

PERSONAL DETAILS

Title(s), initials, name: Dr.ir. H.C. (Hans) van Assen, male
 Place of birth: Leeuwarden, Netherlands
 Birth date: April 10th, 1969
 Phone: +31 73 656 5549
 Email: hvassen@xs4all.nl
 Websites: [Employee page @ TU/e](#) | [Biomedical Diagnostics webpage](#) | [IST/e webpage](#)
 Profiles: [LinkedIn profile](#) | [ResearchGate profile](#) | [Google Scholar profile](#) | [ORCID ID](#)



AMBITION AND PERSONALITY

I like working in a highly innovative environment with cutting-edge technology preferably related to healthcare, and to interact with clinicians. I like to be involved in organization, getting things done, connecting people with different skills, while leading projects and guiding small teams. I have experience with and want to bring technical knowledge and innovation to the clinic.

I am a driven person and a thorough worker who always delivers high quality work, and a true team player. I have good analytical skills and acquaint myself with new topics quickly. I meet deadlines, I like diversity, and I am a good networker.

PROFESSIONAL EXPERIENCE

2012 – 2016 UNIVERSITY RESEARCHER in cardiac image analysis, Dept. Electrical Engineering, TU/e
 2012 – 2016 VISITING SCIENTIST, Catharina Hospital Eindhoven
 2008 – 2011 ASSISTANT PROFESSOR of cardiac image analysis, Dept. Biomedical Engineering, TU/e
 2005 – 2008 POSTDOC cardiac image analysis, Dept. Biomedical Engineering, TU/e
 2000 – 2005 PHD CANDIDATE cardiac statistical shape modeling, Leiden University Medical Center
 1996 – 2000 RESEARCH SCIENTIST vascular image analysis, Leiden University Medical Center
 1995 – 1996 UNIX SOFTWARE ENGINEER, Xirion BV



EDUCATION

1987 – 1995 MSC – APPLIED PHYSICS, Delft University of Technology
 1981 – 1987 GYMNASIUM β – Segbroek College, The Hague, Netherlands

ORGANIZATION

- Co-chair Functional Imaging and Modeling of the Heart (FIMH) 2015 conference, Maastricht, Netherlands, 25–27 June 2015
- Project management for several STW funded research projects at TU/e

GRANTS

2010	co-applicant IST/e (High Potential research program of TU/e)	€	1.000.000
2010	main applicant CHARIGMA (STW, with Philips / King's College London)	€	355.924
2010	main TU/e applicant PAPAVER (STW, together with and led by AMC)	€	1.053.000

AWARDS

- 2nd prize in the "Cardiac MR Left Ventricle Segmentation Challenge", MICCAI 2009, London, UK, 2009
- Best poster award; Advancing Healthcare: An Engineering Perspective, IEEE SBE, Eindhoven, Netherlands, 2013

REVIEWER- AND EDITORSHIPS

- Editor of Springer's Lecture Notes in Computer Science series volume 9126, FIMH conference 2015, 503 pages.
- Reviewer of Med Im Anal, IEEE T Med Imaging, IEEE T Inf Technol B, IEEE T Biomed Eng and 3 clin. journals, a.o. (total: 13)
- Reviewer of main medical image analysis and patt recogn conferences: MICCAI, IPMI, IEEE ISBI, ICPR, ICCV, a.o.. (total: 9)

KEY PUBLICATIONS

- H.C. van Assen, M.G. Danilouchkine, *et al.*, SPASM: a 3D-ASM for Segmentation of Sparse and Arbitrarily Oriented Cardiac MRI Data, *Med Image Anal.*, 10(2), 286-303, 2006 (cited 188 times)
- H.C. van Assen, M.G. Danilouchkine, *et al.*, A 3D Active Shape Model driven by Fuzzy Inference: Application to Cardiac CT and MR, *IEEE TITB*, 12(5), 595-605, 2008 (cited 71 times)
- H.C. van Assen, M. Egmont-Petersen, J.H.C. Reiber, Accurate object localization in gray level images using the center of gravity measure: accuracy versus precision, *IEEE T Image Proc*, 11(12), 1379-1384, 2002 (cited 93 times)

