REsearch for Medical Efficiency (Care4Me)

Co-applicant, task leader for modeling and computer aided diagnosis of neurodegenerative disease

European project funded by ITEA

April 2007 — September 2011

Robust Multi-Object Segmentation

Principal Investigator

VENI award of the Innovational Research Incentives Scheme, funded by the Netherlands Organization for Scientific Research (NWO) with university co-financing

(208 K€ of which 140,608€ from NWO)

September 2006 — May 2010

Computer-Aided Assessment of COPD from CT Images

Principal Investigator

Funded by the Danish government through the strategic research council for nano-, bio- and information technologies (NABIIT), with industrial and university co-financing
Collaboration with University of Copenhagen and Astra Zeneca R&D, Lund
(16,808,085 DKK (ca. 2.253 M€) of which 7,230,528 DKK (ca. 969 K€) from NABIIT)

November 2004 — October 2007

Clinical Applications and Theory of Image Analysis (CATIA)

Co-applicant

Industrial grant, funded by Center for Clinical and Basic Research (CCBR A/S), Ballerup, Denmark (8.0 M DKK, ca. 1.067 M€)

Teaching and Supervision

Ph.D. supervision

November 2014 — Present: Zahra Sedghi Gamechi

Erasmus MC Rotterdam, The Netherlands

Main supervisor (“copromotor”)

February 2013 — Present: Gijs van Tulder

Erasmus MC Rotterdam, The Netherlands

Main supervisor (“copromotor”)

December 2012 — November 2014: Leonie Tepper

Ph.D. thesis: Monitoring Cystic Fibrosis lung disease: Chest imaging and patient-related outcome measures

Erasmus MC Rotterdam, The Netherlands

Co-supervisor (“copromotor”)

May 2012 — Present: Wiewing Kuo

Erasmus MC Rotterdam, The Netherlands

Co-supervisor (“copromotor”)

October 2011 — Present: Annegreet van Opbroek

Erasmus MC Rotterdam, The Netherlands

Main supervisor (“copromotor”)

October 2011 — Present: Andres Arias Lorza

Erasmus MC Rotterdam, The Netherlands

Main supervisor (“copromotor”)

June 2011 — Present: Sepp de Raedt

University of Århus, Denmark

Co-supervisor

April-June 2011: Dr. Francesco Ciompi

Erasmus MC Rotterdam, The Netherlands

Supervisor visiting PhD student

October 2010 — May 2014: Jens Petersen

Ph.D. thesis: Analysis of Airways in Computed Tomography

University of Copenhagen, Denmark

Main supervisor

- February 2010 — June 2014: Arna van Engelen
Ph.D. thesis: Multimodal Image Analysis for Carotid Artery Plaque Characterization
Erasmus MC Rotterdam, The Netherlands
Main supervisor (“copromotor”)
- December 2009 — Present: Hakim Achterberg
Erasmus MC Rotterdam, The Netherlands
Main supervisor (“copromotor”)
- September 2009 — November 2012: Dr. Nora Baka
Ph.D. thesis: Anatomical shape and motion construction from sparse image data
Erasmus MC Rotterdam, The Netherlands
Main supervisor (“copromotor”)
- January 2008 — May 2011: Dr. Melanie Ganz
Ph.D. thesis: Automated Detection and Analysis of Calcified Deposits and their relation to Cardiovascular Diseases
University of Copenhagen, Denmark
Co-supervisor
- January 2008 — December 2010: Dr. Alessandro Crimi
Ph.D. thesis: Statistical Analysis of Vertebral Shapes
University of Copenhagen, Denmark
Research advisor
- June 2007 — November 2010: Dr. Vladlena Gorbunova
Ph.D. thesis: Image Registration of Lung CT Scans for Monitoring Disease Progression
University of Copenhagen, Denmark
Main supervisor
- June 2007 — October 2010: Dr. Lauge Sørensen
Ph.D. thesis: Pattern Recognition-Based Analysis of COPD in CT
University of Copenhagen, Denmark
Main supervisor
- January 2009 — September 2010: Dr. Fedde van der Lijn
Ph.D. thesis: Automated Atlas-Based Segmentation of Brain Structures in MR Images Application to a Population-Based Imaging Study
Erasmus MC Rotterdam, The Netherlands
Research advisor
- February 2007 — July 2010: Dr. Pechin Lo
Ph.D. thesis: Segmentation of Lung Structures in CT
University of Copenhagen, Denmark
Main supervisor
- May-August 2007: Dr. Eva van Rikxoort
University of Copenhagen, Denmark
Supervisor visiting PhD student
- August 2003 — December 2007: Michael Lund
Project: Clinical Image Analysis — Osteoporosis
(IT) University of Copenhagen, Denmark
Co-supervisor
- August 2003 — December 2006: Dr. Lars Arne Conrad-Hansen
Ph.D. thesis: Towards an Automatic Quantification Tool for the Assessment of Atherosclerotic Plaque in Lumbar X-Rays

