# Alexander Leemans, B.Sc. M.Sc. Ph.D. Ph.D.h.c.mult.

## Academic Curriculum Vitae (December, 2019)

*Date of birth: 25-06-1979 Nationality: Belgium*

## *ADDRESS*

PROVIDI Lab
Image Sciences Institute
University Medical Center Utrecht
Heidelberglaan 100 (Room Q02.4.35)
Utrecht – 3584 CX, the Netherlands
Tel: +31 88 755 3170
Email: A.Leemans@umcutrecht.nl
Web: http://www.PROVIDI-Lab.org

## *RESEARCH INTERESTS*

Medical image computing, medical image processing, medical image analysis, image registration, image segmentation, neuroimaging, visualization, brain, diffusion MRI, fiber tractography, modelling

## *EDUCATION*

**Ph.D. in Science** *(2003 – 2006) Department of Physics, University of Antwerp, Belgium*
*Title:* Modeling and Processing of Diffusion Tensor Magnetic Resonance Images for Improved Analysis of Brain Connectivity
*Supervisors:* J. Sijbers, P.M. Parizel, A. Van der Linden, and D. Van Dyck

**M.Sc. in Physics** *(2000 – 2002) Department of Physics, University of Antwerp, Belgium*
*Title:* Entropy based image registration
*Supervisors:* J. Sijbers and D. Van Dyck

**B.Sc. in Physics** *(1997 – 2000) Department of Physics, University of Antwerp, Belgium*

## *RESEARCH EXPERIENCE*

**06/2011 – present** *Associate Professor (tenured faculty position)*
PROVIDI Lab, Image Sciences Institute, University Medical Center Utrecht, The Netherlands

**01/2011 – 06/2011** *Assistant Professor (tenured faculty position)*
PROVIDI Lab, Image Sciences Institute, University Medical Center Utrecht, The Netherlands

**01/2009 – 12/2010** *Assistant Professor (fixed-term faculty position)*
PROVIDI Lab, Image Sciences Institute, University Medical Center Utrecht, The Netherlands

**01/2007 – 12/2008** *Post-doctoral Research Associate*
CUBRIC (Cardiff University Brain Research Imaging Centre), Cardiff University, United Kingdom (Supervisor: D.K. Jones)

**10/2005 – 11/2005** *Visiting Ph.D. student*
The in vivo NMR center, Department of Biomedical Engineering, University of Alberta, Edmonton (Alberta), Canada (Supervisor: C. Beaulieu)

**06/2005 – 07/2005** *Visiting Ph.D. student*
The Athinoula A. Martinos Center for Biomedical Imaging, Harvard University – MIT Division of Health Sciences & Technology and the Massachusetts General Hospital Radiology Department, Charlestown (Boston), Massachusetts, USA (Supervisor: D. Tuch)

**01/2003 – 12/2006** *Ph.D. student (Research and Teaching Assistant)*
Vision Lab, Department of Physics, University of Antwerp, Belgium (Supervisor: J. Sijbers)

**07/2002 – 12/2002** *Research Student*
Vision Lab, Department of Physics, University of Antwerp, Belgium in collaboration with Department of Pharmacology, Organon, Oss, The Netherlands and Department of Orthopedics, Erasmus Medical Centre, Rotterdam, The Netherlands. European Union grant QLRT-1999-02024: *Mechanical Integrity and Architecture of Bone relative to osteoporosis, ageing and drug treatment (MIAB).* (Supervisor: D. Van Dyck)

## *SUPERVISION*

### *Postdocs*

**02/2017 – present** Alberto De Luca – Utrecht, the Netherlands

**05/2012 – present** Erik O'Hanlon (postdoc) – jointly supervised by Mary Cannon (Royal College of Surgeons in Ireland, Dublin, Ireland)

**10/2014 – 04/2017** Anneriet Heemskerk – Utrecht, the Netherlands

### *Ph.D. students*

**12/2019 – present** Roelof van Ewijk (Ph.D. student in Medicine) – jointly supervised by H. Merks (Utrecht, the Netherlands)

**01/2019 – present** Ernst Christiaanse (Ph.D. student in Medicine) – jointly supervised by T. Leiner (Utrecht, the Netherlands)

**05/2018 – present** Andrey Zhylka (Ph.D. student in Biomedical engineering) – jointly supervised by J. Pluim (TU/e, the Netherlands)

**10/2017 – present** Bruno Robalo (Ph.D. student in Biomedical engineering and Biophysics) – jointly supervised by Y. Reijmer and G.J. Biessels (Utrecht, the Netherlands)

**09/2015 – present** Samuel St-Jean (Ph.D. student in Computer Science) – jointly supervised by M. Viergever (Utrecht, the Netherlands)

**12/2014 – present** Fenghua Guo (Ph.D. student in Computer Science) – jointly supervised by M. Viergever (Utrecht, the Netherlands)

**10/2014 – present** Hamed Mesri (Ph.D. student in Medical Physics) – jointly supervised by M. Viergever (Utrecht, the Netherlands)

**10/2014 – present** Szabolcs Dávid (Ph.D. student in Medical Physics) – jointly supervised by M. Viergever (Utrecht, the Netherlands)

**01/2014 – present** Domenico Aquino (Ph.D. student in Engineering) – jointly supervised by A. Erbetta (Milano, Italy)

**12/2013 – present** Hannah Hulshoff (Ph.D. student in medicine) – jointly supervised by F. Jansen and K. Braun (Utrecht, the Netherlands)

| | |
|---|---|
| **07/2013 – present** | Ulrika Roine (Ph.D. student in medicine) – jointly supervised by M. Sams and P. Tani (University of Helsinki, Finland) |
| **06/2013 – present** | Jelmer Kok (Ph.D. student in Medicine) – jointly supervised by B. Kremer (Groningen, the Netherlands) |
| **03/2013 – 12/2019** | Omar Odishi (Ph.D. student in Medicine) – jointly supervised by R. Roos (Leiden, the Netherlands) |
| **11/2013 – 10/2018** | Wieke Haakma (Ph.D. student in medicine) – jointly supervised by P. Luijten, J. Hendrikse & M. Froeling (Utrecht, the Netherlands) |
| **01/2012 – 06/2017** | Timo Roine (Ph.D. student in Engineering) – jointly supervised by B. Jeurissen and J. Sijbers (Antwerp, Belgium) |
| **01/2010 – 12/2017** | Daniele Perrone (Ph.D. student in Engineering) – jointly supervised by W. Philips and J. Aelterman (Ghent, Belgium) |
| **03/2012 – 09/2016** | Chantal Tax (Ph.D. student in Medical Physics) – jointly supervised by M. Viergever (Utrecht, the Netherlands) |
| **09/2010 – 11/2014** | Jolien Gooijers (Ph.D. student in Kinesiology) – jointly supervised by S. Swinnen (Leuven, Belgium) |
| **01/2007 – 11/2013** | Jung-Lung Hsu (Ph.D. student in Medicine) – jointly supervised by M. Viergever (Utrecht, the Netherlands) |
| **09/2009 – 10/2013** | Sjoerd Vos (Ph.D. student in Medical Physics) – jointly supervised by M. Viergever (Utrecht, the Netherlands) |
| **10/2006 – 03/2012** | Ben Jeurissen (Ph.D. student in Physics) – jointly supervised by J. Sijbers (Antwerp, Belgium) |
| **10/2005 – 06/2009** | Wim Van Hecke (Ph.D. student in Medicine) – jointly supervised by J. Sijbers and P. Parizel |

### *M.Sc. students*

| | |
|---|---|
| **08/2019 – present** | Linda Reiland (M.Sc. student in Electrical Engineering, University of Trier, Germany) – jointly supervised by A. De Luca and B. Robalo (Utrecht, the Netherlands) |
| **05/2019 – present** | Maria Leousi (M.Sc. student in Medical Imaging, Utrecht University) – jointly supervised by A. De Luca (Utrecht, the Netherlands) |
| **03/2019 – present** | Saba Ishrat (M.Sc. student in Cognitive Neuroscience, Università degli Studi di Trento) – jointly supervised by J. Jovicich (Università degli Studi di Trento) and A. De Luca (Utrecht, the Netherlands) |
| **02/2019 – present** | Anouk van Rijn (M.Sc. student in Biomedical Technology, TU/e) – jointly supervised by A. De Luca (Utrecht, the Netherlands) |
| **02/2019 – present** | João Gabriel (M.Sc. student in Biomedical Engineering and Biophysics, University of Lisbon) – jointly supervised by A. De Luca (Utrecht, the Netherlands) |
| **02/2019 – present** | Iris Vos (M.Sc. student in Biomedical Technology, TU/e) – jointly supervised by A. De Luca (Utrecht, the Netherlands) |
| **09/2018 – 02/2019** | Rosina Derks (M.Sc. student in Medical Imaging, Utrecht University) – jointly supervised by M. Froeling (Utrecht, the Netherlands) |
| **11/2017 – 07/2018** | Victor Bodiut (M.Sc. student in Brain and Cognitive Sciences, UvA) – jointly supervised by S. David (Utrecht, the Netherlands) |

| | |
|---|---|
| **07/2016 – 06/2017** | Jari Gool (M.Sc. student in Life Sciences) – jointly supervised by Y. van der Werf (VUMC, the Netherlands) |
| **02/2017 – 06/2017** | Victor Bodiut (M.Sc. student in Brain and Cognitive Sciences, UvA) – jointly supervised by S. David (Utrecht, the Netherlands) |
| **06/2016 – 05/2017** | Matthijs Konijn (M.Sc. student in Life Sciences) – jointly supervised by H. Mesri and A. Heemskerk (Utrecht, the Netherlands) |
| **06/2016 – 02/2017** | Marc van den Heerik (M.Sc. student in Neuroscience and Cognition) – jointly supervised by T. Nijboer (Utrecht, the Netherlands) |
| **10/2016 – 12/2016** | Viljami Sairanen (M.Sc. student in Medical Physics) – jointly supervised by S. Savolainen (HUS Medical Imaging Center, University of Helsinki, Finland) |
| **07/2016 – 11/2016** | Bryce Geeraert (M.Sc. student in Biomedical Engineering) – jointly supervised by C. Lebel (University of Calgary, Canada) |
| **10/2014 – 07/2015** | Richard van den Elzen (M.Sc. student in Medical Natural Sciences) – jointly supervised by C. Tax (Utrecht, the Netherlands) |
| **03/2012 – 08/2013** | Wieke Haakma (M.Sc. student in Technical Medicine) – jointly supervised by P. Dik (Utrecht, the Netherlands) |
| **09/2012 – 04/2013** | Wyke Huizinga (M.Sc. student in Physics) – jointly supervised by S. Klein (Rotterdam, the Netherlands) |
| **12/2011 – 02/2012** | Ruud Schreurs (M.Sc. student in Technical Medicine) – jointly supervised by P. Dik (Utrecht, the Netherlands) |
| **10/2010 – 08/2011** | Pasquelle van der Jagt (M.Sc. student in Technical Medicine) – jointly supervised by P. Dik (Utrecht, the Netherlands) |
| **08/2010 – 06/2011** | Pascal Ramaekers (M.Sc. student in Physics), Utrecht, the Netherlands – jointly supervised by M. Viergever |
| **07/2010 – 06/2011** | Remco Krijthe (M.Sc. student in Physics), Utrecht, the Netherlands – jointly supervised by M. Viergever |
| **03/2011 – 04/2011** | Hanne Kause (M.Sc. student in Biomedical Image Sciences), Utrecht, the Netherlands – jointly supervised by M. van Stralen |
| **08/2010 – 05/2011** | Saskia Aarnink (M.Sc. student in Clinical Physics), Utrecht, the Netherlands – jointly supervised by S. Vos |
| **08/2009 – 01/2010** | Daan Broekhuizen (M.Sc. student in Physics), Utrecht, the Netherlands – jointly supervised by M. Viergever |
| **08/2009 – 11/2009** | Yohan de Klein (M.Sc. student in Physics), Utrecht, the Netherlands) – jointly supervised by M. Viergever |
| **05/2007 – 07/2007** | Fahimeh Darki (visiting M.Sc. student in Medical Physics) – jointly supervised by D. Jones |
| **10/2005 – 06/2006** | Ben Jeurissen (M.Sc. student in Biomedical Imaging thesis) – jointly supervised by J. Sijbers |
| **10/2005 – 06/2006** | Evelyne Neels (M.Sc. student in Computer Science) – jointly supervised by J. Sijbers |
| **10/2004 – 06/2005** | Björn Geens (M.Sc. student in Physics) – jointly supervised by J. Sijbers |
| **10/2004 – 06/2005** | Yves Fierens (M.Sc. student in Physics) – jointly supervised by J. Sijbers |
| **10/2004 – 06/2005** | Wim Van Hecke (M.Sc. student in Biomedical Imaging) – jointly supervised by J. Sijbers and J. Van Goethem |

## *TEACHING ACTIVITIES*

| | |
|---|---|
| **12/2017 – present** | University course "Diffusion MRI" (lectures & lab practicals), 1st year M.Sc. in Medical Imaging (~10 students, 30h), joint lecturer: K. Gilhuijs, UMC Utrecht |
| **05/2017 – present** | University course "Image Processing" (lectures & lab practicals), 1st year M.Sc. in Medical Imaging (~15 students, 80h), joint lecturer: K. Gilhuijs, UMC Utrecht |
| **10/2016 – present** | Guest lecturer for the Neurophysiology course, which is part of the Research Master Brain and Cognitive Sciences (~25 students, 2h) from the UvA. |
| **01/2007 – present** | Educational talks at the annual ISMRM/SMRT meetings (2007, 2009, 2011 – 2013, 2015 – 2017) and the ESMRMB "School of MRI" and "Hands-on MRI" courses (2008, 2009, 2012–2017). |
| **11/2010 – 02/2016** | University course "Image Processing I" (lectures & lab practicals), 1st year M.Sc. in Biomedical Image Sciences (~15 students, 80h), joint lecturer: K. Vincken, UMC Utrecht |
| **01/2004 – 06/2004** | University course "Statistics in Biomedical Applications" (lab practicals), 1st year M.Sc. in Biomedical Sciences (~50 students, 30h), lecturer: F. Wuyts, University of Antwerp |
| **10/2003 – 12/2003** | University course "Biomedical Informatics and Statistics" (lab practicals), 1st year M.Sc. in Pharmaceutical Sciences & 2nd year B.Sc. in Veterinary Medicine (~70 students, 15h), lecturer: F. Wuyts, University of Antwerp |
| **01/2003 – 06/2003** | University course "Biometrics" (lab practicals), 1st year B.Sc. in Biomedical Sciences (~140 students, 30h), lecturer: F. Wuyts, University of Antwerp |
| **10/2002 – 12/2002** | University course "General Physics" (lab practicals), 1st year B.Sc. in Biomedical Sciences (~140 students, 16h), lecturer: E. Raman, University of Antwerp |

## *PROJECT GRANTS – SCHOLARSHIPS – PRIZES*

**Grants (principal investigator / applicant)**

1) Funding agency: NWO – VIDI, The Netherlands
   Title: *Diffusion MRI Analysis beyond Connectography*
   Duration: 2014 – 2019
   Amount: 800 k€

2) Funding agency: NWO – Free Competition (EW), The Netherlands
   Title: *Constrained voxel based analysis for diffusion tensor imaging*
   Duration: 2012 – 2015
   Amount: 211 k€

3) Funding agency: IWT, Belgium
   Title: *Modeling and processing of diffusion tensor magnetic resonance images for improved analysis of brain connectivity*
   Duration: 2003 – 2006
   Amount: 190 k€