PROFESSIONAL EXPERIENCE

UNIVERSITY RESEARCHER IN MEDICAL IMAGE ANALYSIS

2012 – Oct 2016

Signal Processing Systems

Department of Electrical Engineering

Eindhoven University of Technology (TU/e), Eindhoven, Netherlands

I work on cardiac image analysis, with a focus on cardiac motion analysis from MRI, using mainly optical flow and spectral filtering/pre-processing, in collaboration with the Academic Medical Center Amsterdam (AMC). Another focus is on the assessment of pulmonary blood flow volume and extravascular lung water volume from indicator dilution curves in collaboration with the Catharina Hospital Eindhoven. Finally, I am involved in monitoring cardiac fetal status during birth, in collaboration with Philips Research Eindhoven.



VISITING SCIENTIST

2012 – Oct 2016

Catharina Hospital Eindhoven

At Catharina Hospital Eindhoven I am involved in research for the assessment of blood volumes from indicator dilution techniques. Furthermore, I collaborate with Catharina Hospital on cardiac motion analysis and atrial fibrillation treatment related research.



ASSISTANT PROFESSOR OF CARDIAC IMAGE ANALYSIS

2008 – 2011

Biomedical Image Analysis

Department of Biomedical Engineering

Eindhoven University of Technology (TU/e), Eindhoven, Netherlands

I worked on cardiac motion analysis using optical flow and spectral filtering/preprocessing. Another research line was the segmentation of the cardiac left atrium from zoomed reconstruction CT. I taught the subject of basic image analysis to BME bachelor students and master students from other departments, like Mechanical and Chemical Engineering etc. I set up this course from scratch.



POSTDOCTORAL FELLOW CARDIAC IMAGE ANALYSIS

2005 – 2008

Biomedical Image Analysis

Department of Biomedical Engineering

Eindhoven University of Technology (TU/e), Eindhoven, Netherlands

I worked on cardiac motion analysis from tagged MRI, mainly based on optical flow theory, and spectral preprocessing.



PHD CANDIDATE

Dec 2000 – Mar 2005

Thesis: "3D Active shape modeling for cardiac MR and CT image segmentation"

Promotor: prof.dr.ir. J.H.C. Reiber

Laboratory for Clinical and Experimental Image Processing (LKEB)

Leiden University Medical Center (LUMC), Leiden, Netherlands

PhD obtained date: May 10, 2006

My PhD research entailed the construction of a 3D Active Shape Model for the segmentation of the cardiac left ventricle (LV) from CT and MR images. This model was able to segment the LV from both modalities without retraining the statistical part; it is applicable to image planes with arbitrary orientations, and to sparse datasets with large open spaces in the data due to the plane configurations. As part of a cardiac segmentation package, it won the second prize in a cardiac segmentation challenge in a MICCAI workshop in 2009.

PhD thesis: [3D Active Shape Modeling for cardiac CT and MR Image Segmentation](#)



RESEARCH SCIENTIST VASCULAR IMAGE ANALYSIS

1996 – 2000

Laboratory for Clinical and Experimental Image Processing (LKEB)

Leiden University Medical Center (LUMC), Leiden, Netherlands

I worked on the segmentation of renal arteries from 2D X-ray angiography images, for the subsequent assessment of the degree of stenosis present in the arteries. The outcome supports the interventional radiologist in his decision whether and/or when to intervene.



UNIX SOFTWARE ENGINEER

1995 – 1996

Xirion BV, De Meern, Netherlands

During my time at Xirion BV I was posted at KPN in The Hague, programming SQL forms for database access.