IT University of Copenhagen, Denmark
Co-supervisor

Post-graduate level teaching

- November 2014: Ph.D. course 'Knowledge Driven Image Segmentation'
Course of Ph.D. school ASCI, The Netherlands
Lecturer
- March 2013, Course 'Translational Aspects of Cardiovascular and Pulmonary Imaging', CNIC,
Madrid, Spain
Invited lecturer
- August 2012, 'Summer School on Domain Adaptation in Image Analysis', Copenhagen, Denmark
Lecturer
- March 2012: Ph.D. course 'Knowledge Driven Image Segmentation'
Course of Ph.D. school ASCI, The Netherlands
Lecturer
- May 2011: ISMRM Educational Course on Image Analysis
At International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting,
Montreal, Canada
Invited lecturer
- November 2009: Ph.D. course 'Knowledge Driven Image Segmentation'
Course of Ph.D. school ASCI, The Netherlands
Lecturer
- June 2009: China-Denmark Graduate Course on Cross-Disciplinary Nano-Bio-IT Research
Tsinghua University, Beijing
Lecturer
- September 2007: Ph.D. course 'Knowledge Driven Image Segmentation'
Course of Ph.D. school ASCI, The Netherlands
Lecturer
- May 2004: Ph.D. course 'Shape Analysis in Medical Imaging'
IT University of Copenhagen, Denmark
Principal lecturer and organizer, development of new course
- April 2004 — December 2004: Seminar Ph.D. Course on Pattern Recognition
IT University of Copenhagen, Denmark
Supervisor/lecturer

Graduate level teaching

- January 2012 — Present: Introduction Medical Image Analysis for students of medicine
Erasmus MC, The Netherlands
- September 2009 — Present: supervisor of several MSc thesis projects in model based medical
image analysis; 6 students
Erasmus MC, The Netherlands
- May 2004 — Present: main supervisor and co-supervisor of several MSc student projects in
(biomedical) image analysis, pattern recognition, and computer vision; 30 students in total
(IT) University of Copenhagen, Denmark

- Fall 2005: Image and Signal Processing
IT University of Copenhagen, Denmark
Development of new course, course manager, lecturer
- Fall 2005: Seminar course Image Analysis
IT University of Copenhagen, Denmark
Supervisor/lecturer
- June 2004 & 2005: Medical Image Segmentation, Capita Selecta in Medical Imaging
Utrecht University, The Netherlands
Invited lecturer
- Spring 2005: Image Analysis
IT University of Copenhagen, Denmark
Course manager, adapting course for first semester students, lecturer
- Spring 2004 & Fall 2004: Image Analysis
IT University of Copenhagen, Denmark
Lecturer on existing course
- Spring 2000 and 2001: Physics of medical imaging
University Medical Center, Utrecht, The Netherlands
Teaching assistant