**Grants (co-investigator / co-applicant)**

4) Funding agency: KIKA ("Stichting Kinderen Kankervrij"), the Netherlands

| | | |
|---|---|---|
| | Title: | Diffusion Weighted Imaging: Meeting the urgent need for surrogate endpoints in pediatric rhabdomyosarcoma |
| | Duration: | 2020 – 2026 |
| | Amount: | 600 k€ |
| | PI: | Hans Merks, Princess Maxima Center, Utrecht, the Netherlands |
| 5) | Title: "TRABIT" (Translational Brain Imaging Training Network) | |
| | Duration: | 2018 – 2022 |
| | Amount: | 3.9 m€ |
| | PI: | Koen Van Leemput, Department of Applied Mathematics and Computer Science, Technical University Denmark, Lyngby, Denmark |
| 6) | Funding agency: | ERA-NET (NEURON) – NWO, The Netherlands |
| | Title: | "RepImpact" (Repetitive Subconcussive Head Impacts - Brain Alterations and Clinical Consequences) |
| | Duration: | 2017 – 2019 |
| | Amount: | 1.5 m€ |
| | PI: | Inga Koerte, Klinik und Poliklinik für Kinder- und Jugendpsychiatrie, Psychosomatik und Psychotherapie – Klinikum der Universität München, Germany |
| 7) | Funding agency: | R01 – NIH (National Institutes of Health), USA |
| | Title: | *MRI Toolbox for Rodent Brain Microstructure Imaging* |
| | Duration: | 2016 – 2019 |
| | Amount: | 1.8 m$ |
| | PI: | Mark Does, Center for Small Animal Imaging, Institute of Imaging Science, Vanderbilt University, Nashville, TN, USA |
| 8) | Funding agency: | HRB (Health Research Board), Ireland |
| | Title: | *Early life stress and the etiopathogenesis of auditory hallucinations in young people* |
| | Duration: | 2016 – 2018 |
| | Amount: | 329 k€ |
| | PI: | Mary Cannon, Department of Psychiatry, RCSI Education and Research Center, Beaumont Hospital, Dublin, Ireland |
| 9) | Funding agency: | FWO, Belgium |
| | Title: | *Delineation of effector-specific representations in motor cortex and their structural/functional connectivity* |
| | Duration: | 2015 – 2018 |
| | Amount: | 136 k€ |
| | PI: | Jolien Gooijers, Motor Control Laboratory, KU Leuven, Belgium |
| 10) | Funding agency: | FP7, European Commission (collaborative project) |
| | Title: | *EPISTOP: Long-term, prospective study evaluating clinical and molecular biomarkers of epileptogenesis in a genetic model of epilepsy – tuberous sclerosis complex* |
| | Duration: | 2013 – 2018 |
| | Amount: | 632 k€ (total across 14 participants = 9.5 m€) |
| | PI: | Floor Jansen (project coordinator: Sergiusz Jozwiak), UMC Utrecht, the Netherlands |
| 11) | Funding agency: | Canadian Institutes of Health Research |
| | Title: | *Integrated Software for the Assessment of Diffusion Tensor Imaging of Brain Wiring in Alzheimer's Disease and Dementia* |
| | Duration: | 2013 – 2016 |
| | Amount: | 219 k$ |
| | PI: | Christian Beaulieu, Department of Biomedical Engineering, University of Alberta, Edmonton, Canada |

12) Funding agency: The Wellcome Trust, United Kingdom
Title: *Tractometry*
Duration: 2012 – 2019
Amount: 1.7 mGBP
PI: Derek Jones, CUBRIC, Cardiff University, Wales, UK

13) Funding agency: Health Research Board (HRB), Ireland
Title: *The anatomy of Risk: A population-based imaging study of adolescents*
Duration: 2012 – 2015
Amount: 301 k€
PI: Mary Cannon, Department of Psychiatry, RCSI Education and Research Center, Beaumont Hospital, Dublin, Ireland

14) Funding agency: FWO, Belgium
Title: *Aging and executive control mechanisms: neural structure-function relations with respect to inhibitory control of bimanual tasks*
Duration: 2010 – 2013
Amount: 433 k€
PI: Stephan Swinnen, Motor Control Laboratory, KU Leuven, Belgium

15) Funding agency: FWO, Belgium
Title: *Quantitative extraction of standard values from DW MR images of the premature brain*
Duration: 2010 – 2013
Amount: 540 k€
PI: Wilfried Philips, Telecommunications and Information Processing, Ghent University, Belgium

16) Funding agency: FWO, Belgium
Title: *Diagnostics and recovery of neuromotor function following a traffic accident in children: study of neural structure-function relations with respect to movement coordination*
Duration: 2010 – 2013
Amount: 428 k€
PI: Stephan Swinnen, Motor Control Laboratory, KU Leuven, Belgium

17) Funding agency: NARSAD Independent Investigator Award, USA
Title: *White matter microstructural impairments as a bipolar disorder endophenotype – a DTI tractography study*
Duration: 2010 – 2012
Amount: 300 k€
PI: Colm McDonald, Department of Psychiatry, National University of Ireland, Galway, Ireland

18) Funding agency: IWT, Belgium
Title: *Improved processing of DTI magnetic resonance images for coregistration, atlas construction, and voxel based analysis*
Duration: 2007 – 2010
Amount: 195 k€
PI: Wim Van Hecke, Department of Physics, University of Antwerp, Belgium

**Prizes, awards and honors**

1) "Doctoratus Honoris Causa (Ph.D.h.c)", honorary doctorate from H.S. Skovoroda Kharkiv National Pedagogical University, (Ukraine), 2019

2) "Magna Cum Laude Merit Award" for the work "Estimation of multiple fiber orientation distributions (mFODs) from diffusion MRI data using spherical deconvolution" presented at the Annual ISMRM Meeting – Montreal, Canada, 2019 (first author: A. De Luca)

3) "Magna Cum Laude Merit Award" for the work "Investigation of the dependence of free water and pseudo-diffusion MRI estimates on the cardiac cycle" presented at the Annual ISMRM Meeting – Montreal, Canada, 2019 (first author: A. De Luca)

4) "Royal Academy of Medicine in Ireland Research Award" for the the work, "The Arcuate Fasciculus and Verbal Deficits in Psychosis", published in Translational Neuroscience, 2018 (first author: J. Kenney)

5) "Doctoratus Honoris Causa (Ph.D.h.c.)", honorary doctorate from Universidad del Chubut (Argentina), 2017

6) "Outstanding Teacher Award" for ISMRM Educational Course "Connectivity: Structure & Function", 25th Annual ISMRM Meeting – Honolulu, Hawaii, USA, 2017

7) "Distinguished Reviewer Award" for the distinguished service to the Society during 2015-2016 as a reviewer for Magnetic Resonance in Medicine, 2017

8) "Winner of the 2016 USERN (Universal Scientific Education and Research Network) Prize in Medical Sciences", *International prize awarded annually to researchers less than 40 years of age for their novel advancement and achievements in scientific education and research (prize = 10,000$). http://usern.tums.ac.ir*

9) "Distinguished Reviewer Award" for the distinguished service to the Society during 2014-2015 as a reviewer for Magnetic Resonance in Medicine, 2016

10) "Magna Cum Laude Merit Award" for the work "Post-Mortem Diffusion MRI of Cervical Spine and Nerves Roots" presented at the Annual ISMRM Meeting – Singapore, 2016 (first author: W. Haakma)

11) "Magna Cum Laude Merit Award" for the work "Mapping the Brain's "Sheet Probability Index" (SPI) with Diffusion MRI: Sheet Happens?!" presented at the Annual ISMRM Meeting – Singapore, 2016 (first author: C.M.W. Tax)

12) "Winner Brain Art Competition" in the category "Best Video Illustration of the Brain" with "The Trumpeting Brain", Organization of Human Brain Mapping (The Neuro Bureau), 2015

13) "Young Investigator Award" for the work "Predicting school age cognitive capacities from the neonatal connectome in preterm born children" presented at the 1st Congress of joint European Neonatal Societies meeting, Budapest, 2015 (first author: K. Keunen)

14) "Distinguished Reviewer Award" for the distinguished service to the Society during 2013-2014 as a reviewer for Magnetic Resonance in Medicine, 2015

15) "Best Research Contribution in Bio-imaging" with the work: "Towards Quantification of the Brain's Sheet Structure in Diffusion MRI Data" presented at the International BASP Frontiers workshop – Villars-sur-Ollon, Switzerland, 2015 (first author: C.M.W. Tax)

16) "Human Brain Mapping Editor's Choice Award for papers published in 2013" with the article: "Investigating the prevalence of complex fiber configurations in white matter tissue with diffusion MRI" (HBM-11-0658), 2014 (first author: B. Jeurissen)

17) "Summa Cum Laude Merit Award" for the work "Diffusion Tensor MRI and Tractography of the Sacral Plexus in Children with Spina Bifida" presented at the Joint Annual ISMRM-ESMRMB meeting – Milan, Italy, 2014 (first author: W. Haakma)

18) "Magna Cum Laude Merit Award" for the work "Towards Quantification of the Brain's Sheet Structure: Evaluation of the Discrete Lie Bracket" presented at the Joint Annual ISMRM-ESMRMB meeting – Milan, Italy, 2014 (first author: C.M.W. Tax)

19) "Magna Cum Laude Merit Award" for the work "In Vivo Investigations of Accuracy and Precision of Fiber Orientations in Crossing Fibers in Spherical Deconvolution-Based HARDI Methods" presented at the Joint Annual ISMRM-ESMRMB meeting – Milan, Italy, 2014 (first author: S.B. Vos)

20) "Magna Cum Laude Merit Award" for the work "Microstructural Development of the Corpus Callosum 'catches Up' Between Term and 7 Years in Children Born <30 Weeks' Gestation or <1250 G" presented at the Joint Annual ISMRM-ESMRMB meeting – Milan, Italy, 2014 (first author: D.K. Thompson)

21) "Outstanding Teacher Award" for ISMRM Sunrise course "From Pulse Sequence to Clinical Applications in the Brain: Diffusion Tensor Imaging", 21st Annual ISMRM Meeting – Salt Lake City, USA, 2013

22) "Magna Cum Laude Merit Award" for the work "REKINDLE: Robust Extraction of Kurtosis INDices with Linear Estimation" presented at the 21st Annual ISMRM meeting – Salt Lake City, USA, 2013 (first author: C.M.W. Tax)

23) "Summa Cum Laude Merit Award" for the work "HARDI and fiber tractography at 1 mm isotropic resolution" presented at the 21st Annual ISMRM meeting – Salt Lake City, USA, 2013 (first author: S.B. Vos)

24) "Magna Cum Laude Merit Award" for the work "A Critical Consideration on the Absence of Significance and the Impact of Structure Size When Interpreting DTI and DKI Results" presented at the 21st Annual ISMRM meeting – Salt Lake City, USA, 2013 (first author: F. Szczepankiewicz)

25) "1st Prize Art of Neuroscience 2013" in category "Movies" (http://aon.nin.knaw.nl, see movie here: http://youtu.be/agNp0QKv3f8) – in collaboration with Sjoerd Vos, 2013 (*prize: tablet computer*)

26) "Outstanding Teacher Award" for ISMRM Sunrise course "Absolute Beginner's Guide to Neuroimaging Methods", 20th Annual ISMRM Meeting – Melbourne, Australia, 2012

27) "1st Prize Best Research Image" at the 1st Congress on Muscle Diseases, organized by the "Prinses Beatrix spier fonds" and "Spierziekten Nederland", Veldhoven, The Netherlands (*prize was a digital single-lens reflex camera*), 2012

28) "2nd Prize Innovative Research" for the work "Diffusion tensor MRI and tractography of the sacral plexus" presented at the 23rd Annual Meeting of the European Society for Paediatric Urology, Zurich, Switzerland, 2012 (first author: P. van der Jagt)

29) "Young Investigator Award" for the work "Longitudinal assessment of chemotherapy induced structural changes in cerebral white matter and its correlation with impaired cognitive functioning in breast cancer patients" presented at the International Cognition and Cancer Task Force Conference, 2012 (first author: S. Deprez)

30) "Best Poster Award" for the work "Tract Coherence Imaging (TCI): Quantifying the intra-voxel fiber tract heterogeneity", presented at the WM study group meeting at the 20th Annual ISMRM meeting – Melbourne, Australia, 2012 (first author: S.B. Vos)

31) "Magna Cum Laude Merit Award" for the work "Uncertainty of quantitative T1 mapping in healthy volunteers at 7.0 Tesla" presented at the 20th Annual ISMRM meeting – Melbourne, Australia, 2012 (first author: D. Polders)

32) "Summa Cum Laude Merit Award" for the work "HARDI-based methods for fiber orientation estimation" presented at the 20th Annual ISMRM meeting – Melbourne, Australia, 2012 (first author: B. Jeurissen)

33) "Summa Cum Laude Merit Award" for the work "White matter microstructural changes in bipolar disorder: A HARDI CSD study" presented at the 20th Annual ISMRM meeting – Melbourne, Australia, 2012 (first author: L. Emsell)

34) "President's Prize for Best Translational Paper" (from Basic Science or Theory through development to clinical application) for the work "Diffusion tensor MRI and tractography of the sacral plexus" presented at the 55th Annual Scientific Meeting of the Society for Research into Hydrocephalus and Spina Bifida (SRHSB) – Nottingham, UK, 2011 (first author: P. van der Jagt)

35) "Top-Citation Award" for the publication "Microstructural maturation of the human brain from childhood to adulthood" (Lebel C. et al, NeuroImage 40(3):1044-55, 2008), which is the most cited

NeuroImage article from the 956 articles published that year, 2010

36) "2nd Prize for Best Diffusion MRI Modeling and Tractography Algorithm" for the work "Fiber Tracking on the 'Fiber Cup Phantom' using Constrained Spherical Deconvolution", presented at the MICCAI Meeting – London, UK, 2009 (first author: B. Jeurissen)

37) "Travel Award" Bristol-Cardiff Neuroscience Collaboration (BCNC), Psychopharmacology Unit – CUBRIC, Young Neuroscientists' Day, Bristol, 1000 GBP, 2008

38) "1st Prize European Brain Expert" for the work "To Rotate B or not to Rotate B?: The importance of B-matrix reorientation during realignment of diffusion tensor MRI data" submitted to the 2nd European Brain Expert Neuroscience Contest (*prize: 5.000 EUR*), 2008

39) "Educational ISMRM Stipend Award", 16th ISMRM Meeting, Toronto, Canada, 1100 USD, 2008

40) "Brain Travel Award", joint annual Meeting ESMRMB-ISMRM, Berlin, Germany, (543 GBP), 2007

41) "3rd Prize Magnetic Art Award" for the work "Dead Presidents" presented at the "Art 'N' Artifacts" exhibit at the joint annual Meeting ESMRMB-ISMRM – Berlin, Germany (*prize: iPod*), 2007

42) "Educational Stipend Award", joint Annual Meeting ESMRMB-ISMRM, Berlin, Germany, (250 USD), 2007

43) "Travel Award" from the Royal Society (UK's National Academy of Sciences), joint annual Meeting ESMRMB-ISMRM, Berlin, Germany, 497 GBP, 2007

44) "Educational Stipend Award", 14th Annual ISMRM Meeting, Seattle, USA, (760 USD), 2006

45) "3rd Prize Research Focus Poster" for the work "A graphical toolbox for exploratory diffusion tensor imaging and fiber tractography" presented at the 14th Annual SMRT Meeting – Miami, USA, 2005

46) "Cum Laude Award" for the work "In vivo visualization of the neuroanatomy and brain connectivity of starling brain through diffusion tensor imaging" presented at the 21st Annual Scientific ESMRMB Meeting – Copenhagen, Denmark, 2004 (first author: M. Verhoye)

47) "Young Investigator Award: Belgian Hospital Physicist of the Year", announced at the 20th Annual Symposium of the Belgian Hospital Physicists Association – Brussels, Belgium (*prize: 500 EUR*), 2004

48) "Cover images" selected for (i) the handbook "Clinical Neuroanatomy and Neuroscience", M.J.T. FitzGerald, G. Gruener, and E. Mtui (Eds.), http://amzn.com/0702037389), "The Psychologist" (April Issue, 2015); Biological Psychiatry: Cognitive Neuroscience and Neuroimaging (May Issue, 2016) and (ii) nine articles that I (co)authored: Van Hecke et al, NeuroImage 2008; Lebel et al, NeuroImage 2008; Leemans et al, MRM 2009; Polders et al, JMRI 2011; Deprez et al, HBM 2011; Deprez et al, Brain Imaging Behav 2013; Reijmer et al, Neurology 2013; Veraart et al, NeuroImage 2013; Vos et al, Hear Res 2015; van Veluw et al, Neurology 2019.