EDUCATION

MSC – APPLIED PHYSICS, DELFT UNIVERSITY OF TECHNOLOGY, DELFT, NETHERLANDS

1987 – 1995

Physical Informatics – Pattern Recognition and Image Processing

Final project: *Collision avoidance of two robots in a flexible assembly cell*

Master thesis supervisor: Dr. Pieter P. Jonker

Master's graduation professor: Prof.dr. I.T. Young

Grade: 8 / 10

GYMNASIUM β – SEGBROEK COLLEGE, THE HAGUE, NETHERLANDS

1981 – 1987

Subjects: Dutch language, English language, Latin, Mathematics, Physics, Chemistry, Biology, History



RESEARCH

INTEREST FIELDS

- Medical image analysis – extraction of motion, deformation, segmentation, feature extraction, biomarker detection
- Cardiac image analysis – extraction of motion, deformation, cardiac segmentation
- Vascular image analysis – vascular segmentation, topography
- Intervention guidance – imaging and image analysis, e.g. of atrial fibrillation ablation, modeling, shape registration
- Statistical modeling – either shape, appearance, motion, or deformation, a.o.

ORGANIZATION

- Co-chair Functional Imaging and Modeling of the Heart 2015, Maastricht, Netherlands ([FIMH 2015 webpage](#), [proceedings](#))
Functional Imaging and Modeling of the Heart is a biennial conference that aims to encourage collaboration between scientists in cardiovascular imaging and modeling and experts in cardiology, radiology, biology and physiology. The 2015 edition of FIMH lasted 2.5 days, welcomed approximately 100 participants and was financially self-supporting. The chairs received many complements for the good organization and high-level science in the presentations. I was responsible for the review process including communication with reviewers and authors, the conference website, the registration system, keeping track of finances, and the bids to organize the upcoming conference in 2017. One year after publication of the proceedings book, there have been a total of 23,123 chapter downloads, which makes this one of the top 25% downloaded eBooks within its relevant eBook collection.
- IST/e symposium 2013 ([IST/e webpage](#))
- Cardio theme within IST/e
- Board member of BM/d within the SPS group ([Biomedical Diagnostics webpage](#))

GRANTS

2010	co-applicant of IST/e, a TU/e High Potential research program	€ 1.000.000
2010	main applicant of grant CHARIGMA on left atrial wall characterisation for ablation guidance (collaboration with Philips Healthcare/King's College London)	€ 355.924
2010	main TU/e applicant of grant PAPAVER on transcatheter aortic valve replacement (collaboration with AMC)	€ 1.053.000

PHD/PDENG PROJECTS, CO-ADVISOR/CO-SUPERVISOR

PHD

- A. Becciu, Robust multi-scale methods for optic flow. STW, 2006 – 2010
- F.B. Mesadi, Full cardiac LA wall segmentation and thickness assessment from dense 3D MSCT. 2009 – 2011
- A.O. Alagamy, Characterization of wall properties for image guided management of atrial fibrillation. STW, 2012 – 2015
- S. Saporito, Contrast magnetic resonance imaging for quantitative assessment of transpulmonary circulation. STW, 2012 – 2016
- H.B. Kause, Progression in image analysis for percutaneous aortic valve replacement. STW, 2012 – 2016
- I.H.F. Herold, Pulmonary blood volume assessment from contrast-enhanced ultrasound. 2012 – 2016
- P. Hamelmann, Fetal heart-rate variability monitoring based on Doppler ultrasound. 2014 – 2016

PDENG

- O.G. Filatova, Progression in image analysis for percutaneous aortic valve replacement. STW, 2012 – 2014

MEMBERSHIP PHD/PDENG COMMITTEES

- 2010, November 24, A. Becciu, *Feature based estimation of myocardial motion from tagged MR images*, TU/e, Netherlands
- 2010, September 8, G.A.F. Schoonenberg, *3D Reconstruction for Percutaneous Interventions*, TU/e, Netherlands

- 2011, October 14, A. Elen, *Model-based analysis of cardiac medical images: iconic, landmark-based and hybrid modeling*, KU Leuven, Belgium
- 2014, September 25, O.G. Filatova, *Progression in image analysis for percutaneous aortic valve replacement*, PDEng, TU/e, Netherlands
- 2016, September 21, C. Piazzese, Politecnico di Milano, Italy / Università della Svizzera italiana, Switzerland
- 2016, October 27, M. Elattar, AMC, Netherlands
- 2016, November 17, S. Saporito, TU/e, Netherlands