Undergraduate level teaching

- May 2008: Videnskabsteori/Science Studies
University of Copenhagen, Denmark
Invited lecturer
- Spring 1999: Algorithms and datastructures
Institute of Information and Computing Sciences, Utrecht, The Netherlands
Teaching assistant, examiner
- Spring 1999: Introduction to Image Analysis
Institute of Information and Computing Sciences, Utrecht, The Netherlands
Teaching assistant, examiner
- Fall 1998 and 1999: Biomedical modeling; Mathematica practical
Institute of Information and Computing Sciences, Utrecht, The Netherlands
Teaching assistant
- Fall 1998: Biomedical modeling; Elementary differential equations
Institute of Information and Computing Sciences, Utrecht, The Netherlands
Teaching assistant

Pedagogical and management training

- 2011 — 2012: Erasmus MC Leadership Program
- 2011: Course "PhD Supervision"
- 2010: Female Career Development Program (FCD) at Erasmus MC
- 2005 — 2006: Course "Higher Education Teaching and Learning"
pedagogical course for assistant professors at the IT University of Copenhagen
9-day course + project (300 hrs), *passed*

Professional activities

Editorial board member of Medical Image Analysis since 2009

Editorial board member of Image and Vision Computing 2008-2009

Associate editor for Medical Physics 2005, 2006, 2009, 2011, 2012, 2013

Program Committee member/Paper Selection Committee member at international conferences

- Information Processing in Medical Imaging (IPMI) 2015
- Medical Image Computing and Computer-Assisted Intervention (MICCAI) 2014, 2013, 2012, 2011, 2007, 2006
- SPIE Medical Imaging - Computer-Aided Diagnosis 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008
- SPIE Medical Imaging - Image Processing 2015
- IEEE International Symposium on Biomedical Imaging (ISBI) 2015, 2014
- Novel technology that shapes Radiology: EIBIR presents IMAGINE 2013, committee chair
- ECR 'Computer Applications' Scientific Subcommittee 2016, 2015
- International Conference on CT Screening for Lung Cancer 2010
- MICCAI Workshop on Medical Computer Vision (MCV) 2014, 2013, 2012
- International Workshop on Pulmonary Image Analysis 2013, 2011, 2010, 2009, 2008
- International Workshop on Machine Learning in Medical Imaging (MLMI) 2014, 2013, 2012, 2011, 2010
- International Conference on Pattern Recognition (ICPR) 2012, 2010, 2008
- International Conference on Image and Signal Processing (ICISP) 2012, 2010
- International Conference on Imaging Theory and Applications (IMAGAPP) 2011, 2010, 2009
- International Conference on Computer Vision Theory and Applications (VISAPP) 2011, 2010, 2009, 2008
- European Conference on Computer Vision (ECCV) 2010
- Annual Workshop of the Austrian Association for Pattern Recognition (OAGM) 2008
- International Conference on Bio-Inspired Systems and Signal Processing (BIOSIGNALS) 2008
- IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA) 2007, 2006
- International Workshop on Computer Vision Approaches to Medical Image Analysis (CVAMIA) 2006
- MICCAI Joint Disease Workshop 2006

IEEE Engineering in Medicine and Biology Society (EMBS) Technical Committee (TC) on Biomedical Imaging and Image Processing (BIIP) (since 2013)

Reviewer for international journals

- IEEE Transactions on Medical Imaging
- Medical Image Analysis
- IEEE Transactions on Pattern Analysis and Machine Intelligence

- IEEE Transactions on Image Processing
- IEEE Transactions on Information Technology in BioMedicine
- IEEE Transactions on Biomedical Engineering
- NeuroImage
- Chest
- Medical Physics
- Journal of Mathematical Imaging and Vision
- Computer Vision and Image Understanding
- International Journal of Biomedical Imaging
- Academic Radiology
- Pattern Recognition
- Pattern Recognition Letters
- Journal of Electronic Imaging
- Journal of Computer Science and Technology
- Computer Methods and Programs in Biomedicine
- IET Image Processing
- EURASIP Journal on Advances in Signal Processing