## *INVITED PRESENTATIONS AT CONFERENCES – SYMPOSIA – WORKSHOPS*

### International

1) *Considerations for computing connectomes with diffusion MRI*
Symposium on "Function & structure of brain connectoms", Tel Aviv, Israel, 2019

2) *Investigating neurodegeneration with diffusion MRI*
Symposium of the "Taiwan Dementia Society", Taipei, Taiwan, 2019

3) *Practical considerations for studying human brain connectivity with diffusion MRI*
X Congresso Internacional de Atualização em Neurociências, São Paulo, Brazil, 2019

4) *Imaging structures and connections of the brain: From methods to biomedical applications*
Brain connectivity workshop: "Structures and connections of the brain. Practical applications in medicine, rehabilitation, sports, and pedagogy", Kharkov, Ukraine, 2019

5) *Methodological considerations on analyzing diffusion MRI data*
Educational Course at the annual OHBM meeting, *"MR Diffusion Imaging: From Theory to Applications"*, Rome, Italy, 2019

6) *Identifying and correcting physiological and systematic artifacts in diffusion MRI*
Educational Course at the annual OHBM meeting, *"Taking Control Of Your Neuroimaging Data: Understanding Artefacts And Quantifying Quality"*, Rome, Italy, 2019

7) *Challenges of studying neonatal connectivity with diffusion MRI*
4th International Symposium on "MRI of the neonatal brain: from basics to bedside", Wilhelmina Children's Hospital, UMC Utrecht, Utrecht, The Netherlands, 2019

8) *DTI Processing: Pitfalls in Clinical Applications*
ISMRM Virtual Meeting of the Diffusion Study Group, "Diffusion Imaging and Fiber Tractography: Tips & Tricks for Clinical Use", 2018

9) *Fiber Tracking with diffusion MRI*
Symposium "Diffusion imaging: From basics to the neurological clinic", Brussels, Belgium, 2018

10) *Could not accept invitation due to travel ban (VISA was not approved due to previous visit to Iran)*
BIDS (Brain Imaging Data Structure) Workshop, Stanford, USA, 2018

11) *Quality assessment and diffusion MRI data preprocessing: Getting ready for analysis*
ISMRM Workshop on Advanced Neuro MR: Best Practices for Technical Implementation, Seoul, South Korea, 2018

12) *Diffusion MRI analysis methods*
ISMRM Workshop on Advanced Neuro MR: Best Practices for Technical Implementation, Seoul, South Korea, 2018

13) *Principles of Magnetic Resonance: From MRI to DTI to DKI to SDI*
NeuroChubut Meeting – Puerto Madryn, Chubut Province, Patagonia, Argentina, 2017

14) *Quality assessment and correction methods for diffusion MRI data*
Computational Brain Connectivity Mapping – Winter School Workshop 2017, Juan-les-Pins, France, 2017

15) *Practicalities and pitfalls in diffusion MRI*
Philips Australia and New Zealand User Group Meeting – Sydney, Australia, 2017

16) *Advances in diffusion MRI: Fixels, connectomes & sheets*
Keynote Lectures at 12th Annual meeting of the Australia & New Zealand (ANZ) Chapter of the SMRT – Sydney, Australia, 2017

17) *Challenges for clinical diffusion MRI*
Keynote Lectures at 12th Annual meeting of the Australia & New Zealand (ANZ) Chapter of the SMRT – Sydney, Australia, 2017

18) *Introduction to Diffusion MRI: Key concepts and applications*
First Latin-American ExploreDTI Workshop, Sao Paolo, Brazil, 2017

19) *Data QA and processing tools for diffusion MRI*
First Latin-American ExploreDTI Workshop, Sao Paolo, Brazil, 2017

20) *Diffusion MRI analysis: Ins and outs*
First Latin-American ExploreDTI Workshop, Sao Paolo, Brazil, 2017

21) *Methodological considerations on processing and analyzing diffusion MRI data*
Educational Course at the OHBM Meeting: "MR Diffusion Imaging: Getting Your Measures Right", Vancouver, Canada, 2017

22) *Processing & analysis of diffusion MRI data*
ESMRMB School of MRI: "Clinical fMRI & DTI – Theory and Practice", Porto, Portugal, 2017

23) *Measuring connectivity with diffusion MRI*
"Connectivity: Structure & Function" – Weekend Educational Session at the 25th Annual Meeting of the ISMRM, Honolulu, USA, 2017

24) *Acerca de pre-procesamiento datos en ExploreDTI*
Symposium "Datos de difusión aplicados a Resonancia Magnética: Impacto en la Neurociencia Cognitiva", Facultad de Psicología, Universidad Nacional de Córdoba, Córdoba, Argentina, 2016

25) *Visualización de data IRM de difusión*
Symposium "Datos de difusión aplicados a Resonancia Magnética: Impacto en la Neurociencia Cognitiva", Facultad de Psicología, Universidad Nacional de Córdoba, Córdoba, Argentina, 2016

26) *IRM de difusión: De tensores a armónicos esféricos*
Symposium "Datos de difusión aplicados a Resonancia Magnética: Impacto en la Neurociencia Cognitiva", Facultad de Psicología, Universidad Nacional de Córdoba, Córdoba, Argentina, 2016

27) *An interdisciplinary insight into the human brain: Advances in the third millennium*
1st Universal Scientific Education Research Network (USERN) Congress, Tehran University of Medical Science, Tehran, Iran, 2016

28) *Analysis Pipelines for Diffusion MRI Data: From Voxels to Connectomes*
ISMRM Workshop: "Breaking the Barriers of Diffusion MRI", Lisbon, Portugal, 2016

29) *Practicalities and Challenges in diffusion MRI*
International Workshop on Geometry, PDE's and Lie Groups in Image Analysis, TU/e – Eindhoven, The Netherlands, 2016

30) *Diffusion Tensor Imaging: The basics*
Workshop "Neuroimaging of Cerebrovascular Disease" at 8th International Meeting of the Society of Vascular Behavioural and Cognitive Disorders (VasCog), VU Amsterdam, the Netherlands, 2016

31) *Investigating the brain's white matter architecture with diffusion MRI*
The Interdisciplinary Center for Neurosciences (IZN) – University of Heidelberg (Retreat at Kloster Schöntal), Germany, 2016

32) *Methodological considerations on analyzing diffusion MRI data*
Educational Course at the OHBM Meeting: "MR Diffusion Imaging: Getting Your Measures Right", Geneva, Switzerland, 2016

33) *Analysis of diffusion MRI data*
ESMRMB School of MRI: "Clinical fMRI & DTI – Theory and Practice", Barcelona, Spain, 2016

34) *Diffusion MRI of the Brain: Applications in clinical research*
Advanced Diffusion MRI and Data Analysis Workshop, Tehran University of Medical Sciences, Medical Imaging Center, Imam Khomeini Hospital, Tehran, Iran, 2016

35) *Diffusion MRI: Key concepts*
Advanced Diffusion MRI and Data Analysis Workshop, Tehran University of Medical Sciences, Medical Imaging Center, Imam Khomeini Hospital, Tehran, Iran, 2016

36) *Quality assurance and preprocessing of Diffusion-Weighted MRI Data*
Advanced Diffusion MRI and Data Analysis Workshop, Tehran University of Medical Sciences, Medical Imaging Center, Imam Khomeini Hospital, Tehran, Iran, 2016

37) *Advanced Methods for fiber tractography*
Advanced Diffusion MRI and Data Analysis Workshop, Tehran University of Medical Sciences, Medical Imaging Center, Imam Khomeini Hospital, Tehran, Iran, 2016

38) *Diffusion MRI Analysis: Methodological considerations*
Advanced Diffusion MRI and Data Analysis Workshop, Tehran University of Medical Sciences, Medical Imaging Center, Imam Khomeini Hospital, Tehran, Iran, 2016

39) *Diffusion Imaging: Form the "Oops" to the "Aha"*
"Diffusion & Perfusion: What do you know?" – Educational Session at the 24th Annual Meeting of the ISMRM, Singapore, 2016

40) *Preprocessing of diffusion MRI data: Boring but important*
HWK Workshop "Diffusion tensor imaging and beyond: Concepts and practical guidelines", Institute for Advanced Study, Delmenhorst, Germany, 2016

41) *Analyzing diffusion MRI: From voxels to networks*
HWK Workshop "Diffusion tensor imaging and beyond: Concepts and practical guidelines", Institute for Advanced Study, Delmenhorst, Germany, 2016

42) *No function without structure: Challenges in diffusion MRI and tractography for clinical research*
Educational Course in Session: "E³ - ECR Academies: Neuroradiology: from Morphology to Function" at the European Congress of Radiology (ECR), Vienna, Austria, 2016

43) *Structural brain connectivity*
Educational Course at the ESMRMB Meeting: "Brain Connectivity", Edinburgh, Scotland, 2015

44) *Processing and Quality Control of DTI data*
Educational Course at the OHBM Meeting: "MR Diffusion Imaging: Getting Your Measures Right", Honolulu, Hawaii, USA, 2015

45) *Brain network applications in basic neuroscience*
"Brain Networks" – Sunrise Educational Course at the 23rd Annual Meeting of the ISMRM, Toronto, Canada, 2015

46) *DTI Processing: Pitfalls in Clinical Applications*
"Advanced Neuro" – Educational Course at the 24th Annual Meeting of the SMRT, Toronto, Canada, 2015

47) *Data analysis for diffusion MRI*
ESMRMB School of MRI: Clinical fMRI & DTI – Theory and Practice, Basel, Switzerland, 2015

48) *General Introduction and Overview of Diffusion MRI*
Advanced Diffusion MRI and Data Analysis Workshop, Tehran University of Medical Sciences, Tehran, Iran, 2015

49) *Clinical Research Applications of Brain Diffusion MRI*
Advanced Diffusion MRI and Data Analysis Workshop, Tehran University of Medical Sciences, Tehran, Iran, 2015

50) *Quality Assurance and Preprocessing of Diffusion-Weighted MRI Data*
Advanced Diffusion MRI and Data Analysis Workshop, Tehran University of Medical Sciences, Tehran, Iran, 2015

51) *Fiber Tractography: Advanced Methods*
Advanced Diffusion MRI and Data Analysis Workshop, Tehran University of Medical Sciences, Tehran, Iran, 2015

52) *Strategies and Pitfalls of Diffusion MRI Analysis*
Advanced Diffusion MRI and Data Analysis Workshop, Tehran University of Medical Sciences, Tehran, Iran, 2015

53) *Diffusion MRI: From dream to nightmare*
IDIG workshop, National University of Ireland, Galway, Ireland, 2014

54) *The do's and don'ts of diffusion MRI*
1st International Summer School of Connectomics, Bordeaux, France, 2014

55) *Data analysis for diffusion MRI*
ESMRMB School of MRI: Clinical fMRI & DTI – Theory and Practice, IoP, London, UK, 2014

56) *Processing and Quality Control of DTI data*

Educational Course at the OHBM Meeting: “MR Diffusion Imaging: Getting Your Measures Right”, Hamburg, Germany, 2014

57) *Do’s and don’ts of diffusion pre-processing and quality control*
Workshop “Do’s and don’ts in diffusion MRI” (theory), Réseau de Bio-Imagerie du Québec, CRIUGM, Montreal, Canada, 2014

58) *ExploreDTI*
Workshop “Do’s and don’ts in diffusion MRI” (hands-on), Réseau de Bio-Imagerie du Québec, Université de Sherbrooke, Département d’informatique, Canada, 2014

59) *DWI: basic concepts, applications, and limitations*
7th Benelux Meeting of The Section for Magnetic Resonance Technologists (SMRT) of the International Society for Magnetic Resonance in Medicine (ISMRM), University Hospital Brussels, Brussels, Belgium (2014)

60) *DTI analysis approaches from voxels to graph theory*
White Matter Symposium, Trondheim, St Olavs Hospital, Trondheim, Norway, 2014

61) *Processing and analysis of diffusion tensor imaging data*
Seminar at Signal Processing Group, Dept. of Signals and Systems, Chalmers University of Technology, Gothenburg, Sweden, 2014

62) *Diffusion Tensor Imaging*
3rd International Symposium on “MRI of the neonatal brain: from basics to bedside”, Wilhelmina Children’s Hospital, UMC Utrecht, Utrecht, The Netherlands, 2013

63) *Diffusion Image Analysis Strategies & Limitations*
ISMRM Diffusion Workshop “Diffusion as a Probe of Neural Tissue Microstructure”, Podstrana, Croatia, 2013

64) *Processing and analyzing diffusion (tensor) imaging data*
Symposium “Diffusion Tensor Imaging”, National Doctoral Programme of Psychology, Institute of Behavioural Sciences, University of Helsinki, Helsinki, Finland, 2013

65) *Guidelines and considerations for fiber tractography*
Symposium “Diffusion Tensor Imaging”, National Doctoral Programme of Psychology, Institute of Behavioural Sciences, University of Helsinki, Helsinki, Finland, 2013

66) *Overview of “ExploreDTI”*
Symposium “Diffusion Tensor Imaging”, National Doctoral Programme of Psychology, Institute of Behavioural Sciences, University of Helsinki, Helsinki, Finland, 2013

67) *Brain Mafia: it's all about the connections*
Symposium “Functional and Anatomical Connectivity in the Brain”, Universidad Nacional Autónoma de México, Querétaro, México, 2013

68) *Methodological considerations for analyzing diffusion MRI data*
UK Diffusion Group Summer Meeting, School of Psychology, Cardiff University, Cardiff, Wales, UK, 2013

69) *Data analysis for diffusion tensor imaging*
ESMRMB School of MRI: Clinical fMRI & DTI – Theory and Practice, Rotterdam, The Netherlands, 2013

70) *Guidelines and critical considerations for clinical diffusion MRI research beyond DTI*
6th Annual Irish Diffusion Imaging Group (IDIG) symposium, Galway University, Galway, Ireland, 2013

71) *Diffusion Tensor Imaging*
From Pulse Sequences to Clinical Application in the Brain – Sunrise Educational Course at the 21st Annual Meeting of the ISMRM, Salt Lake City, Utah, USA, 2013

72) *Data Analysis for Diffusion Tensor MRI*

ESMRMB – Hands-On MRI: fMRI & DTI for Clinical Practice, Paris, France, 2012

73) *Introduction to diffusion MRI and fiber tractography*
Workshop "Structural brain connectivity: Diffusion imaging – State of the art and beyond", Humboldt-Universität zu Berlin, Berlin, Germany, 2012

74) *Quality assessment, preprocessing, and analysis of diffusion MRI data*
Workshop "Structural brain connectivity: Diffusion imaging – State of the art and beyond", Humboldt-Universität zu Berlin, Berlin, Germany, 2012

75) *Introduction to diffusion imaging and different approaches in analyzing DTI data*
Workshop "Learn to do tractography with ExploreDTI", Dept. of Biomedical Engineering and Computational Science, Helsinki, Finland, 2012

76) *Deterministic vs. probabilistic tractography*
Workshop "Learn to do tractography with ExploreDTI", Dept. of Biomedical Engineering and Computational Science, Helsinki, Finland, 2012

77) *An introduction to ExploreDTI with a special focus on wild bootstrap tractography*
Workshop "Learn to do tractography with ExploreDTI", Dept. of Biomedical Engineering and Computational Science, Helsinki, Finland, 2012

78) *Diffusion MRI data Analysis*
ESMRMB School of MRI: Clinical fMRI & DTI – Theory and Practice, Uppsala, Sweden, 2012

79) *Diffusion Basics*
ISMRM Meeting, Sunrise Course "Absolute Beginner's Guide to Neuroimaging Methods", Melbourne, Australia, 2012

80) *The contribution of diffusion MRI to investigating white matter diseases*
Daiichi Sankyo Symposium on Brain White Matter Imaging, Taipei, Taiwan, 2012

81) *Experimental design, artifacts, and confounds in diffusion MRI data*
ISMRM Meeting, Educational course "Diffusion, Perfusion, and the Corresponding Physiology", Montreal, Canada, 2011

82) *Diffusion tensor imaging in behavioural neurology: Where should I start?*
12th Zeelandia Symposium on Behavioral Neuroscience, National Cheng Kung University, Tainan City, Taiwan, 2010

83) *Diffusion tensor imaging (applications, quality issues and future) and speculations about new MR possibilities*
European Neonatal Neuro Experts Meeting (ENNEM): on the future of neonatal brain research in Rotterdam – Erasmus MC Rotterdam, the Netherlands, 2010

84) *Why analyzing diffusion MRI data can be so depressing!*
Workshop Diffusion Tensor Imaging – Trinity College Dublin, Dublin, Ireland, 2010

85) *Tips and tricks for assessing diffusion MR data quality*
Workshop Diffusion MRI of Traumatic Brain Injury, Chicago, USA, 2010

86) *Principles of diffusion tensor MRI and fiber tractography*
Workshop on Non-Invasive Quantitative Molecular Imaging (NIMI), Ghent, Belgium, 2010

87) *Theory and applications of diffusion MRI*
7th IEEE International Symposium on Biomedical Imaging (ISBI), Educational session: "Functional magnetic resonance and diffusion tensor imaging", Rotterdam, the Netherlands, 2010