QUALIFICATION OF THE BIOMEDICAL IMAGE ANALYSIS GROUP OF THE TU/E BY QANU, NOVEMBER 2010

Quality

"The Committee was of the unanimous opinion that the work of the group of prof. dr. Ter Haar Romeny is of excellent quality. The examples presented (**analysis of cardiac imaging** and diffusion tensor image analysis based on HARDI data) as well as the on line demonstration were very convincing. Focus of the work is the development of generic algorithmic tools, for which it is very well known and which benefits from the link to the TU/e Mathematics and Computer Science Department. Strength of the group is that despite its focus on mathematical tools it has established a **strong application branch** ('algorithm design need real-world problems')."

The **analysis of cardiac imaging** was either performed by me, or was set up and supervised by me. [Read the 2010 QANU report](#) of the Biomedical Engineering department of the Eindhoven University of Technology.

GRANT PROGRAM JURER/REFEREE

- Jurer of the STW Open Technology Program, grant program, 2014
- Reviewer in the Pegasus grant program, Research Foundation Flanders, Belgium, 2013

AWARDS

- 2nd prize in the "Cardiac MR Left Ventricle Segmentation Challenge", MICCAI 2009, London, UK, 2009
- Best poster award; Advancing Healthcare: An Engineering Perspective, IEEE SBE, Eindhoven, Netherlands, 2013

PROFILES & IDS

TU/e	Employee page @ TU/e
BM/d group webpage	Biomedical Diagnostics webpage
IST/e webpage	IST/e webpage
LinkedIn	LinkedIn profile
ResearchGate	ResearchGate profile
Google Scholar	Google Scholar profile
ORCID ID	0000-0003-4907-904X
ResearcherID	F-4593-2016
Scopus Author ID	6507525949

EDUCATION

UNIVERSITY TEACHING QUALIFICATION (UTQ/BKO)

I have obtained the UTQ (BKO: Basis Kwalificatie Onderwijs) certificate in November 2016 at the TU/e.

TEACHING

BACHELOR PHASE

- Basic Image Processing (2008–2011, 2nd year Bachelor course, responsible lecturer, I set this up as a new course in 2008)
- BIOMIM skills lab on Image Analysis (2009–2010, 3rd year Bachelor course, *examiner*)
- Design-Centered Learning (OGO) (2005, 1st year Bachelor course, Image Analysis for Pathology, *tutor*)

MASTER PHASE

- I have supervised almost 40 student projects in the master phase, positioned both at TU/e and externally (at Philips Health-care, and in China). Four foreign students (Turkish, French, Portuguese) came to the TU/e to do their externship under his supervision.
- Additional to the above mentioned projects, I have been a member of 25 MSc graduation committees.

POSTGRADUATE AND EXTERNAL COURSES

- HOVO Brabant (Higher Education for the Elderly, 2008), 2 hour lecture about Medical Image Processing
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COURSES TAKEN

- Teaching and Learning in Higher Education (TU/e), 2010
- Training ERC grant writing (EG Liaison), 2009
- Academic Leadership (Eva Wiltingh Instituut), 2008
- Supervising MSc Students (TU/e), 2006
- How to Sell Technology (TU/e Innovation Lab, Licentec), 2006
- Tutor Training (TU/e), 2005

H-INDEX

h-index Google Scholar: 15 (cf. scholar.google.com)

EDITORSHIPS

- Lecture Notes in Computer Science, vol 9126, 2015, Proc. Functional Imaging and Modeling of the Heart 2015, editor
 - West European Student and Young Professional Congress 2015 (abstract book), IEEE Student Branch Eindhoven, themes Care and Cure, Automotive, and Smart and Sustainable Society/Connected World, May 20, 2015, editor
 - Neurocomputing, vol 144, 2014, special issue on "Advanced Computing for Image-Guided Intervention", guest editor
 - "Advancing Healthcare; An engineering perspective" (abstract book), IEEE Student Branch Eindhoven Symposium, theme Care and Cure, Feb 18, 2014, editor
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REVIEWING ACTIVITIES