Scientific Review Committee member at international conferences

- Information Processing in Medical Imaging (IPMI) 2013, 2011, 2009, 2007, 2005
- Medical Image Computing and Computer-Assisted Intervention (MICCAI) 2010, 2009, 2008, 2005, 2004
- International Conference on Computer Vision (ICCV) 2013, 2011, 2009
- Computer Vision and Pattern Recognition (CVPR) 2015, 2014, 2013, 2011, 2010, 2009, 2007
- IEEE International Symposium on Biomedical Imaging (ISBI) 2015, 2013, 2012, 2011, 2010
- Scandinavian Conference on Image Analysis (SCIA) 2011, 2009, 2007
- International Conference on Intelligent Computing (ICIC) 2007

Ad hoc reviewer

- British Machine Vision Conference (BMVC) 2004
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2004

Reviewer of research proposals

- Committee member of VENI program Interdisciplinary Research 2015, Netherlands Organisation for Scientific Research (NWO)
- Committee member of VENI program Physical Sciences 2014, 2013, Netherlands Organisation for Scientific Research (NWO)
- Committee member for Erasmus MC fellowships 2014, 2013, 2012
- Committee member of MEERVOUD program Physical Sciences 2011, 2012, Netherlands Organisation for Scientific Research (NWO)
- Committee member of Open Competition Physical Sciences 2008&2009, Netherlands Organisation for Scientific Research (NWO)

- Reviewer for Swiss National Science Foundation (SNSF)
- Reviewer for Austrian Science Fund
- Reviewer for The Institute for the Promotion of Innovation by Science and Technology in Flanders
- Reviewer for Research Foundation Flanders (FWO)
- Reviewer for Netherlands Organisation for Scientific Research (NWO)

Invited lectures

Invited lectures at international workshops as well as seminars at foreign universities (while in Denmark/Netherlands)

- Medical Image Computing and Computer Assisted Interventions PC Workshop, Boston, USA, May 2014
- Wallenberg conference center, Sahlgrenska University Hospital, Gothenburg, Sweden, March 2014
- Computer Vision and Imaging Biomarker (CVIB) Workshop, UCLA, Los Angeles, USA, February 2014
- EuSoMII Academy Course Imaging Informatics in Oncology, Turin, Italy, September 2013
- Wallenberg Laboratory, Sahlgrenska University Hospital, Gothenburg, April 2013
- Translational Aspects of Cardiovascular and Pulmonary Imaging Event, Madrid, Spain, March 2013
- Oxford Cancer Imaging Center Seminar, University of Oxford, December 2012
- International Symposium on Medical Imaging, Radboud University Nijmegen, September 2012
- Summer School on Domain Adaptation in Image Analysis, Copenhagen, Denmark, August 2012
- Uniklinik Freiburg, Germany, May 2012
- ICMS International Workshop on Mathematical imaging in interaction with biomedicine, Edinburgh, UK, September 2011
- ISMRM invited tutorial lecture on image segmentation, Montreal, Canada, May 2011
- International workshop on data mining in large medical image databases, UCLA, USA, February 2010
- Tsinghua University, Beijing, China, June 2009
- Leiden University, Netherlands, September 2007
- International Workshop on Image Analysis in the Life Sciences, Theory and Applications, Linz, Austria, March 2007
- International Workshop on Medical Image Analysis, The University of Iowa, Iowa Institute of Biomedical Imaging, February 2007
- German Cancer Research Center, Heidelberg, Germany, December 2006

- International workshop on Quantitative Shape Modelling of Biomedical Images (QSMBI), Copenhagen, Denmark, May 2006
- Erasmus MC Rotterdam, The Netherlands, December 2005
- Eindhoven University, The Netherlands, December 2005
- International Seminar on Medical Image Computing and Computer Assisted Intervention, Copenhagen, Denmark, August 2005
- Brigham and Women's Hospital and MIT, Boston, MA, July 2005
- Capita Selecta in Medical Imaging, Utrecht University, The Netherlands, June 2005
- Technical University of Denmark, Copenhagen, Denmark, December 2004
- Capita Selecta in Medical Imaging, Utrecht University, The Netherlands, June 2004
- Erasmus MC Rotterdam, The Netherlands, June 2003

Publications

I have (co-)authored 135 peer-reviewed full papers in international conferences (87) and journals (48). Of these, I am first author of 16 publications and, as primary supervisor, second and/or last author of 87. These papers are listed below together with books/edited volumes/book chapters (6), patent applications (18, of which 6 granted), and peer reviewed abstracts presented at international conferences (56).