88) *Spherical deconvolution based tractography at low b-values: can we deal with 'crossing fibers' in a clinical setting?*
2nd Annual Irish Diffusion Imaging Group (IDIG) symposium, Galway University, Galway, Ireland, 2009

89) *DTI Analysis and post-processing*

ESMRMB Hands-on MRI course in fMRI & DTI, Rotterdam, the Netherlands, 2009

90) *Exploring DTI with ExploreDTI*
ISMRM Meeting, Breakout Session "Diffusion Tensor MRI for the Clinician and the Neuroscientist: From Experimental Design to Data Analysis", Honolulu, Hawaii, USA, 2009

91) *ExploreDTI for diffusion MRI data analysis*
ESMRMB Hands-on MRI course "Diffusion: from basic Physics to Exploration of Microscopic Structure", Cardiff University, United Kingdom, 2008

92) *Clustering of tracts*
Joint ISMRM-ESMRMB Meeting, Educational lecture, Berlin, Germany, 2007

93) *End point clustering for diffusion tensor white matter fiber bundle tractography*
IEEE Advanced Concepts for Intelligent Vision Systems (ACIVS), Antwerp, Belgium, 2005

**National**

1) *DTI of the brain*
14th PhD symposium "In vivo NMR" – UMC Utrecht, Utrecht, The Netherlands, 2017

2) *Diffusion Tensor Imaging of the brain*
13th PhD symposium "In vivo NMR" – AMC Spinoza center, Amsterdam, The Netherlands, 2016

3) *Diffusion Tensor MRI*
Course: "Evidence Based Evaluation of New Imaging Techniques" (PhD Programme Regenerative Medicine) – University Medical Center Utrecht, The Netherlands, 2014, 2015, 2017, 2019

4) *Diffusion MRI: Characterizing tissue properties with random walks*
Keynote lecture at the 9th Research Day of the Division Surgical Specialties – University Medical Center Utrecht, The Netherlands, 2014

5) *Analysis and visualization of multi-parametric MRI data. Application to diffusion MRI*
12th PhD symposium "In vivo NMR" – Biomedical MR Research Group, Department of Radiology and Nuclear Medicine, Radboud University Medical Center, Nijmegen, The Netherlands, 2014

6) *Diffusion tensor imaging: Data quality, processing, and analysis*
AMBER Research Meeting, Erasmus MC, Rotterdam, The Netherlands, 2014

7) *Diffusion MRI as a method to understand our brain*
Symposium of study association "Van der Waals", "How can we beat the human brain?", TU Eindhoven, Eindhoven, The Netherlands, 2013

8) *Analysis and visualization of multi-parametric MRI data. Application to diffusion MRI*
11th PhD symposium "In vivo NMR" – Wageningen University, Lab of Biophysics & Wageningen NMR Centre, the Netherlands, 2012

9) *Analysis and visualization of multi-parametric MRI data. Application to diffusion MRI*
10th PhD symposium "In vivo" NMR – Eindhoven University of Technology, Eindhoven, the Netherlands, 2010

10) *In vivo reconstruction of brain fiber pathways with diffusion tensor MRI*
BME research day 2010 – Of Mice, Men and Molecules, Eindhoven, The Netherlands, 2010

11) *Whole brain studies: methods and applications in neuroimaging*
1st Annual Meeting Young Neuroscientists' Day, Bristol, United Kingdom, 2007

## *INVITED LECTURES AT OTHER INSTITUTIONS*

1) *Processing and analysis for connectomics with diffusion MRI*
Department of Biological and Medical Psychology, University of Bergen, Bergen, Norway, 2019

2) *Investigating brain connections with fiber tractography: Methods and applications*
Faculty of Psychology, University of Social Science and Humanities, Warsaw, Poland, 2019

3) *Unraveling the mysteries of the brain with diffusion MRI*
H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine, 2019

4) *Semi-automated analysis for tumor characterization with diffusion-weighted magnetic resonance imaging (DW-MRI)*
Klinikum Stuttgart - Olgahospital, Stuttgart, Germany, 2019

5) *Diffusion MRI in neuroscientific and clinical research: A potpourri of Methods and Applications*
Department of Biomedical engineering, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Canada, 2019

6) *Processing and analysis of diffusion MRI data to study brain connectivity*
Spinoza Center for Neuroimaging, Amsterdam, the Netherlands, 2019

7) *Could not accept invitation due to travel ban (VISA was not approved due to previous visit to Iran)*
Neural Plasticity Research Laboratory, Division of Physical Therapy, Center for Rehabilitation Therapy, Emory University School of Medicine, Atlanta, USA, 2018

8) *Connectomics with diffusion MRI: Where physics meets psychology*
Department of Psychology – University of Cordoba, Spain, 2018

9) *Computing brain connections with diffusion MRI*
University of Chubut, Puerto Madryn, Argentina, 2017

10) *Processing and analysis of diffusion MRI data for medical research*
Brain and Mind Center, University of Sydney, Sydney, Australia, 2017

11) *Diffusion MRI of the brain: From voxels to connectomes*
Shiraz University of Medical Sciences, Shiraz, Iran, 2016

12) *Methods and applications of diffusion MRI fiber tractography*
MedTech West, Gothenburg, Sweden, 2016

13) *Processing methodology in diffusion MRI*
Computational Radiology Laboratory (CRL), Boston Children's Hospital, Harvard Medical School, Boston, USA, 2015

14) *Methodological considerations on processing diffusion MRI data*
Laboratory of Mathematics in Imaging (LMI) – Surgical Planning Laboratory (SPL) – Psychiatry Neuroimaging Laboratory (PNL), Brigham and Women's Hospital, Harvard Medical School, Boston, USA, 2015

15) *Processing diffusion MRI: 101*
Department of Neurology, Kaohsiung Chang Gung Memorial Hospital, Niaosong District, Kaohsiung, Taiwan, 2015

16) *The role of diffusion MRI in oncology*
Department of Neurosurgery, Linkou Chang Gung Memorial Hospital, Kuei Shan Hsiang, Taoyuan Hsien, Taiwan, 2015

17) *Analyzing diffusion MRI: 101*
Department of Neurology, Linkou Chang Gung Memorial Hospital, Kuei Shan Hsiang, Taoyuan Hsien, Taiwan, 2015

18) *Processing and analysis of brain diffusion MRI data: Guidelines and critical considerations*
Computational Cognitive Neuroscience Lab – Department of Artificial Intelligence, Donders Institute for Brain, Cognition and Behaviour, Radboud University, Nijmegen, the Netherlands, 2015

19) *Diffusion tensor imaging and beyond*
Neuroimaging Seminar, Neuroscience Campus Amsterdam, VU University Medical Center, the

Netherlands, 2015

20) *Processing and analysis of diffusion MRI data*
Institute of Cancer Research – London University, Royal Marsden Hospital, London, UK, 2015

21) *Processing of diffusion MRI data for analyzing the brain's circuitry*
The Basque Center on Cognition, Brain and Language – Donostia, San Sebastián, Spain, 2015

22) *Connectomics, Connectography, Connectometry*
DRCMR – Hvidovre Hospital, University of Copenhagen, Denmark, 2014

23) *Diffusion MRI: Voxels, Tracts, and Connectomes*
Neurologische Universitätsklinik, BG-Kliniken Bergmannsheil Bochum, Ruhr-Universität Bochum (RUB), Germany, 2014

24) *Diffusion MRI: Basics of processing and analysis with ExploreDTI*
Neural Control of Movement Lab, Department of Health Sciences and Technology, ETH Zürich, Switzerland, 2014

25) *Diffusion MRI based structural brain connectivity: What, how, and why?*
Center of Functionally Integrative Neuroscience, Institute for Clinical Medicine, Aarhus University, Denmark, 2014

26) *The do's and don'ts of processing and analyzing diffusion MRI data*
Center for Biomedical Imaging, New York University School of Medicine, New York, USA, 2014

27) *Processing and analyzing diffusion MRI data: Pitfalls and progress*
Brain Imaging and Analysis Center, Duke University School of Medicine, Durham, North Carolina, USA, 2014

28) *Exploratory investigations of diffusion MRI data with ExploreDTI: The basics*
Yaniv Assaf's Lab, Department of Neurobiology, The George S. Wise Faculty of Life Sciences, Tel Aviv University, Tel Aviv, Israel, 2013

29) *Exploratory investigations of diffusion MRI data with ExploreDTI: Advanced methods*
Yaniv Assaf's Lab, Department of Neurobiology, The George S. Wise Faculty of Life Sciences, Tel Aviv University, Tel Aviv, Israel, 2013

30) *The ins and outs of analyzing diffusion MRI data*
Department of Rehabilitation Sciences and Physiotherapy, Ghent University, Ghent, Belgium, 2013

31) *Diffusion MRI analyses for clinical studies: guidelines and critical considerations*
Neuroradiology Department, Foundation of the Carlo Besta Neurological Institute, Milan, Italy, 2012

32) *Efficient approaches for spotting artifacts in diffusion MRI data*
German Cancer Research Center, Imaging and Radio-oncology, Quantitative imaging based disease characterization, Heidelberg, Germany, 2012

33) *From diffusion of water molecules to virtual reconstructions of white matter pathways: Introduction to diffusion MRI*
Department of Neurology, Taichung Veterans General Hospital, Taichung, Taiwan, 2012

34) *The basics of diffusion MRI: methods and applications*
Department of Neurology, Zhanghua Christianity Hospital, Zhanghua, Taiwan, 2012

35) *Data quality assessment for diffusion MRI data: Is it worth the efforts?*
Section of neuroradiology, Department of Radiology, Lund University Hospital, Lund, Sweden, 2011

36) *Crossing fibers in diffusion MRI: cutting across the cross-talk!*
Motor Control Laboratory, Group Biomedical Sciences, Leuven University, Leuven, Belgium, 2010

37) *Diffusion MRI: introduction and applications*
Institute of Medical Informatics, Taipei Medical University, Taipei, Taiwan, 2010

38) *Recent advances in diffusion tensor MRI analyses*
Department of Psychiatry, Taipei Medical University, Taipei, Taiwan, 2010

39) *Clinical (research) applications of diffusion tensor imaging*
Department of Neurology, Shin Kong WHS Memorial Hospital, Taipei, Taiwan, 2010

40) *Data quality considerations for diffusion MRI analyses and consequences for quantitative studies*
Institute of Neuroscience & Radiological Science, National Yang-Ming University, Taipei, Taiwan, 2010

41) *A mishmash of processing issues for diffusion (tensor) MRI data*
Danish Centre for Magnetic resonance, Hvidovre Hospital, University of Copenhagen, Denmark, 2010

42) *High angular resolution diffusion MRI with spherical deconvolution modeling: Clinically feasible?*
BIOMIM - Biomedical Image Analysis, Department of Biomedical Engineering, TU Eindhoven, the Netherlands, 2010

43) *Image processing for Diffusion Tensor MRI (DTI) and Fiber Tractography: Improving the reliability of quantitative analyses*
Philips Healthcare - Advanced Concept Development, MRI - Best, the Netherlands, 2009

44) *Tips and tricks for analyzing diffusion MR data: what we can and can't do in clinical applications*
Department of Neurology, Shin Kong Wu Ho Su Memorial Hospital, Taipei, Taiwan, 2009

45) *An introduction to the methods and applications of diffusion tensor imaging*
Institute of Medical Informatics, Taipei Medical University, Taipei, Taiwan, 2009

46) *A potpourri of diffusion MRI*
Vision Lab, Department of Physics, University of Antwerp, Antwerp, Belgium, 2009

47) *ExploreDTI as a toolbox for processing, analyzing, and visualizing diffusion data*
Clinical Neuroimaging Laboratory, Department of Psychiatry, National University of Ireland, Galway, Ireland, 2009

48) *Image Processing for Diffusion Tensor Magnetic Resonance Imaging: Is it just making pretty pictures?*
Medical Imaging Center, Gasthuisberg, UZ Leuven, Leuven Belgium, 2008

49) *Diffusion Tensor Magnetic Resonance Imaging: Methods and Applications*
Motor Control Laboratory, Group Biomedical Sciences, Leuven University, Leuven, Belgium, 2008

50) *A model based approach for voxelwise analysis of multi-subject diffusion tensor MR data*
CUBRIC, School of Psychology, Cardiff University, Cardiff, Wales, United Kingdom, 2007

51) *A framework for analyzing a large cohort of DTI data sets for a white matter development study*
The in vivo NMR centre, Department of Biomedical Engineering, University of Alberta, Edmonton, Alberta, Canada, 2005

52) *White matter fiber bundle coregistration for diffusion tensor tractography*
BioMIM, TU/e – Dept. of Biomedical Engineering Eindhoven, Eindhoven, the Netherlands, 2005

## *INTERNAL EDUCATIONAL LECTURES*

1) *Diffusion MRI: From random walks to brain connectomes*
Course for MRI Technologists, Imaging Division, UMC Utrecht, The Netherlands, 2017

2) *Investigating the brain's wiring with diffusion MRI*
The Registration and Imaging of Brain Systems (RIBS) lab, Brain Center Rudolf Magnus, UMC Utrecht, The Netherlands, 2016

3) *ExploreDTI: software for diffusion MRI processing, analysis, and visualization*
Meeting "Extension NEOBRAIN population", Department of Neonatology, UMC Utrecht, The Netherlands, 2013

4) *Diffusion in neuroimaging: From the random walk of $H_20$ molecules to white matter fiber pathways in the brain*
ImagO introduction course, UMC Utrecht, Utrecht, The Netherlands, 2010

5) *Research at the Image Sciences Institute*
Symposium on Medical Physics, Dept. of Radiotherapy and Radiology, UMC Utrecht, 2010

6) *Introduction of MR diffusion fiber tractography*
URIBS – tractography meeting, UMC Utrecht, Utrecht, The Netherlands, 2009

7) *Tensors, tracts, and blobs in diffusion MRI: Improving the reliability of quantitative analyses*
Image Sciences Institute - UMC Utrecht, Utrecht, The Netherlands, 2009

8) *The random walk in Neuroimaging: Reconstructing Brain Connections from the Diffusion of $H_20$*
ImagO, UMC Utrecht, Utrecht, The Netherlands, 2009

## *REVIEWING FOR JOURNALS AND CONFERENCES*

American Journal of Neuroradiology
Archives of General Psychiatry
Biological Psychiatry
Brain
Brain Structure and Function
Cerebral Cortex
Computers in Biology and Medicine
Computer Methods in Biomechanics and Biomedical Engineering
Cortex
Diabetes Care
European Society for Magnetic Resonance in Medicine and Biology
Frontiers in Neuroscience
IEEE Advanced Concepts for Intelligent Vision Systems
IEEE Transactions in Medical Imaging
IEEE Transactions on Biomedical Engineering
International Conference on Pattern Recognition
International Society for Magnetic Resonance in Medicine
Human Brain Mapping
Journal of Cerebral Blood Flow and Metabolism
Journal of Magnetic Resonance Imaging
Journal of Morphology
Journal of Neuroimaging
Journal of Neuroscience
Journal of Neuroscience Methods
Journal of Neurotrauma
Journal of Psychiatry and Neuroscience
Journal of Signal Processing Systems
Lecture Notes in Computer Science
Magnetic Resonance Imaging
Magnetic Resonance in Medicine
Magnetic Resonance Materials in Physics, Biology and Medicine
Measurement Science Review
Medical Engineering & Physics
Medical Image Analysis
Medical Image Computing and Computer Assisted Intervention
Medical Physics

Molecular Psychiatry
Neural Computation
Neurobiology of Aging
NeuroImage
NeuroImage: Clinical
Neuroradiology
NeuroScience
NMR in Biomedicine
Organization of Human Brain Mapping
PLoS One
Psychiatry Research: Neuroimaging
Radiology
Schizophrenia Research
Scientific Reports
Stem Cells International