JOURNALS

- Medical Image Analysis
- IEEE Transactions on Medical Imaging
- IEEE Transactions on Information Technology in Biomedicine
- IEEE Transactions on Biomedical Engineering
- Investigative Radiology
- Magnetic Resonance Materials in Physics, Biology and Medicine
- Physics in Medicine and Biology
- Medical Engineering & Physics
- Computer Methods in Biomechanics and Biomedical Engineering
- International Journal of Computer Assisted Radiology and Surgery
- Biomedical Signal Processing and Control
- Computational and Mathematical Methods in Medicine
- Journal of Healthcare Engineering

CONFERENCES

- MICCAI - most important medical image computing conf., program committee member for most conferences since 2005
 - IEEE EMBS, ICPR, IEEE ISBI, ICDS, NVPBV, EuroGraphics, ICCV, IPMI
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LECTURES

- MALT Meeting (meeting on iMaging And eLectrical Technologies), April/May 2015, Lugano, Switzerland, invited as senior scientist, and to bring two PhDs along.
- IST/e Annual Symposium 2013, TU/e (*symposium, invited*), 2013
- The Diffusion Imaging Summer 2012 Symposium, Irish Diffusion Imaging Group, University of Dublin, Ireland (*symposium, invited*), 2012
- Day of Biophysics and Biomedical Engineering, Wageningen University (*symposium, invited*), 2011
- Trends in Medical Technology, AMC Amsterdam (*symposium, invited*), 2011
- BME Colloquium, TU/e (*colloquium, invited*), 2011

- Interregio Meeting “Ontwikkelingen in de imaging technologie voor biomedische toepassingen”, Eindhoven (*symposium, invited*), 2011
- FEI Company (*colloquium, invited*), 2010
- MICCAI, Computational Biomechanics for Medicine V, Beijing, China (*conference*), 2010
- Motion correction for percutaneous interventions, TU/e (*symposium, invited*), 2010
- Research day Biomedical Engineering, TU/e, Eindhoven, Netherlands (*symposium, invited*), 2009
- Institute for Biomedical Engineering University and ETH Zurich, Zürich (*colloquium, invited*), 2008
- MICCAI Analysis of Functional Medical Images (workshop), New York, USA (*conference*), 2008
- BME Colloquium, TU/e (*colloquium, invited*), 2006
- Functional Imaging and Modeling of the Heart, Barcelona, Spain (*conference*), 2005
- European Grid Conference, Amsterdam, Netherlands (*conference*), 2005
- SPIE Medical Imaging, San Diego, USA (*conference*), 2003
- Fall 2002 Meeting of the NVPBV, Best, Netherlands (*conference*), 2002
- Multiple (academic) hospitals (Leiden Univ. Med. Center, Univ. Med. Center Utrecht, Catharina Hospital, Máxima Med. Center) and at Philips Healthcare

INTERNATIONAL REFEREED JOURNAL PAPERS (26)