Papers in international journals

- A. Feragen, J. Petersen, M. Owen, P. Lo, L.H. Thomsen, M.M.W. Wille, A. Dirksen, and M. de Bruijne, "Geodesic atlas-based labeling of anatomical trees: Application and evaluation on airways extracted from CT," *IEEE Transactions on Medical Imaging*, 2014. Accepted pending minor revisions.
- A.G. van Opbroek, M.A. Ikram, M.W. Vernooij, and M. de Bruijne, "Transfer learning improves supervised image segmentation across imaging protocols," *IEEE Transactions on Medical Imaging*, 2014. In press.
- A van Engelen, T Wannarong, G Parraga, W.J. Niessen, A Fenster, J.D. Spence, and M. de Bruijne, "Three-dimensional carotid ultrasound plaque texture predicts vascular events," *Stroke* 45, pp. 2695–2701, 2014.
- J. Petersen, M.M.W. Wille, L.L. Rakêt, A. Feragen, J.H. Pedersen, M. Nielsen, A. Dirksen, and M. de Bruijne, "Effect of inspiration on airway dimensions measured in maximal inspiration CT images of subjects without airflow limitation," *European Radiology* 24(9), pp. 2319–2325, 2014.
- A van Engelen, W.J. Niessen, S. Klein, H.C. Groen, H.J.M. Verhagen, J.J. Wentzel, A van der Lugt, and M. de Bruijne, "Atherosclerotic plaque component segmentation in combined MRI and CTA data incorporating class label uncertainty," *PLoS ONE*, 2014.
- Jens Petersen, Mads Nielsen, Pechin Lo, Lars Haug Nordenmark, Jesper Holst Pedersen, Mathilde Marie Winkler Wille, Asger Dirksen, and Marleen de Bruijne, "Optimal surface segmentation using flow lines to quantify airway abnormalities in chronic obstructive pulmonary disease.," *Medical Image Analysis* 18(3), pp. 531–541, 2014.
- Ruwan Tennakoon, Alireza Bab-Hadiashar, Zhenwei Cao, and Marleen de Bruijne, "Non-rigid registration of volumetric images using ranked order statistics," *IEEE Transactions on Medical Imaging* 33, pp. 422 – 432, 2014.
- N. Baka, B.L. Kaptein, J.E. Giphart, M. Staring, M. de Bruijne, B.P.F. Lelieveldt, and E. R. Valstar, "Evaluation of automated statistical shape model based knee kinematics from biplane fluoroscopy," *Journal of Biomechanics* 47(1), pp. 122–129, 2014.
- Hakim C. Achterberg, Fedde van der Lijn, Tom den Heijer, Meike W. Vernooij, M Arfan Ikram, Wiro J. Niessen, and Marleen de Bruijne, "Hippocampal shape is predictive for the development of dementia in a normal, elderly population.," 35(5), pp. 2359–2371, 2014.
- P. Ciet, P. Wielopolski, R. Manniesing, S. Lever, M. de Bruijne, G. Morana, P.C. Muzzio, M.H. Lequin, and H.A.W.M. Tiddens, "Spirometer controlled cine-magnetic resonance imaging to diagnose tracheobronchomalacia in pediatric patients," *European Respiratory Journal* 43(1), pp. 115–124, 2014.
- A van Engelen, W.J. Niessen, S. Klein, H.C. Groen, K. van Gaalen, H.J.M. Verhagen, J.J. Wentzel, A van der Lugt, and M. de Bruijne, "Automated segmentation of atherosclerotic histology based on pattern classification," *Journal of Pathology Informatics* 4, 2013.