## *EXTRAMURAL REVIEWING (GRANTS, RESEARCH PROGRAMS)*

- ERC: "European Research Council" – Consolidator Grant
- NFNZ: "Neurological Foundation of New Zealand"
- INRIA: "Institut National de Recherche en Informatique et en automatique" (national institute for research in computer science and control) – Panel member for the evaluation of project-teams affiliated with the theme "Computational Neuroscience and Medicine"
- BBSRC: "Biotechnology and Biological Sciences Research Council" (UK government funding agency)
- LE STUDIUM: French funding agency (Centre-Val de Loire)
- MRC-CSF: Medical Research Counsel – Clinical Scientist Fellowship scheme (UK government funding agency)
- Wings for Life: Spinal Cord Research Foundation (Austrian Funding Agency)
- Wellcome Trust: "Collaborative Award in Science" (UK government funding agency)
- EPSRC: "Engineering and Physical Sciences Research Council" (UK government funding agency)
- FWF: "Fonds zur Förderung der wissenschaftlichen Forschung" (Austrian Science Fund)
- SNSF: "Schweizerischer Nationalfonds zur Förderung der wissenschaftlichen Forschung" (Swiss National Science Foundation)
- ANR: "Agence Nationale de la Recherche" (National Research Foundation, France)
- IWT: "Agentschap voor Innovatie door Wetenschap en Technologie" (Agency for Innovation by Science and Technology, Belgium)
- FWO: "Fonds Wetenschappelijk Onderzoek – Vlaanderen" (Research Foundation Flanders, Belgium)

## *EXAMINER FOR THESIS DISSERTATIONS*

- Kim Braeckman

  Elektronics and Information Systems, Faculty of engineering and Architecture, Ghent University, Belgium, "Towards diffusion MRI biomarkers for cognitive training in a mild traumatic brain injury rat model", Supervisors: Christian Vanhove, Benedicte Descamps and Karen Caeyenberghs, 2019 (member of the PhD Assessment Committee)

- Rutger Heinen

  Department of Neurology, University Medical Center Utrecht, The Netherlands, “Distant effects of cerebral small vessel disease in the brain: Looking beyond the obvious”, Supervisors: Geert Jan Biessels, Yael Reijmer and Jeroen de Bresser, 2019 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Robbert Harms

  Department of Cognitive Neuroscience, Maastricht Brain Imaging Centre (MBIC), Faculty of Psychology & Neuroscience, Maastricht University, The Netherlands, “Diffusion MRI Analysis: Robust and efficient microstructure modeling”, Supervisors: Rainer Goebel and Alard Roebroeck, 2019 (member of the PhD Assessment Committee)

- Oliver Timothy Wiebenga

  Department of Radiology and Nuclear Medicine, the Department of Anatomy and Neurosciences, and the MS Center at the VU University Medical Center, Amsterdam, The Netherlands, “Advanced neuroimaging of therapy effects in multiple sclerosis”, Supervisor: Jeroen Geurts, 2019 (member of the PhD Assessment Committee)

- Demian Wasserman

  Parietal Team, INRIA Saclay Ile-de-France, Paris, France, HDR: “Microstructure, Macrostructure, and Cognition. A walk in Diffusion MRI”, 2019 (“Raporteur” for the “Habilitation á

  Diriger des Recherches” du Sorbonne Université)

- Olivier Commowick

  Visages Team, INRIA Rennes - Bretagne Atlantique, Campus de Beaulieu, Rennes, France, HDR: “Compartments imaging for the characterization of brain diseases from quantitative MRI”, 2019 (“Jury” for the “Habilitation á Diriger des Recherches” du Université de Rennes)

- Quinten van Geest

  Department of Anatomy and Neurosciences, VU University Medical Center, Amsterdam, The Netherlands, “Cognitive decline in multiple sclerosis”, Supervisor: Jeroen Geurts, 2018 (opponent at thesis defense ceremony)

- Chenyu (Tim) Wang

  The Brain and Mind Center, Faculty of Medicine, University of Sydney, “Improving the specificity of quantitative neuroimaging biomarkers for monitoring disease progression and understanding disease mechanisms in multiple sclerosis with diffusion magnetic resonance imaging”, Supervisor: Michael Barnett, 2018 (member of the PhD Assessment Committee)

- Richard Parker

  Department of Neuroimaging, Institute of Psychiatry, Psychology & Neuroscience, King’s College London, UK, “Multivariate pattern recognition as a tool for investigating cognitive ageing: combining machine learning and diffusion MRI”, Supervisor: Michael O’Sullivan, 2018 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Renée Walhout

  University Medical Center Utrecht, the Netherlands, “Cerebral changes in amyotrophic lateral sclerosis”, Supervisor: L.H. van den Berg, 2017 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Hans van der Horn

  Neurology Department of the University Medical Center Groningen, the Netherlands, “Adaptation after mild traumatic brain injury”, Supervisors: J. van der Naalt, J.M. Spikman, 2017 (opponent at thesis defense ceremony)

- Rutger Fick

  Athena Project-Team, Inria Sophia Antipolis – Méditerranée, France, “Advanced dMRI Signal Modeling for Tissue Microstructure Characterization”, Supervisor: R. Deriche, 2017 (member of the

PhD Assessment Committee & opponent at thesis defense ceremony)

- Matteo Mancini

  University of Roma ("Roma Tre") - Rome, Italy, "Combining neuroimaging and brain stimulation: A connectomics perspective", Supervisor: M. Cercignani, 2017 (member of the PhD Assessment Committee)

- Alberto De Luca

  University of Padova - Department of Information Engineering, Italy, "Diffusion MRI of the brain and skeletal muscle", Supervisor: A. Bertoldo, 2016 (member of the PhD Assessment Committee).

- Luis Miguel Lacerda

  Department of Neuroimaging, Institute of Psychiatry, Psychology & Neuroscience, King's College London, UK, "Quantitative White Matter Metrics: Diffusion Imaging and Advanced Processing for Detailed Investigation of Brain Microstructure", Supervisors: Gareth Barker and Flavio Dell'Acqua, 2016 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Mohammad Alipoor

  Chalmers University of Technology, Gothenburg, Sweden, "Computational diffusion MRI: optimal gradient encoding schemes", Supervisor: Irene Yu-Hua Gu, 2016 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Gabriel Girard

  Départment d'informatique, faculté des sciences, Université de Sherbrooke, QC, Canada & Équipe-projet Athena, INRIA Université de Nice-Sophia Antipolis – Méditerranée, France, "White matter tractography guided by anatomical and microstructural priors", Supervisors: Rachid Deriche, Maxime Descoteaux, and Kevin Whittingstall, 2016 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Mwape Mofya

  MRC/UCT Medical Imaging Research Unit, Department of Human Biology, Faculty of Health Sciences, University of Cape Town, South Africa, "Simultaneous DTI and rs-fMRI using the navigated diffusion sequence", Supervisors: E. Meintjes, A. Alhamud, P. Taylor, 2015 (member of the MSc Assessment Committee)

- Farshid Sepehrband

  Queensland Brain Institute, University of Queensland, Australia, "Axonal morphometry using diffusion-weighted MRI", Supervisors: Zhengyi Yang and David Reutens, 2015 (member of the PhD Assessment Committee)

- Janice Hua

  Groupe d'Imagerie Neurofonctionnelle, Université de Bordeaux, France, "Extraction and description of WM association bundles", Supervisor: Laurent Petit, 2015 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Nele De Geeter

  Department of Electrical Energy, Systems and Automation, Ghent University, Ghent, Belgium, "A DTI based computational model for transcranial magnetic stimulation", Supervisors: Luc Dupré, Guilllaume Crevecoeur, 2015 (member of the PhD Assessment Committee)

- Madelon Pijnenburg

  Group Biomedical Sciences, Department of Rehabilitation Sciences, KU Leuven, Belgium, "The neural basis of sensorimotor control in individuals with non-specific low back pain and healthy controls", Supervisors: Simon Brumagne, Karen Caeyenberghs, and Stephan Swinnen, 2015 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Nina Reislev

  Danish Research Centre for Magnetic Resonance, Copenhagen University Hospital Hvidovre,

Denmark, “The Wiring of the Blind Brain”, Supervisors: Hartwig Siebner, Tim Dyrby, Maurice Ptito, and Ron Kupers, 2014 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Elodie André

  Cyclotron Research Centre, University of Liege, Belgium, “Improvement of data quality for Di usion Kurtosis Imaging and application to clinical neurological research”, Supervisors: Christophe Phillips, Farida Grinberg, and Jon Shah, 2014 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Mohammad Alipoor

  Chalmers University of Technology, Gothenburg, Sweden, “Computational Diffusion MRI: Tensor-based Models for Diffusion Imaging of the Brain”, Supervisors: Irene Yu-Hua Gu and Andrew Mehnert, 2014 (member of the MSc Assessment Committee & opponent at thesis defense ceremony)

- Kajo van der Marel

  Utrecht University, The Netherlands, “Structural and functional MRI of normal and compromised rat brain development”, Supervisors: M.A. Viergever, R.M. Dijkhuizen, and L. Reneman, 2013 (opponent at PhD thesis defense ceremony)

- Pim Pullens

  Maastricht University, the Netherlands, “Diffusion weighted magnetic resonance imaging: validation, correction and applications”, Supervisors: R. Goebel and A. Roebroeck, 2012 (member of the PhD Assessment Committee & opponent at thesis defense ceremony)

- Yael Reijmer

  Utrecht University, The Netherlands, “Vascular Cognitive Impairment: risk factors and brain MRI correlates”, Supervisors: L.J. Kappelle, G.J. Biessels, and E. van den Berg, 2012 (opponent at PhD thesis defense ceremony)

- Alkathafi Alhamud

  Cape Universities Brain Imaging Centre (CUBIC), Department of Human Biology, University of Cape Town, South Africa, “Implementation of Anatomical Navigators for Real Time Motion Correction in Diffusion Tensor Imaging”, Supervisors: E. Meintjies and A. van der Kouwe, 2012 (member of the PhD Assessment Committee)

- Tom Close

  University of Melbourne, Australia, “Advanced techniques in diffusion MRI tractography of cerebral white matter”, Supervisors: L. Johnston, J.D. Tournier, and F. Calamante, 2011 (member of the PhD Assessment Committee)

- Jeroen de Bresser

  Utrecht University, The Netherlands, “MRI-based quantification of brain damage in cerebrovascular disorders”, Supervisors: M.A. Viergever, L.J. Kappelle, and G.J. Biessels, 2011 (opponent at PhD thesis defense ceremony)

## *COMMITTEES AND MEMBERSHIPS*

- Member of the ISMRM Annual Meeting Program Committee, 2018 – present
- Member of the ESMRMB Annual Meeting Scientific Program Committee (Rotterdam, 2019)
- Steering Committee Member of the ESMRMB School of MRI, 2017 – present
- Member of Organization for Human Brain Mapping, 2009 – 2010, 2014 – present
- Member of the USERN (Universal Scientific Education and Research Network) Advisory board, 2016 – present
- Member of the ESMRMB Annual Meeting Scientific Program Committee (Barcelona, 2017)

- Member of ISMRM Diffusion MRI Study Group, 2004 – present
- Member of the International Society for Magnetic Resonance in Medicine (ISMRM), 2004 – present
- Member of the European Society for Magnetic Resonance in Medicine and Biology (ESMRMB), 2003 – 2006, 2015 – present
- Program Committee Member of MICCAI workshop, entitled: "Mathematical Methods for Brain Connectivity", Munich, Germany, 2015
- Secretary of the ISMRM Diffusion Study Group Committee – International Society of Magnetic Resonance in Medicine, 2013 – 2015
- Program Committee Member of MICCAI workshop, entitled: "Mathematical Methods for Brain Connectivity", Nagoya, Japan, 2013
- Member of the Belgian Microscopy Society, 2004 – 2006
- Graduate students' representative for the Physics Research Committee, Antwerp University, Belgium, 2000 – 2002

## *EDITORIAL BOARDS*

- BMC Medical Imaging (Associate Editor), 2016 – present
- Tomography (Academic Editor), 2015 – present
- PLOS ONE (Academic Editor), 2014 – present
- Frontiers in Neuroscience and Neurology (Review Editor for section "Brain Imaging Methods"), 2014 – present
- NMR in Biomedicine (Guest Editor), 2016 – 2019

## *ORGANIZATIONAL & PROFESSIONAL ACTIVITIES*

- Board Member of the Scientific Counsel MS Research (https://msresearch.nl) – the Netherlands, 2017 – present
- Organizer of the NMR in Biomedicine Special Issue "Diffusion MRI of the brain: The naked truth", 2017
- Organizer of the *ExploreDTI* courses (three-day workshop): http://www.exploredti.com/workshop, 2016 – present
- Co-chair and organizer of the 22nd Annual Meeting OHBM Satellite Symposium: "Ex vivo approaches for investigating the brain's circuitry: The what, the how & the why", Geneva, Switzerland, 2016
- Co-chair and organizer of the 4th International ISMRM Diffusion Study Group workshop "Breaking the Barriers of Diffusion MRI", 2016.
- Co-moderator of oral scientific session ("Frontiers of Diffusion") at the ISMRM Annual Meeting, Singapore, 2016
- Course Director "Clinical fMRI & DTI - Theory and Practice" of the ESMRMB School of MRI, 2016 – present
- Founder and head of the PROVIDI Lab (http://www.providi-lab.org). Funding, recruiting, and managing personnel, setting out research line(s), 2013 – present
- Author of ExploreDTI, a freely available dMRI software toolbox (http://www.ExploreDTI.com), 2005 – present
- Co-moderator of oral scientific sessions at the joint ISMRM-ESMRMB Annual Meeting ("Diff/Perf Wed Sunrise: Absolute Beginners Guide to Neuroimaging Methods" & "Diffusion Applications"), Milan – Italy, 2014

- Co-moderator of oral scientific session ("Diffusion Acquisition") at the ISMRM Annual Meeting, Salt Lake City – USA, 2013
- Evaluator, referee and advisor for promotions and appointments of (tenured) faculty positions at universities and academic institutions in USA (2013/2015) and Israel (2017)
- Co-moderator of oral scientific session ("Clinical Diffusion") at the ISMRM Annual Meeting, Melbourne – Australia, 2012
- Co-organizer & Moderator educational session (Zooming in on the network: structural and functional connectivity) in national PhD workshop "Current issues in clinical neuroscience: advances in brain MRI", Utrecht, The Netherlands, 2011
- Co-moderator of oral scientific session at the ISMRM-ESMRMB Joint Annual Meeting, Stockholm – Sweden, 2010
- Co-organizer ISMRM British Chapter, Cardiff University, United Kingdom, 2009
- Co-organizer conference: Young Neuroscientist's Day, Cardiff, United Kingdom, jointly hosted by Cardiff University and the University of Bristol, 2008
- Organizer of "Monday's Brain Mapping Seminars" (weekly seminars at CUBRIC, Cardiff University with presentations of internal and external guest speakers), 2007 – 2008
- Co-organizer conference: Advanced Concepts for Intelligent Vision Systems (ACIVS), Antwerp University, Belgium (jointly hosted by Antwerp University and the University of Ghent), 2005

## *PUBLIC ENGAGEMENT AND POPULAR PRESS*

- Co-organizer "YOUth" public event: popular meeting with participants (kids and parents) of a large-scale brain development project to explain our research and present our progress, 2019
- Science outreach & raising awareness of our research via Twitter (@Alex_Leemans), 2014 – present
- Guest lecture at Scheppersinstituut, a high school in Mechelen, Belgium. Audience: 17/18 year old students. Topic: advances in MRI for investigating fibrous tissue – 2018
- Contribution to Traveling Science Exhibition "Beyond Human Limits" from Science North, Sudbury, Ontario, Canada, 2018
- Contribution to Exhibition "Our Senses" at the American Museum of Natural History – New York, USA, 2017
- Contribution to Interstellate – Volume 2, 2017
- Contribution to CBBC series *Operation Ouch!* (science and medical show) – Maverick TV, television production company in the UK, 2017
- Dutch Brain Awareness Week: "Neurowetenschappers op school" ("Neuroscientists at school"): Teaching 17-year-old high school students about the brain, Jeroen Bosch College, 's-Hertogenbosch, 2014, 2016 - 2019
- Dutch Science Event: "Weekend van de Wetenschap", PROVIDI Lab contributed to "6D Door De Hersenen", University Museum Utrecht, 2016
- Contribution of animation for interview in VTM (Belgium national TV channel) news on 2 March, 2016; http://nieuws.vtm.be/180951-vtm-nieuws-woensdag-02032016-19u)
- Contribution to "Blickfang" in "Gehirn und Geist" (a magazine of the German edition of Scientific American), http://www.spektrum.de/magazin/gehirn-und-geist, 2015
- Contribution (3D brain print) to Exhibition Andreas Vesalius (M-Museum Leuven) in collaboration with Faber (KU Leuven) and iMaterialise, 2015