- 2016** S. Saporito, S. Dovancescu, I.H.F. Herold, H.C.M. van den Bosch, **H.C. van Assen**, R.M. Aarts, H.H.M. Korsten, M. Mischi, Comparison of cardiac magnetic resonance imaging and bioimpedance spectroscopy for the assessment of fluid displacement induced by external leg compression, *Physiological Measurement*, 38(1): 15–32, DOI: 10.1088/1361-6579/38/1/15, 2016
- 2016** S. Saporito, I.H.F. Herold, P. Houthuizen, H.C.M. van den Bosch, J. Den Boer, H.H.M. Korsten, **H.C. van Assen**, M. Mischi, Model-based characterization of the trans-pulmonary circulation in heart failure by dynamic contrast-enhanced MRI, *Investigative Radiology*, 51(11): 720–727, DOI: 10.1097/RLI.0000000000000304, 2016
- 2016** S. Saporito, **H.C. van Assen**, P. Houthuizen, J.-P. Aben, M. Strik, L. van Middendorp, F. Prinzen, M. Mischi, Assessment of left ventricular mechanical dyssynchrony in LBBB canine model: a comparison between cine and tagged MRI, *Journal of Magnetic Resonance Imaging*, 44(4): 956–963, DOI: 10.1002/jmri.25225, 2016
- 2016** I.H.F. Herold, S. Saporito, M. Mischi, **H.C. van Assen**, R.A. Bouwman, H.C.M. van den Bosch, A.G.W. de Lepper, H.H.M. Korsten, P. Houthuizen, Pulmonary Transit Time Measurement by Contrast-Enhanced Ultrasound in Left Ventricular Dyssynchrony, *Echo Research and Practice*, 3(2): 35–43, 2016
- 2016** I.H.F. Herold, S. Saporito, R.A. Bouwman, P. Houthuizen, **H.C. van Assen**, M. Mischi, H.H.M. Korsten, Reliability, repeatability, and reproducibility of pulmonary transit time assessment by contrast enhanced echocardiography, *Cardiovascular Ultrasound*, 14:1, DOI: 10.1186/s12947-015-0044-1, 2016
- 2015** S. Saporito, I.H.F. Herold, P. Houthuizen, H.C.M. van den Bosch, H.H.M. Korsten, **H.C. van Assen**, M. Mischi, Automatic indicator dilution curve extraction in dynamic-contrast enhanced imaging using spectral clustering, *Physics in Medicine and Biology*, 60(13): 5225–5240, 2015
- 2015** I.H.F. Herold, M.A. Soliman Hamad, **H.C. van Assen**, R.A. Bouwman, H.H.M. Korsten, M. Mischi, Pulmonary blood volume measured by contrast enhanced ultrasound: a comparison with transpulmonary thermodilution, *British Journal of Anaesthesia*, 115(1): 53–60, DOI: 10.1093/bja/aeu554, 2015
- 2014** F. Zuo, J. Han, P. Yan, **H.C. van Assen**, K. Suzuki, Guest Editorial: Special issue on advanced computing for image-guided intervention, *Neurocomputing*, 144, 1–2, 2014
- 2014** M.A. Elattar, E.M. Wiegerinck, R.N. Planken, Ed van Bavel, **H.C. van Assen**, Jan Baan Jr., H.A. Marquering, Automated Segmentation of Aortic Root in CT Angiography of Patients Evaluated for TAVI Eligibility, *Medical & Biological Engineering & Computing*, 52(7), 611–618, 2014
- 2013** I.H.F. Herold, G. Russo, M. Mischi, P. Houthuizen, T. Saidov, M. van ‘t Veer, **H.C. van Assen**, H.H.M. Korsten, Volume quantification by contrast-enhanced ultrasound and thermodilution: an in-vitro comparison, *Cardiovascular Ultrasound*, 11:36, 2013
- 2013** R. Duits, H. Führ, B.J. Janssen, L.C.M. Bruurmijn, L.M.J. Florack, **H.C. van Assen**, Evolution equations on Gabor transforms and their applications, *Applied and Computational Harmonic Analysis*, 35(3): 483–526, 2013