- N. Baka, C. T. Metz, C. Schultz, L. Neefjes, R. J. van Geuns, B P F. Lelieveldt, W. J. Niessen, T. van Walsum, and M. de Bruijne, "Statistical coronary motion models for 2D+t/3D registration of X-ray coronary angiography and CTA.," *Medical Image Analysis* 17(6), pp. 698–709, 2013.
- A. Bab-Hadiashar, R. Tennakoon, and M. de Bruijne, "Quantification of smoothing requirement for 3D optic flow calculation of volumetric images," *IEEE Transactions on Image Processing* 22, pp. 2128 – 2137, 2013.
- A. Feragen, P. Lo, M. de Bruijne, M. Nielsen, and F. Lauze, "Towards a theory of statistical tree-shape analysis," *IEEE Transactions on Pattern Analysis and Machine Intelligence* 35, pp. 2008 – 2021, 2013.
- M. Loeve, G. P. Krestin, M. Rosenfeld, M. de Bruijne, S. Stick, and H.A.W.M. Tiddens, "Chest computed tomography; a validated surrogate endpoint of cystic fibrosis lung disease?," *European Respiratory Journal* 42, pp. 844–857, 2013.
- Fan Liu, Fedde van der Lijn, Claudia Schurmann, Gu Zhu, M. Mallar Chakravarty, Pirro G. Hysi, Andreas Wollstein, Oscar Lao, Marleen de Bruijne, M. Arfan Ikram, Aad van der Lugt, Fernando Rivadeneira, Andre. Uitterlinden, Albert Hofman, Wiro J. Niessen, Georg Homuth, Greig de Zubicaray, Katie L. McMahon, Paul M. Thompson, Amro Daboul, Ralf Puls, Katrin Hegenscheid, Liisa Bevan, Zdenka Pausova, Sarah E. Medland, Grant W. Montgomery, Margaret J. Wright, Carol Wicking, Stefan Boehringer, Timothy D. Spector, Tomas Paus, Nicholas G. Martin, Reiner Biffar, and Manfred Kayser, "A genome-wide association study identifies five loci influencing facial morphology in europeans," *PLoS Genetics* 8(9), p. e1002932, 2012.
- P. Lo, B. van Ginneken, J.M. Reinhardt, Tarunashree Y., P.A. de Jong, B. Irving, C. Fetita, M. Ortner, R. Pinho, J. Sijbers, M. Feuerstein, A. Fabijanska, C. Bauer, R. Beichel, C. S. Mendoza, R. Wiemker, J. Lee, A. P. Reeves, S. Born, O. Weinheimer, E. M. van Rikxoort, J. Tschirren, K. Mori, B. Odry, D.P. Naidich, I. Hartmann, E.A. Hoffman, M. Prokop, J.H. Pedersen, and M. de Bruijne, "Extraction of airways from CT (EXACT09)," *IEEE Transactions on Medical Imaging* 31(11), pp. 2093–2107, 2012.
- X. Wang, T. Heimann, P. Lo, M. Sumkauskaite, M. Puderbach, M. de Bruijne, H.-P. Meinzer, and I. Wegner, "Statistical tracking of tree-like tubular structures with efficient branching detection in 3D medical image data," *Physics in Medicine and Biology* 57(16), pp. 5325–42, 2012.
- F. van der Lijn, M. de Bruijne, S. Klein, T. den Heijer, Y.Y. Hoogendam, A. van der Lugt, M.M.B. Breteler, and W.J. Niessen, "Automated brain structure segmentation based on atlas registration and appearance models," *IEEE Transactions on Medical Imaging* 31(2), pp. 276 – 286, 2012.
- F. van der Lijn, B.F.J. Verhaaren, M.A. Ikram, S. Klein, M. de Bruijne, H.A. Vrooman, M.W. Vernooij, A. Hammers, D. Rueckert, A. van der Lugt, M.M.B. Breteler, and W.J. Niessen, "Automated measurement of local white matter lesion volume," *NeuroImage* 59(4), pp. 3901–3908, 2012.
- N. Baka, M. de Bruijne, T. van Walsum, B.L. Kaptein, J.E. Giphart, M. Schaap, W.J. Niessen, and B.P.F. Lelieveldt, "Statistical shape model based femur kinematics from bi-plane fluoroscopy," *IEEE Transactions on Medical Imaging* 31(8), 2012.
- A. Crimi, M. Loog, M. de Bruijne, M. Nielsen, and M. Lillholm, "Shape-based assessment of vertebral fracture risk in postmenopausal women using discriminative shape alignment," *Academic Radiology* 19(4), pp. 446 – 454, 2012.