- “Hoe magnetisme en diffusie kunnen bijdragen aan hersenonderzoek: toepassingen van diffusie-MRI tractografie” in NeuroPraxis (Dutch neuroscience magazine), 2014
- “Diffusie MRI” in “Beeldspraak” (Dutch magazine of Imaging Division of UMC Utrecht) Vol. 3(3), 2012
- Presentation at the “Rotary Club Rosmalen”, the Netherlands (in Dutch): “Hoe magnetisme en diffusie kunnen bijdragen aan hersenonderzoek”, 2012
- Participation in exhibition “Get Smart! Entertain your brain” of “The Brain Project” at “Continium”, the Discovery Center in Kerkrade (http://www.continium.nl), 2012
- Contribution to “Dream The End studio”: http://www.dreamtheend.com, 2011
- Contribution to documentary “Sidelined: Sports Concussions” on QUEST TV in USA (video footage: http://science.kqed.org/quest/video/sidelined-sports-concussions), 2011
- Providing data to make a scientific animation for “The Walter and Eliza Hall Institute of Medical Research” (Drew Berry), 2010
- No. one in “Top 10 science videos” (http://www.newscientist.com/article/dn19648-best-of-web-video-halloween-special.html), NewScientist, (MacGregor Campbell), 2010
- Contributed to Serbian magazine “MDExplorer” (Vladica Veličković), 2010
- “Supercomputers unlocking the brain's secrets – CUBRIC’s odyssey” (interview by Nick Heath), www.Silicon.com, 2008
- “Visualizing white matter fiber pathways in the human brain”, Contribution to the scientific exhibition “Cardiff University Research Projects Overview” at the National Museum of Wales (organizer: Andrew Emery – Community Engagement Team), 2008
- Scientific educational poster exhibitions: “Sut Rydym Yn Meddwl” (How We Think) and “Strwythur Ymennydd” (Brain Structure) at “The National Eisteddfod of Wales” (celebration of Wales’ wealth of culture), 2008
- Interviews after winning the “European Brain Expert” award: “Brain Wave” (Cardiff University News Centre), “Uni’s researcher wins Brain Expert prize” (Western Mail Newspaper), “Brain breakthrough” (Gair Rhydd), “First Prize in Brain Research” (Times Higher Education), “CUBRIC researcher wins top prize” (Cardiff Neurosciences Centre), 2008
- “Cardiff University’s Science in Health Live!” (scientific exhibition: “Inside the Living Brain” – United Kingdom), 2007 – 2008
- “Nieuwe scantechniek kijkt virtueel in het brein: hersenen anders bekeken”, EOS magazine (Scientific American - Dutch language edition), Vol. 7-8 (July-August) p. 102-105, 2006
- “Science Week Event” (interactive exhibition – Hasselt, Belgium), 2006
- “Day of Technology” (educational exhibition – Antwerp, Belgium), 2004 – 2006
- “Bi-annual Belgian Science Festival” (interactive exhibition – Antwerp, Belgium), 2004, 2006
- “University for Children” (interactive exhibition – Antwerp, Belgium), 2005 – 2006

## *REFERENCES*

- Prof. Derek K. Jones, Director of CUBRIC
  School of Psychology
  Cardiff University
  Park Place
  Cardiff, CF5 2AF
  United Kingdom
  jonesd27@cardiff.ac.uk

Tel: +44 (0)29 208 79412

- Prof. Christian Beaulieu, The In Vivo NMR Centre
  Department of Biomedical Engineering
  University of Alberta
  Research Transition Building (Room 1098)
  Edmonton, AB T6G 2V2
  Canada
  christian.beaulieu@ualberta.ca
  Tel: +1 (780)492 0908

- Prof. Jan Sijbers, The iMinds – Vision Lab
  Department of Physics
  Antwerp University
  Universiteitsplein 1, Building N
  2610 Wilrijk (Antwerp)
  Belgium
  jan.sijbers@ua.ac.be
  Tel: +32 (0)3 820 2464

## *PUBLICATIONS*

- **Ph.D. Thesis**

**A. Leemans**, *"Modeling and Processing of Diffusion Tensor Magnetic Resonance Images for Improved Analysis of Brain Connectivity"*, University of Antwerp, Belgium, ISBN: 90-5728-054-X, 2006

- **Books**

1. J. Marino Dávolos, **A. Leemans**, L. Ledesma Torres, R. Jaldo, J. Cruz Arias, *"Microestructura de la cognición: Resonancia magnética aplicada a las neurociencias",* Publisher: Amolca (Actualidades Medico Odontologicas Latinoamericanas), ISBN: 9789804300325, 2019

- **Book Chapters**

2. C.M.W. Tax, S.B. Vos, and **A. Leemans**, *"Checking and correcting DTI data"* – In W. Van Hecke, L. Emsell, and S. Sunaert (Eds.), Diffusion Tensor Imaging: A Practical Handbook, Springer New York, p. 127-150, 2016
3. M. Froeling, P. Pullens, and **A. Leemans**, *"DTI Analysis Methods: Region-of-Interest Analysis"* – In W. Van Hecke, L. Emsell, and S. Sunaert (Eds.), Diffusion Tensor Imaging: A Practical Handbook, Springer New York, p. 175-182, 2016
4. W. Van Hecke, **A. Leemans**, and L. Emsell, *"DTI Analysis Methods: Voxel-Based Analysis"* – In W. Van Hecke, L. Emsell, and S. Sunaert (Eds.), Diffusion Tensor Imaging: A Practical Handbook, Springer New York, p. 183-203, 2016
5. K.M. Curran, L. Emsell, and **A. Leemans**, *"Quantitative DTI measures"* – In W. Van Hecke, L. Emsell, and S. Sunaert (Eds.), Diffusion Tensor Imaging: A Practical Handbook, Springer New York, p. 65-87, 2016
6. S.B. Vos, C.M.W. Tax, and **A. Leemans**, *"Diffusion MRI and fiber tractography: The State-Of-The-Art and its Potential Impact on Patient Management"* – In T.C. Kwee and H. Zaidi (Eds.), PET Clinics – Evolving Medical Imaging Techniques, Elsevier, Vol. 8, p. 279-293, 2013
7. D.K. Jones and **A. Leemans**, *"Diffusion Tensor Imaging"*, Methods in Molecular Biology, Vol. 711, p. 127-144, 2011 – In M. Modo and J.W. Bulte (Eds.), MR Neuroimaging: Protocols and Methods, Humana Press, ISBN: 9781617379918

8. **A. Leemans**, *"Visualization of diffusion MRI data"*. In D.K. Jones (Ed.), Diffusion MRI: Theory, Methods and Applications. Oxford University Press, ISBN: 9780195369779, Chapter 21, p. 354 – 379, 2010

- **Peer-reviewed International Journal Articles (in press or published)**

9. S. David, L. Heesink, E. Geuze, T. Gladwin, J. van Honk, R. Kleber, **A. Leemans**, *"Regions of white matter abnormalities in the arcuate fasciculus in veterans with anger and aggression problems"*, Brain Structure and Function, (in press)

10. N. Wagenaar, C.H. Verhage, L.S. de Vries, B.P.L. van Gasselt, C. Koopman, **A. Leemans**, Groenendaal F, Benders MJNL, van der Aa NE, *"Early prediction of unilateral cerebral palsy in infants at risk: MRI versus the hand assessment for infants"*, Pediatric Research, (in press)

11. N. Dooley, E. O'Hanlon, C. Healy, A. Adair, C. McCandless, D. Coppinger, I. Kelleher, M. Clarke, **A. Leemans**, T. Frodl, M. Cannon, *"Psychotic experiences in childhood are associated with increased structural integrity of the left arcuate fasciculus - A population-based case-control study."*, Schizophrenia Research, (in press)

12. V. Nath, K.G. Schilling, A.E. Hainline, Y. Huo, P. Parvathaneni, J.A. Blaber, M. Rowe, P. Rodrigues, V. Prchkovska, D. Baran Aydogan, W. Sun, Y. Shi, W.A. Parker, A. Aziz Ould Ismail, R. Verma, R.P. Cabeen, A.W. Toga, A.T. Newton, J. Wasserthal, P. Neher, K. Maier-Hein, G. Savini, F. Palesi, E. Kaden, Y. Wu, J. He, Y. Fen, M. Barakovic, D. Romascano, J. Rafael-Patino, M. Frigo, G. Girard, A. Daducci, J.P. Thiran, M. Paquette, F. Rheault, J. Sidhu, C. Lebel, **A. Leemans**, M. Descoteaux, T.B. Dyrby, H. Kang, and B.A. Landman, *"Tractography Reproducibility Challenge with Empirical Data (TraCED): The 2017 ISMRM Diffusion Study Group Challenge"*, Journal of Magnetic Resonance Imaging, Vol. 51(1), p. 234-249, 2020

13. H.Y. Mesri, S. David, M.A. Viergever, **A. Leemans**, *"The adverse effect of gradient nonlinearities on diffusion MRI: From voxels to group studies"*, NeuroImage, Vol. 205(116127), 2020

14. S. St-Jean, M. Chamberland, M.A. Viergever, **A. Leemans**, *"Reducing variability in along-tract analysis with diffusion profile realignment"*, NeuroImage, Vol. 199, p. 633-679, 2019

15. J.K. Gool, R. Fronczek, **A. Leemans**, D.A. Kies, G.J. Lammers, Y.D. Van der Werf, *"Widespread white matter connectivity abnormalities in narcolepsy type 1: A diffusion tensor imaging study"*, Human Brain Mapping, Vol. 24(101963), 2019

16. A. De Luca, L. Schlaffke, J.C.W. Siero, M. Froeling, **A. Leemans**, *"On the sensitivity of the diffusion MRI signal to brain activity in response to a motor cortex paradigm"*, Human Brain Mapping, Vol. 40(17), p. 5069-5082, 2019

17. M. Stam, W. Haakma, L. Kuster, M. Froeling, M.E.P. Philippens, C. Bos, **A. Leemans**, L.A.M. Otto, L.H. van den Berg, J. Hendrikse, W.L. van der Pol, *"Magnetic resonance imaging of the cervical spinal cord in spinal muscular atrophy"*, NeuroImage: Clinical, Vol. 24(102002), 2019

18. S. Krohn, M. Froeling, **A. Leemans**, D. Ostwald, P. Villoslada, C. Finke, F.J. Esteban, *"Evaluation of the 3D fractal dimension as a marker of structural brain complexity in multiple-acquisition MRI."*, Human Brain Mapping, Vol. 40(11), p. 3299-3320, 2019

19. C.M. Tax, F. Grussu, E. Kaden, L. Ning, U. Rudrapatna, J. Evans, S. St-Jean, **A. Leemans**, S. Koppers, D. Merhof, A. Ghosh, R. Tanno, D.C. Alexander, S. Zappalà, C. Charron, S. Kusmia, D.E. Linden, D.K. Jones, J. Veraart, *"Cross-scanner and cross-protocol diffusion MRI data harmonisation: A benchmark database and evaluation of algorithms"*, NeuroImage, Vol. 15(195), p. 285-299, 2019

20. **A. Leemans**, *"Diffusion MRI of the brain: The naked truth"*, NMR in Biomedicine, Vol. 32(e4084), p. 1-2, 2019

21. L.M. Moura, R. Luccas, J.P.Q.D. Paiva, E. Amaro Jr, **A. Leemans**, C.C. Leite, M.C.G. Otaduy, A.B. Conforto, *"Diffusion tensor imaging biomarkers to predict motor outcomes in stroke: A narrative review"*, Frontiers in neurology, Vol. 10(445), 2019

22. B. Jeurissen, M. Descoteaux, S. Mori, **A. Leemans**, *"Diffusion MRI Fiber tractography of the brain"*, NMR in Biomedicine, Vol. 32(e3785), p. 1-22, 2019

23. S. David, A.M. Heemskerk, F. Corrivetti, M. Thiebaut De Schotten, S. Sarubbo, F. Corsini, A. De Benedictis, L. Petit, M.A. Viergever, D.K. Jones, E. Mandonnet, H. Axer, J. Evans, T. Paus, and **A. Leemans**, *"The superoanterior fasciculus (SAF): A novel white matter pathway in the human brain?"*, Frontiers in Neuroanatomy, Vol. 13(24), p. 1-18, 2019

24. S.H.J. Nagtegaal, S. David, A.T.J. van der Boog, **A. Leemans**, J.J.C. Verhoeff, *"Changes in cortical thickness and volume after cranial radiation treatment: A systematic review"*, Radiotherapy and Oncology, Vol. 135, p.33-42, 2019

25. M.J.C.M. Augustijn, E. D'Hondt, **A. Leemans**, L. Van Acker, A. De Guchtenaere, M. Lenoir, F.J.A. Deconinck, K. Caeyenberghs, *"Weight loss, behavioral change, and structural neuroplasticity in children with obesity through a multidisciplinary treatment program"*, Human brain mapping, Vol. 40(1), p. 137-150, 2019

26. T. Roine, B. Jeurissen, D. Perrone, J. Aelterman, W. Philips, J. Sijbers, **A. Leemans**, *"Reproducibility and intercorrelation of graph theoretical measures in structural brain connectivity networks"*, Medical Image Analysis, Vol. 52, p. 56-67, 2019

27. S. van Veluw, Y. Reijmer, A. van der Kouwe, A. Charidimou, G. Riley, **A. Leemans**, B. Bacskai, M. Frosch, A. Viswanathan, and S.M. Greenberg, *"Histopathology of diffusion imaging abnormalities in cerebral amyloid angiopathy"*, Neurology, Vol. 92(9), p. 933-943, 2019

28. K. Caeyenberghs, R. Duprat, **A. Leemans**, H. Hosseini, P.H. Wilson, D. Klooster, C. Baeken, *"Accelerated intermittent theta burst stimulation in major depression induces decreases in modularity: A connectome analysis"*, Network Neuroscience, Vol. 3(1) 157-172, 2019

29. M.R.T. Sinke, W.M. Otte, D. Christiaens, O. Schmitt, **A. Leemans**, A. van der Toorn, R. Angela Sarabdjitsingh, M. Joëls, R.M. Dijkhuizen, *"Diffusion MRI-based cortical connectome reconstruction - dependency on tractography procedures and neuroanatomical characteristics"*, Brain Structure and Function, Vol. 223, p. 2269-2285, 2018

30. O.F. Odish, R.H. Reijntjes, S.J. van den Bogaard, R.A. Roos, **A. Leemans**, *"Progressive microstructural changes of the occipital cortex in Huntington's disease"*, Brain Imaging and Behavior, Vol. 12(6), p. 1786-1794, 2018

31. V. Sairanen, **A. Leemans**, C.M.W. Tax, *"Fast and accurate Slicewise OutLIer Detection (SOLID) with informed model estimation for diffusion MRI data"*, NeuroImage, Vol. 181, p. 331-346, 2018

32. A. De Luca, **A. Leemans**, A. Bertoldo, F. Arrigoni, M. Froeling, *"A robust deconvolution method to disentangle multiple water pools in diffusion MRI"*, NMR in Biomedicine, Vol. 31(11), e3965, 2018

33. C. Gagliardi, F. Arrigoni, A. Nordio, A. De Luca, D. Peruzzo, A. Decio, **A. Leemans**, R. Borgatti, *"A Different Brain: Anomalies of Functional and Structural Connections in Williams Syndrome"*, Frontiers in Neurology, Vol. 9, p. 721, 2018

34. R. Heinen, N. Vlegels, J. de Bresser, **A. Leemans**, G.J. Biessels, Y.D. Reijmer, Utrecht Vascular Cognitive Impairment study group, *"The cumulative effect of small vessel disease lesions is reflected in structural brain networks of memory clinic patients"*, NeuroImage: Clinical, Vol. 19, p. 963-969, 2018

35. F. Arrigoni, A. De Luca, D. Velardo, F. Magri, S. Gandossini, A. Russo, M. Froeling, A. Bertoldo, **A. Leemans**, N. Bresolin, G. D'angelo, *"Multiparametric quantitative MRI assessment of thigh muscles in limb-girdle muscular dystrophy 2A and 2B"*, Muscle & nerve, Vol. 58(4), p. 550-558, 2018

36. A. Versace, C.D. Ladouceur, S. Graur, H.E. Acuff, L.K. Bonar, K. Monk, A. McCaffrey, A. Yendiki, **A. Leemans**, M.J. Travis, V.A. Diwadkar, S.K. Holland, J.L. Sunshine, R.A. Kowatch, S.M. Horwitz, T.W. Frazier, L.E. Arnold, M.A. Fristad, E.A. Youngstrom, R.L. Findling, B.I. Goldstein, T. Goldstein, D. Axelson, B. Birmaher, M.L. Phillips, *"Diffusion imaging markers of bipolar versus*