- 2013** B.J. van Nierop, H.C. van Assen, E.D. van Deel, L.B.P. Niesen, D.J. Duncker, G.J. Strijkers, K. Nicolay, Phenotyping of left and right ventricular function in mouse models of compensated hypertrophy and heart failure with cardiac MRI, *PLoS ONE*, 8(2): e55424, 2013
- 2013** R. Duits, B.J. Janssen, A. Becciu, H.C. van Assen, A variational approach to cardiac motion estimation based on covariant derivatives and multi-scale Helmholtz decomposition, *Quarterly of Applied Mathematics*, 71(1): 1–36, 2013
- 2012** L.M.J. Florack, H.C. van Assen, Multiplicative Calculus in Biomedical Image Analysis, *Journal of Mathematical Imaging and Vision*, 42(1), 64–75, 2012
- 2011** D.W.J. van der Schaft, A.C.C. van Spreeuwel, H.C. van Assen, F.P.T. Baaijens, Mechanoregulation of vascularisation in aligned tissue engineered muscle; a role for VEGF, *Tissue Engineering Part A*, 17(21-22), 2857–2865, 2011
- 2011** A. Fuster, A. Becciu, M. Pottek, B.J.P. van den Heuvel, B.M. ter Haar Romenij, H.C. van Assen, 3D Winding Number: Theory and Application to Medical Imaging, *International Journal of Biomedical Imaging*, Article ID 516942, 2011
- 2010** L.M.J. Florack, H.C. van Assen, A New Methodology for Multiscale Myocardial Deformation and Strain Analysis based on Tagging MRI, *International Journal of Biomedical Imaging*, Article ID 341242, 2010
- 2010** J.W. van Triest, R.T.A. Megens, H.C. van Assen, B.M. ter Haar Romenij, M. van Zandvoort, Arterial radius estimation from microscopic data using a new algorithm for circle parameter estimation, *Journal of Biomedical Optics*, 15(2), Article ID 026012, 2010
- 2009** M.P. Rubbens, A. Driessen - Mol, R.A. Boerboom, M. Koppert, H.C. van Assen, B.M. ter Haar Romenij, F.P.T. Baaijens, C.V.C. Bouten, Quantification of the temporal evolution of collagen orientation in mechanically conditioned engineered cardiovascular tissues, *Annals of Biomedical Engineering*, 37(7), 1263–1272, 2009
- 2008** H.C. van Assen, M.G. Danilouchkine, M.S. Dirksen, J.H.C. Reiber, B.P.F. Lelieveldt, A 3D Active Shape Model driven by Fuzzy Inference: Application to Cardiac CT and MR, *IEEE Transactions on Information Technology in Biomedicine*, 12(5), 595–605, 2008
- 2006** H.C. van Assen, M.G. Danilouchkine, A.F. Frangi, S. Ordás, J.J.M. Westenberg, J.H.C. Reiber, B.P.F. Lelieveldt, SPASM: a 3D-ASM for Segmentation of Sparse and Arbitrarily Oriented Cardiac MRI Data, *Medical Image Analysis*, 10(2), 286–303, 2006
- 2005** E. Angelié, P.J.H. de Koning, M.G. Danilouchkine, H.C. van Assen, G. Koning, R.J. van der Geest, J.H.C. Reiber, Optimizing the automatic segmentation of the left ventricle in magnetic resonance images, *Medical Physics*, 32(2), 369–375, 2005
- 2004** H.C. van Assen, G.B.C. Vasbinder, B.C. Stoel, H. Putter, J.M.A. van Engelshoven, J.H.C. Reiber, Quantitative assessment of the morphology of renal arteries from X-ray images; Quantitative Vascular Angiography (QVA), *Investigative Radiology*, 39(6), 365–373, 2004
- 2002** H.C. van Assen, M. Egmont-Petersen, J.H.C. Reiber, Accurate object localization in gray level images using the center of gravity measure: accuracy versus precision, *IEEE Transactions on Image Processing*, 11(12), 1379–1384, 2002
- 2000** H.C. van Assen, H.A. Vrooman, M. Egmont-Petersen, J.G. Bosch, G. Koning, E.L. van der Linden, B. Goedhart, J.H.C. Reiber, Automated calibration in vascular x-ray images using the accurate localization of catheter marker bands, *Investigative Radiology*, 35(4), 219–226, 2000
- 2000** J.J.M. Westenberg, R.J. van der Geest, M.N.J.M. Wasser, E.L. van der Linden, T. van Walsum, H.C. van Assen, A. de Roos, J. Vanderschoot, J.H.C. Reiber, Vessel diameter measurements in gadolinium contrast-enhanced three-dimensional MRA of peripheral arteries, *Magnetic Resonance Imaging*, 18, 13–22, 2000