- A. van Engelen, W.J. Niessen, S. Klein, H.C. Groen, H.J.M. Verhagen, J.J. Wentzel, A. van der Lugt, and M. de Bruijne, "Multi-feature-based plaque characterization in ex vivo MRI trained by registration to 3D histology," *Physics in Medicine and Biology* 57(1), pp. 241–256, 2012.
- M. Ganz, M de Bruijne, E. Dam, P. Pettersen, M. Karsdal, C. Christiansen, and M Nielsen, "Distribution, size, and shape of abdominal aortic calcified deposits and their relationship to mortality in postmenopausal women," *International Journal of Biomedical Imaging* , 2012.
- V. Gorbunova, J. Sparring, P. Lo, M. Loeve, H. Tiddens, M Nielsen, A. Dirksen, and M de Bruijne, "Mass preserving image registration for lung CT," *Medical Image Analysis* 16(4), pp. 786 – 795, 2012.
- M. Loeve, M. de Bruijne, I.C.J. Hartmann, M. van Straten, W.C.J. Hop, and H.A.W.M. Tiddens, "Three-section expiratory CT: Insufficient for trapped air assessment in patients with cystic fibrosis?," *Radiology* 262(3), pp. 969–976, 2012.
- M. Loeve, W.C.J. Hop, M. de Bruijne, P.Th.W. van Hal, P. Robinson, M.L. Aitken, J.D. Dodd, H.A.W.M. Tiddens, and on behalf of the Computed Tomography Cystic Fibrosis Survival study group, "Chest computed tomography scores are predictive of survival in CF patients awaiting lung transplantation.," *American Journal of Respiratory and Critical Care Medicine* , 2012.
- C.T. Metz, N. Baka, H. Kirisli, , M. Schaap, S. Klein, L.A. Neefjes, N.R. Mollet, B. Lelieveldt, M. de Bruijne, W.J. Niessen, and T. van Walsum, "Regression-based cardiac motion prediction from single-phase CTA," *IEEE Transactions on Medical Imaging* 31(6), 2012.
- K. Murphy, J.P.W. Pluim, E.M. van Rikxoort, P.A. de Jong, B. de Hoop, H.A. Gietema, O. Mets, M. de Bruijne, P. Lo, M. Prokop, and B. van Ginneken, "Toward automatic regional analysis of pulmonary function using inspiration and expiration thoracic CT," *Medical Physics* 39(3), pp. 1650–1662, 2012.
- S.B. Shaker, A. Dirksen, P. Lo, L.T. Skovgaard, M. de Bruijne, and J.H. Pedersen, "Factors influencing decline in lung density in a Danish lung cancer screening cohort," *European Respiratory Journal* 40(5), pp. 1142–1148, 2012.
- L. Sørensen, M. Nielsen, P. Lo, H. Ashraf, J.J.H. Pedersen, and M. de Bruijne, "Texture-based analysis of COPD: a data-driven approach," *IEEE Transactions on Medical Imaging* 31(1), pp. 70 – 78, 2012.
- H. Ashraf, P. Lo, S.B. Shaker, M. de Bruijne, A. Dirksen, P. Tønnesen, M. Dahlbäck, and J.H. Pedersen, "Short term effect of changes in smoking behaviour on emphysema quantification by computed tomography (CT)," *Thorax* 66(1), pp. 55–60, 2011.
- N. Baka, B.L. Kaptein, M. de Bruijne, T. van Walsum, J.E. Giphart, W.J. Niessen, and B.P.F. Lelieveldt, "2D-3D shape reconstruction of the distal femur from stereo X-ray imaging using statistical shape models," *Medical Image Analysis* 15(6), pp. 840–850, 2011.
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