*general psychopathology risk in youth at-risk, Neuropsychopharmacology"*, Vol. 43(11), p. 2212-2220, 2018

37. A. Sierk, J. Daniels, A. Manthey, J.G. Kok, **A. Leemans**, M. Gaebler, J.P. Lamke, J. Kruschwitz, H. Walter, *"White matter network alterations in patients with depersonalization/derealization disorder"*, Journal of Psychiatry and Neuroscience, Vol. 43(5), p. 347-357, 2018

38. W. Haakma, M. Froeling, M. Pedersen, L. Uhrenholt, P. Douven, **A. Leemans**, L. Warner Thorup Boel, *"Post-mortem diffusion MRI of the cervical spine and its nerve roots"*, Journal of Forensic Radiology and Imaging, Vol. 12, p. 50-56, 2018

39. W. Haakma, J. Hendrikse, L. Uhrenholt, **A. Leemans**, L. Warner Thorup Boel, M. Pedersen, M. Froeling, *"Multicenter reproducibility study of diffusion MRI and fiber tractography of the lumbosacral nerves"*, Journal of Magnetic Resonance Imaging, Vol. 48(4), p. 951-963, 2018

40. R.E.M. Senden, K. Keunen, N.E. van der Aa, **A. Leemans**, I. Isgum, M.A. Viergever, J. Dudink, L.S. de Vries, F. Groenendaal, M.J.N.L. Benders, *"Mild cerebellar injury does not significantly affect cerebral white matter microstructural organization and neurodevelopmental outcome in a contemporary cohort of preterm infants"*, Pediatric Research, Vol. 83(5), p. 1004-1010, 2018

41. M.L. Tataranno, N.H.P. Claessens, P. Moeskop, M.C. Toet, K.J. Kersbergen, G. Buonocore, I. Išgum, **A. Leemans**, S. Counsell, F. Groenendaal, L.S. de Vries, M.J.N.L. Benders, *"Changes in brain morphology and microstructure in relation to early brain activity in extremely preterm infants"*, Pediatric Research, Vol. 83(4), p. 834-842, 2018

42. K. Caeyenberghs, A. Clemente, G. Egan, D.R. Hocking, **A. Leemans**, C. Metzler-Baddeley, D.K. Jones, P.H. Wilson, *"Evidence for training-dependent structural neuroplasticity in brain-injured patients: A critical review"*, Neurorehabilitation and Neural Repair, Vol. 32(2), p. 99-114, 2018

43. S.K.G. Jensen, M. Pangelinan, L. Bjvrnholm, A. Klasnja, **A. Leemans**, M. Drakesmith, C.J. Evans, E.D. Barker, T. Paus, *"Associations between prenatal, childhood, and adolescent stress and variations in white-matter properties in young men"*, NeuroImage, Vol. 182, p. 389-397, 2018

44. J. Fitzgerald, **A. Leemans**, E. Kehoe, E. O'Hanlon, L. Gallagher, J. McGrath, *"Abnormal Fronto-Parietal White Matter Organisation in the Superior Longitudinal Fasciculus Branches in Autism Spectrum Disorders"*, European Journal of Neuroscience, Vol. 47(6), p. 652-661, 2018

45. YD Reijmer, MS van den Heerik, R Heinen**, A Leemans**, J Hendrikse, J.B. de Vis, L.A. van der Kleij, C. Lucci, M.E. Hendriks, M.J.E. van Zandvoort, I.M.C. Huenges Wajer, J.M.A. Visser-Meily, G.J.E. Rinkel, G.J. Biessels, M.D.I. Vergouwen, *"Microstructural White Matter Abnormalities and Cognitive Impairment After Aneurysmal Subarachnoid Hemorrhage"*, Stroke, Vol. 49(9), p. 2040-2045, 2018

46. M. Biesbroek, **A. Leemans**, H. den Bakker, M. Duering, B. Gesierich, H. Koek, E. van den Berg, A. Postma, G.-J. Biessels, *"Microstructure of strategic white matter tracts and cognition in memory clinic patients with vascular brain injury"*, Dementia and Geriatric Cognitive Disorders, Vol. 44(5-6), p. 268-282, 2018

47. C. Coviello, K. Keunen, K.J. Kersbergen, F. Groenendaal, **A. Leemans**, B. Peels, I. Isgum, M.A. Viergever, L.S. de Vries, G. Buonocore, V.P. Carnielli, M.J.N.L. Benders, *"Effects of early nutrition and growth on brain volumes and white matter microstructure in preterm newborns"*, Pediatric Research, Vol. 83(1), p. 102-110, 2018

48. J. De Bresser, H.J. Kuijf, K. Zaanen, M.A. Viergever, J. Hendrikse, G.J. Biessels, A. Algra, E. Van Den Berg, W. Bouvy, M. Brundel, S. Heringa, L. J. Kappelle, **A. Leemans**, P. R. Luijten, W. P.T.M. Mali, G. E.H.M. Rutten, K. L. Vincken, J. Zwanenburg, *"White matter hyperintensity shape and location feature analysis on brain MRI; Proof of principle study in patients with diabetes"*, Scientific Reports, Vol. 8(1893), p. 1-10, 2018

49. T. Billiet, L. Emsell, M. Vandenbulcke, R. Peeters, D. Christiaens, **A. Leemans**, W. Van Hecke, A. Smeets, F. Amant, S. Sunaert, S. Deprez, "Recovery from chemotherapy-induced white

matter changes in young breast cancer survivors?", Brain Imaging and Behavior, Vol. 12(1), p. 64-77, 2018

50. L. Schlaffke, **A. Leemans**, L.M. Schweizer, S. Ocklenburg, T. Schmidt-Wilcke, *"Learning Morse code alters microstructural properties in the inferior longitudinal fasciculus: A DTI study"*, Frontiers in Human Neuroscience, Vol. 11(383), p. 1-9, 2017

51. K. Keunen, M.J. Benders, **A. Leemans**, P.C. Fieret-van Stam, L.H. Scholtens, R. Schmidt, M.A. Viergever, R.S. Kahn, F. Groenendaal, L.S. de Vries, M.P. van den Heuvel, *"White matter maturation in the neonatal brain is predictive of school age cognitive capacities in children born very preterm"*, Developmental Medicine & Child Neurology, Vol. 59(9), p. 939-946, 2017

52. S. van Baalen, **A. Leemans**, P. Dik, M.R. Lilien, B. ten Haken, M. Froeling, *"IVIM modeling in the kidneys: comparison of mono-, bi- and triexponential fit"*, Journal of Magnetic Resonance Imaging, Vol. 46(1), p. 228-239, 2017

53. A. Amidi, S.M. Hosseini, **A. Leemans**, S.R. Kesler, M. Agerbaek, L.M. Wu, R. Zachariae, *"Changes in Brain Structural Networks and Cognitive Functions in Testicular Cancer Patients Receiving Cisplatin-based Chemotherapy"*, Jounal of the National Cancer Institute, Vol. 109(12), p. 1-7, 2017

54. J.P.M. Kenney, G. McPhilemy, C. Scanlon, P. Najt, S. McInerney, S. Arndt, E. Scherz, F. Byrne, **A. Leemans**, B. Jeurissen, B. Hallahan, C. McDonald, D.M. Cannon, *"The arcuate fasciculus network and verbal deficits in psychosis"*, Translational Neuroscience, Vol. 8, p. 117-126, 2017

55. K.H. Maier-Hein, P.F. Neher, J.C. Houde, M.A. Côté, E. Garyfallidis, J. Zhong, M. Chamberland, F.C. Yeh, Y.C. Lin, Q. Ji, W.E. Reddick, J.O. Glass, D.Q. Chen, Y. Feng, C. Gao, Y. Wu, J. Ma, H. Renjie, Q. Li, C.F. Westin, S. Deslauriers-Gauthier, J.O.O. González, M. Paquette, S. St-Jean, G. Girard, F. Rheault, J. Sidhu, C.M.W. Tax, F. Guo, H.Y. Mesri, S. Dávid, M. Froeling, A.M. Heemskerk, **A. Leemans**, A. Boré, B. Pinsard, C. Bedetti, M. Desrosiers, S. Brambati, J. Doyon, A. Sarica, R. Vasta, A. Cerasa, A. Quattrone, J. Yeatman, A.R. Khan, W. Hodges, S. Alexander, D. Romascano, M. Barakovic, A. Auría, O. Esteban, A. Lemkaddem, J.P. Thiran, H.E. Cetingul, B.L. Odry, B. Mailhe, M.S. Nadar, F. Pizzagalli, G. Prasad, J.E. Villalon-Reina, J. Galvis, P.M. Thompson, F.S. Requejo, P.L. Laguna, L.M. Lacerda, R. Barrett, F. Dell'Acqua, M. Catani, L. Petit, E. Caruyer, A. Daducci, T.B. Dyrby, T. Holland-Letz, C.C. Hilgetag, B. Stieltjes, M. Descoteaux, *"The challenge of mapping the human connectome based on diffusion tractography"*, Nature Communications, Vol. 8(1349), p. 1-13, 2017

56. C.M.W. Tax, C.-F. Westin, T. Dela Haije, A. Fuster, M.A. Viergever, E. Calabrese, L. Florack, **A. Leemans**, *"Quantifying the brain's sheet structure with normalized convolution"*, Medical Image Analysis, Vol. 39, p. 162-177, 2017

57. S. O'Donoghue, L. Kilmartin, D. O'Hora, L. Emsell, C. Langan, S. McInerney, N.J. Forde, **A. Leemans**, B. Jeurissen, G.J. Barker, P. McCarthy, D.M. Cannon, C. McDonald, *"Anatomical integration and rich-club connectivity in euthymic bipolar disorder"*, Psychological Medicine, Vol. 47(9), p. 1609-1623, 2017

58. K.L. Ruddy, **A. Leemans**, D.G. Woolley, N. Wenderoth, R.G. Carson, *"Structural and Functional Cortical Connectivity Mediating Cross Education of Motor Function"*, The Journal of Neuroscience, Vol. 37(10), p. 2555-2564, 2017

59. S.B. Vos, C.M.W. Tax, P.R. Luijten, S. Ourselin, **A. Leemans**, M. Froeling, *"The importance of correcting for signal drift in diffusion MRI"*, Magnetic Resonance in Medicine, Vol. 77(1), p. 285-299, 2017

60. M. Froeling, C.M.W. Tax, S.B. Vos, P.R. Luijten, **A. Leemans**, *"'MASSIVE' brain dataset: Multiple Acquisitions for Standardization of Structural Imaging Validation and Evaluation"*, Magnetic Resonance in Medicine, Vol. 77(5), p. 1797-1809, 2017

61. K.L. Ruddy, **A. Leemans**, R.G. Carson, *"Transcallosal connectivity of the human cortical motor network"*, Brain Structure and Function, Vol. 222(3), p. 1243-1252, 2017

62. W. Haakma, B.A. Jongbloed, M. Froeling, H.S. Goedee, C. Bos, **A. Leemans**, L.H. van den Berg, J. Hendrikse, W.L. van der Pol, *"MRI shows thickening and altered diffusion in the median and ulnar nerves in multifocal motor neuropathy"*, European Radiology, Vol. 27(5), p. 2216-2224, 2017

63. H.J. van der Horn, J.G. Kok, M.E. de Koning, M.E. Scheenen, **A. Leemans**, J.M. Spikman, J. van der Naalt, *"Altered wiring of the human structural connectome in adults with mild traumatic brain injury"*, Journal of Neurotrauma, Vol. 34(5), p. 1035-1044, 2016

64. C.M.W. Tax, T. Dela Haije, A. Fuster, C.-F. Westin, M.A. Viergever, L. Florack, **A. Leemans**, *"Sheet Probability Index (SPI): Characterizing the geometrical organization of the white matter with diffusion MRI"*, NeuroImage, Vol. 142, p. 260-279, 2016

65. L. Serbruyns, I. Leunissen, P. van Ruitenbeek, L. Pauwels, K. Caeyenberghs, E. Solesio-Jofre, M. Geurts, K. Cuypers, R.L. Meesen, S. Sunaert, **A. Leemans**, S.P. Swinnen, *"Alterations in brain white matter contributing to age-related slowing of task switching performance: The role of radial diffusivity and magnetization transfer ratio"*, Human Brain Mapping, Vol. 37(11), p. 4084-4098, 2016

66. Y.D. Reijmer, P. Fotiadis, G. Piantoni, G. Boulouis, K.E. Kelly, M.E. Gurol, **A. Leemans**, M.J. O'Sullivan, S.M. Greenberg, A. Viswanathan, *"Small vessel disease and cognitive impairment: The relevance of central network connections"*, Human Brain Mapping, Vol. 37(7), p. 2446-2454, 2016

67. M. Kennis, S.J.H. van Rooij, R.S. Kahn, E. Geuze, **A. Leemans**, *"Choosing the polarity of the phase-encoding direction in diffusion MRI: Does it matter for group analysis?"*, NeuroImage: Clinical, Vol. 11, p. 539-547, 2016

68. C.E. Kelly, D.K. Thompson, J. Chen, **A. Leemans**, C.L. Adamson, T.E. Inder, J.L.Y. Cheong, L.W. Doyle, P.J. Anderson, *"Axon density and axon orientation dispersion in children born preterm"*, Human Brain Mapping, Vol. 37(9), p. 3080-3102, 2016

69. W. Huizinga, D.H.J. Poot, J.-M. Guyader, R. Klaassen, B.F. Coolen, M. van Kranenburg, R.J.M. van Geuns, A. Uitterdijk, M. Polfliet, J. Vandemeulebroucke, **A. Leemans**, W.J. Niessen, S. Klein, *"PCA-based groupwise image registration for quantitative MRI"*, Medical Image Analysis, Vol. 29, p. 65-78, 2016

70. W. Haakma, M. Pedersen, M. Froeling, L. Uhrenholt, **A. Leemans**, L. Warner Thorup Boel, *"Diffusion tensor imaging of peripheral nerves in non-fixed post-mortem subjects"*, Forensic Science International, Vol. 263, p. 139-146, 2016

71. D. Perrone, B. Jeurissen, J. Aelterman, T. Roine, J. Sijbers, A. Pizurica, **A. Leemans**, W. Philips, *"D-BRAIN: Anatomically accurate simulated diffusion MRI brain data"*, PLoS One, Vol. 11(3), p. e0149778, 2016

72. S.B. Vos, M. Aksoy, Z. Han, S.J. Holdsworth, J. Maclaren, M.A. Viergever, **A. Leemans**, R. Bammer, *"Trade-off between angular and spatial resiolution in in vivo fiber tractography"*, NeuroImage, Vol. 129, p. 117-132, 2016

73. M. Catani, F. Dell'Acqua, H. Howells, S. Budisavljevic, M. Thiebaut de Schotten, S. Froudist Walsh, L. D'Anna, A. Thompson, S. Sandrone, E.T. Bullmore, J. Suckling, S. Bar-on-Cohen, M.V. Lombardo, S.J. Wheelwright, B. Chakrabarti, M.-C. Lai, A.N.V. Ruigrok, **A. Leemans**, C. Ecker, MRC AIMS Consortium, M.C. Craig, D.G.M. Murphy, "*Frontal networks in adults with autism spectrum disorder"*, Brain, Vol. 139, p. 616-630, 2016

74. J. Debrabant, G. Vingerhoets, H. Van Waelvelde, **A. Leemans**, T. Taymans, K. Caeyenberghs, *"Brain connectomics of visual-motor deficits in children with developmental coordination disorder"*, Journal of Pediatrics, Vol. 169, p. 21-27, 2016

75. C.E. Kelly, J.L.Y. Cheong, L. Gabra Fam, **A. Leemans**, M.L. Seal, L.W. Doyle, P.J. Anderson, A.J. Spittle, D.K. Thompson, *"Moderate and Late Preterm Infants Exhibit Widespread Brain White*

*Matter Microstructure Alterations at Term-Equivalent Age Relative to Term-Born Controls"*, Brain Imaging and Behavior, Brain Imaging and Behavior, Vol. 10(1), p. 41-49, 2016

76. A.L. Murray, D.K. Thompson, L. Pascoe, **A. Leemans**, T.E. Inder, L.W. Doyle, J.F.I. Anderson, P.J. Anderson, *"White matter abnormalities and impaired attention abilities in children born very preterm"*, NeuroImage, Vol. 124, p. 75-84, 2016