FULL REFEREED CONFERENCE PAPERS (31)

- 2016** P. Hamelmann, A. Kolen, L. Schmitt, R. Vullings, H.C. van Assen, M. Mischi, L. Demi, J. van Laar, J.W.M. Bergmans, Ultrasound Transducer Positioning Aid for Fetal Heart Rate Monitoring, *38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE EMBC) 2016*, Orlando, USA, 4105–4108, 2016
- 2016** H.B. Kause, A. Hernández-Sabaté, P. Márquez-Valle, A. Fuster, L.M.J. Florack, H.C. van Assen, D. Gil, Confidence Measures for Assessing the HARP Algorithm in Tagged Magnetic Resonance Imaging, *18th International Conference on Medical Image Computing and Computer Assisted Intervention, STACOM Workshop on Statistical Atlases and Computational Models 2015*, Munich, Germany, *Lecture Notes in Computer Science*, 9534, 69–79, 2016

- 2015** A. Al-Agamy, R. Karim, A. Arujana, J. Harrison, S. Williams, K.S. Rhode, [H.C. van Assen](#), Statistical Model of Paroxysmal Atrial Fibrillation Catheter Ablation Targets for Pulmonary Vein Isolation, *17th International Conference on Medical Image Computing and Computer Assisted Intervention, STACOM Workshop on Statistical Atlases and Computational Models 2014*, Boston, USA, *Lecture Notes in Computer Science*, 8896, 221–230, 2015
- 2015** P. Márquez Valle, H.B. Kause, A. Fuster, A. Hernández Sabaté, L.M.J. Florack, D. Gil, [H.C. van Assen](#), Factors Affecting Optical Flow Performance in Tagging Magnetic Resonance Imaging, *17th International Conference on Medical Image Computing and Computer Assisted Intervention, STACOM Workshop on Statistical Atlases and Computational Models 2014*, Boston, USA, *Lecture Notes in Computer Science*, 8896, 231–238, 2015
- 2014** S. Saporito, I. Herold, P. Houthuizen, E. Korsten, [H. van Assen](#), M. Mischi, Automatic Blood Pool Identification in Contrast Ultrasound Using Principal Component Analysis, *11th IEEE International Symposium on Biomedical Imaging: From Nano to Macro 2014*, Beijing, China, 1168–1171, 2014
- 2014** H.B. Kause, O. Filatova, R. Duits, M. Bruurmijn, A. Fuster, L.M.J. Florack, [H.C. van Assen](#), Direct Myocardial Strain Assessment from Frequency Estimation in Tagging MRI, *16th International Conference on Medical Image Computing and Computer Assisted Intervention, STACOM Workshop on Statistical Atlases and Computational Models 2013*, Nagoya, Japan, *Lecture Notes in Computer Science*, 8330, 212–219, 2014
- 2013** M. Elattar, E. Wiegerinck, N. Planken, E. van Bavel, [H. van Assen](#), J. Baan Jr., H. Marquering, Automated Normalized Cut Segmentation of Aortic Root in CT Angiography, *XIII Mediterranean Conference on Medical and Biological Engineering and Computing (MEDICON) 2013*, Seville, Spain, IFMBE Proceedings, 41, 1821–1824, 2013
- 2013** M. Bruurmijn, H.B. Kause, O. Filatova, R. Duits, A. Fuster, L.M.J. Florack, [H.C. van Assen](#), Myocardial Deformation from Local Frequency Estimation, *7th International Conference on Functional Imaging and Modeling of the Heart*, London, United Kingdom, *Lecture Notes in Computer Science*, 7945, 284–291, 2013
- 2012** A. Fuster, R.F.P. van Pelt, R. Fick, G. Claassen, B.M. ter Haar Romenij, [H.C. van Assen](#), L.M.J. Florack, 3D saddle point detection and applications in cardiac imaging, *9th IEEE International Symposium on Biomedical Imaging: From Nano to Macro 2012*, Barcelona, Spain, 808–811, 2012
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