77. E. O'hanlon, S. Howley, S. Prasad, J. McGrath, **A. Leemans**, C. McDonald, H. Garavan, K.C. Murphy, *"Multimodal MRI reveals structural connectivity differences in 22q11 Deletion Syndrome related to impaired spatial working memory"*, Human Brain Mapping, Vol. 37(12), p. 4689-4705, 2016

78. N. Sauwen, D.M. Sima, S. Van Cauter, J. Veraart, **A. Leemans**, F. Maes, U. Himmelreich, S. Van Huffel, *"Hierarchical non-negative matrix factorization to characterize brain tumor heterogeneity using multi-parametric MRI"*, NMR in Biomedicine, Vol. 28(12), 1599-1624, 2015

79. U. Roine, T. Roine, J. Salmi, T. Nieminen-von Wendt, P. Tani, S. Leppämäki, P. Rintahaka, K. Caeyenberghs, **A. Leemans**, M. Sams, *"Abnormal wiring of the connectome in adults with high functioning autism spectrum disorder"*, Molecular Autism, Vol. 6(65), p. 1-11, 2015

80. N.J. Forde, S. O'Donoghue, C. Scanlon, L. Emsell, C. Chaddock, **A. Leemans**, B. Jeurissen, G.J. Barker, D.M. Cannon, R.M. Murray, C. McDonald, *"Structural brain network analysis in families multiply affected with bipolar I disorder"*, Psychiatry Research: Neuroimaging, Vol. 234(1), p. 44-51, 2015

81. R.A. Poldrack, T.O. Laumann, O. Koyejo, B. Gregory, A. Hover, M.Y. Chen, K.J. Gorgolewski, J. Luci, S.J. Joo, R.L. Boyd, S. Hunicke-Smith, Z.B. Simpson, T. Caven, V. Sochat, J.M. Shine, E. Gordon, A.Z. Snyder, B. Adeyemo, S.E. Petersen, D.C. Glahn, D. Reese McKay, J.E. Curran, H.H. Göring, M.A. Carless, J. Blangero, R. Dougherty, **A. Leemans**, D.A. Handwerker, L. Frick, E.M. Marcotte, J.A. Mumford, *"Long-term neural, behavioral, and physiological phenotyping of a single human"*, Nature Communications, Vol. 6(8885), p. 1-15, 2015

82. C.M.W. Tax, M. Chamberland, M. van Stralen, M.A. Viergever, K. Whittingstall, D. Fortin, M. Descoteaux, **A. Leemans**, *"Seeing more by showing less: Orientation-dependent transparency rendering for fiber tractography visualization"*, PLoS One, Vol. 10(10), p. e0139434, 2015

83. J. Shin, C. Bourdon, M. Bernard, M. Wilson, E. Reischl, M. Waldenberger, B. Ruggeri, G. Schumann, S. Desrivieres, **A. Leemans**, IMAGEN Consortium, SYS Consortium, M. Abrahamowicz, G. Leonard, L. Richer, L. Bouchard, D. Gaudet, T. Paus, Z. Pausova, *"Layered genetic control of DNA methylation and gene expression: A locus of multiple sclerosis in healthy individuals"*, Human Molecular Genetics, Vol. 24(20), p. 5733-5745, 2015

84. D.K. Thompson, K.J. Lee, L. van Bijnen, **A. Leemans**, L. Pascoe, S.E. Scratch, J. Cheong, G.F. Egan, T.E. Inder, L.W. Doyle, P.J. Anderson, *"Accelerated corpus callosum development in prematurity predicts improved outcome"*, Human Brain Mapping, Vol. 36(10), p. 3733-3748, 2015

85. D. Perrone, J. Aelterman, A. Pižurica, B. Jeurissen, W. Philips, **A. Leemans**, *"The effect of Gibbs ringing artifacts on measures derived from diffusion MRI"*, NeuroImage, Vol. 120, p. 32-43, 2015

86. O.F.F. Odish, K. Caeyenberghs, H. Hosseini, S.J.A. van den Bogaard, R.A.C. Roos, **A. Leemans**, *"Dynamics of the connectome in Huntington's disease: A longitudinal diffusion MRI study"*, NeuroImage: Clinical, Vol. 9, p. 32-43, 2015

87. Y.D. Reijmer, A.P. Schultz, **A. Leemans**, M.J. O'Sullivan, M.E. Gurol, R. Sperling, S.M. Greenberg, A. Viswanathan, T. Hedden, *"Decoupling of structural and functional brain connectivity in older adults with white matter hyperintensities"*, NeuroImage, Vol. 117, p. 222-229, 2015

88. B.F.M. Rijken, **A. Leemans**, Y. Lucas, K. van Montfort, I.M.J. Mathijssen, M.H. Lequin, *"Diffusion tensor imaging and fiber tractography in children with an abnormally shaped brain due to craniosynostosis syndromes"*, American Journal of Neuroradiology, Vol. 36(8), p. 1558-1564, 2015

89. S.B. Vos, W. Haakma, H. Versnel, M. Froeling, L. Speleman, P. Dik, M.A. Viergever, **A. Leemans**, W. Grolman, *"Diffusion tensor imaging of the auditory nerve in patients with long-term single-sided deafness"*, Hearing Research, Vol. 323, p. 1-8, 2015

90. E. Roze, M.J. Benders, K.J. Kersbergen, N.E. van der Aa, F. Groenendaal, I.C. van Haastert, **A. Leemans**, L.S. de Vries, *"Neonatal DTI early after birth predicts motor outcome in preterm infants with periventricular hemorrhagic infarction"*, Pediatric Research, Vol. 78(3), p. 298-303, 2015

91. O.F.F. Odish, **A. Leemans**, R.H.A.M. Reijntjes, S.J.A. van den Bogaard, E.M. Dumas, R. Wolterbeek, C.M.W. Tax, H.J. Kuijf, K.L. Vincken, J. van der Grond, R.A.C. Roos, *"Microstructural brain abnormalities in Huntington's disease: a two year follow-up"*, Human Brain Mapping, Vol. 36(6), p. 2061-2074, 2015

92. T. Roine, B. Jeurissen, D. Perrone, J. Aelterman, W. Philips, **A. Leemans**, J. Sijbers, *"Informed constrained spherical deconvolution (iCSD)"*, Medical Image Analysis, Vol. 24(1), p. 269-281, 2015

93. K. Pieterman, A. Plaisier, P. Govaert, **A. Leemans**, M.H. Lequin, J. Dudink, *"Data quality in diffusion tensor imaging studies of the preterm brain - A systematic review"*, Pediatric Radiology, Vol. 45(9), p. 1372-1381, 2015

94. E. O'Hanlon, **A. Leemans**, I. Kelleher, M.C. Clarke, S. Roddy, H. Coughlan, M. Harley, F. Amico, M. Hoscheit, L. Tiedt, J. Tabish, A. McGettigan, T. Frodl, M. Cannon, *"White matter differences among adolescents reporting psychotic experiences. A population-based diffusion MRI study"*, JAMA Psychiatry, Vol. 72(2), p. 668-677, 2015.

95. L.E.M. Wisse, Y.D. Reijmer, A. ter Telgte, H.J. Kuijf, **A. Leemans**, P.R. Luijten, H.L. Koek, M.I. Geerlings, G.J. Biessels, *"Hippocampal disconnection in early Alzheimer's disease: a 7 tesla MRI study"*, Journal of Alzheimer's Disease, Vol. 45(4), p. 1247-1256, 2015

96. A. Versace, H. Acuff, M.A. Bertocci, G. Bebko, J.R.C. Almeida, S.B. Perlman, **A. Leemans**, C. Schirda, H. Aslam, A. Dwojak, L. Bonar, M. Travis, M.K. Gill, C. Demeter, V.A. Diwadkar, J.L. Sunshine, S.K. Holland, R.A. Kowatch, B. Birmaher, D. Axelson, S.M. Horwitz, T.W. Frazier, L.E. Arnold, M.A. Fristad, E.A. Youngstrom, R.L. Findling, M.L. Phillips, *"White Matter Structure in Youth with Behavioral and Emotional Dysregulation Disorders: a Probabilistic Tractographic Study"*, JAMA Psychiatry, Vol. 72(4), p. 367-376, 2015

97. U. Roine, J. Salmi, T. Roine, T. Nieminen-von Wendt, S. Leppämäki, P. Rintahaka, P. Tani, **A. Leemans**, M. Sams, *"Constrained spherical deconvolution-based tractography and tract-based spatial statistics show abnormal microstructural organization in Asperger syndrome"*, Molecular Autism, Vol. 6(4), p. 1-11, 2015

98. J.L. Hsu, W.H. Chen, C.H. Bai, J.G. Leu, C.Y. Hsu, M.A. Viergever, **A. Leemans**, *"Microstructural white matter tissue characteristics are modulated by homocysteine: A diffusion tensor imaging study"*, PLoS One, Vol. 10(2), p. e0116330, 2015

99. D. Drijkoningen, K. Caeyenberghs, I. Leunissen, C. Vander Linden, **A. Leemans**, S. Sunaert, J. Duysens, S.P. Swinnen, *"Training-induced improvements in postural control are accompanied by alterations in cerebellar white matter in brain injured patients"*, NeuroImage: Clinical, Vol. 7, p. 240-251, 2015

100. Y.D. Reijmer, P. Fotiadis, S. Martinez-Ramirez, D.H. Salat, A. Schultz, A. Shoamanesh, A.M. Ayres, A. Vashkevich, D. Rosas, K. Schwab, **A. Leemans**, G.J. Biessels, J. Rosand, K.A. Johnson, A. Viswanathan, M. Edip Gurol, S.M. Greenberg, *"Structural network alterations and neurologic dysfunction in cerebral amyloid angiopathy"*, Brain, Vol. 138(1), p. 179-188, 2015

101. J. Dudink, K. Pieterman, **A. Leemans**, M. Kleinnijenhuis, A.-M. van Cappellen van Walsum, F. Hoebeek, *"Recent Advancements in Diffusion MRI for Investigating Cortical Development after Preterm Birth – Potential and Pitfalls"*, Frontiers in Human Neuroscience, Vol. 8(1066), p. 1-7, 2015

102. C.M.W. Tax, W.M. Otte, M.A. Viergever, R.M. Dijkhuizen, and **A. Leemans**, *"REKINDLE: Robust Extraction of Kurtosis INDices with Linear Estimation"*, Magnetic Resonance in Medicine, Vol. 73(2), p. 794-808, 2015.

103. L. Serbruyns, J. Gooijers, K. Caeyenberghs, R.L. Meesen, K. Cuypers, H.M. Sisti, **A. Leemans**, S.P. Swinnen, *"Bimanual motor deficits in older adults predicted by diffusion tensor imaging metrics of corpus callosum subregions"*, Brain Structure and Function, Vol. 220(1), p. 273-290, 2015

104. N. De Geeter, G. Crevecoeur, **A. Leemans**, L. Dupre, *"Effective electric fields along realistic DTI-based neural trajectories for modelling the stimulation mechanisms of TMS"*, Physics in Medicine and Biology, Vol. 60(2), p. 453-471, 2015

105. J. Gooijers, **A. Leemans**, S. Van Cauter, S. Sunaert, S.P. Swinnen, and K. Caeyenberghs, *"White matter organization in relation to upper limb motor control in healthy subjects: exploring the added value of Diffusion Kurtosis Imaging"*, Brain Structure and Function, Vol. 219(5), p. 1627-1638, 2014

106. K.J. Kersbergen, **A. Leemans**, F. Groenendaal, N.E. van der Aa, M.A. Viergever, L.S. de Vries, M.J. Benders, *"Microstructural brain development between 30 and 40 weeks corrected age in a longitudinal cohort of extremely preterm infants"*, NeuroImage, Vol. 103, p. 214-224, 2014

107. W. Haakma, P. Dik, B. ten Haken, M. Froeling, R.A.J. Nievelstein, I. Cuppen, T.P.V.M. de Jong, and **A. Leemans**, *"Diffusion tensor MRI and fiber tractography of the sacral plexus in children with spina bifida"*, The Journal of Urology, Vol. 192(3), p. 927-933, 2014

108. T. Billiet, B. Mädler, F. D'Arco, R. Peeters, S. Deprez, E. Plasschaert, **A. Leemans**, H. Zhang, B. Van den Bergh, M. Vandenbulcke, E. Legius, S. Sunaert, L. Emsell, *"Characterizing the histopathological basis of unidentified bright objects in neurofibromatosis type 1: a combined in vivo multi-exponential T2 relaxation and multi-shell diffusion MRI analysis"*, NeuroImage: Clinical, Vol. 4, p. 649-658, 2014

109. C.M.W. Tax, R. Duits, A. Vilanova, B.M. ter Haar Romeny, P. Hofman, L. Wagner, **A. Leemans**, and P. Ossenblok, *"Evaluating Contextual Processing in Diffusion MRI: Application to Optic Radiation Reconstruction for Epilepsy Surgery"*, PLOS ONE, Vol. 9(7), p. e101524, 2014

110. M. Bach, F.B. Laun, **A. Leemans**, C.M.W. Tax, G.J. Biessels, B. Stieltjes, K.H. Maier-Hein, *"Methodological considerations on Tract-Based Spatial Statistics (TBSS)"*, NeuroImage, Vol. 100, p. 358-369, 2014

111. B. Jeurissen, **A. Leemans**, and J. Sijbers, *"Automated correction of improperly rotated diffusion gradient orientations in diffusion-weighted MRI"*, Medical Image Analysis, Vol. 18(7), p. 953-962, 2014

112. K. Caeyenberghs and **A. Leemans**, *"Hemispheric lateralization of topological organization in structural brain networks"*, Human Brain Mapping, Vol. 35(9), p. 4944-4957, 2014

113. S.A.U. Rudrapatna, T. Wieloch, K. Beirup, K. Ruscher, W.J.P. Mol, P. Yanev, **A. Leemans**, A. van der Toorn, R.M. Dijkhuizen, *"Can diffusion kurtosis imaging improve the sensitivity and specificity of detecting microstructural alterations in brain tissue chronically after experimental stroke? Comparisons with diffusion tensor imaging and histology"*, NeuroImage, Vol. 97, p. 363-373, 2014

114. L. Emsell, C. Chaddock, N. Forde, W. Van Hecke, G.J. Barker, **A. Leemans**, S. Sunaert, M. Walshe, E. Bramon, D. Cannon, R. Murray, and C. McDonald, *"White matter microstructural abnormalities in families multiply affected with bipolar disorder: A diffusion tensor tractography study"*, Psychological Medicine, Vol. 44(10), p. 2139-2150, 2014

115. A. Plaisier, K. Pieterman, M.H. Lequin, P. Govaert, A.M. Heemskerk, I.K.M. Reiss, G.P. Krestin, **A. Leemans**, and J. Dudink, *"Choice of diffusion tensor estimation approach affects fiber tractography of the fornix in the preterm brain"*, American Journal of Neuroradiology, Vol. 35(6), p. 1219-1225, 2014

116. S. Van Cauter, F. De Keyzer, D.M. Sima, A. Croitor Sava, F. D'Arco, J. Veraart, R.R. Peeters, **A. Leemans**, S. Van Gool, G. Wilms, P. Demaerel, S. Van Huffel, S. Sunaert, U. Himmelreich, *"Integrating diffusion kurtosis imaging, dynamic susceptibility-weighted MR imaging and short echo time chemical shift imaging for grading gliomas"*, Neuro-Oncology, Vol. 16(7), p. 1010-1021, 2014

117. K. Caeyenberghs, **A. Leemans**, I. Leunissen, J. Gooijers, C. Van der Linden, S. Sunaert, and S.P. Swinnen, *"Altered structural networks and executive deficits in traumatic brain injury patients"*, Brain Structure and Function, Vol. 219(1), p. 193-209, 2014

118. T. Roine, B. Jeurissen, D. Perrone, J. Aelterman, **A. Leemans**, W. Philips, J. Sijbers, *"Isotropic non-white matter partial volume effects in constrained spherical deconvolution"*, Frontiers in Neuroinformatics, Vol. 8(28), p. 1-9, 2014

119. I. Ellison-Wright, P.J. Nathan, E.T. Bullmore, R. Zaman, R.B. Dudas, M. Agius, E. Fernandez-Egea, U. Müller, C.M. Dodds, N.J. Forde, C. Scanlon, **A. Leemans**, C. McDonald, D.M. Cannon, *"Distribution of tract deficits in schizophrenia"*, BMC Psychiatry, Vol. 14(99), p. 1-13, 2014

120. L. Holleran, M. Ahmed, H. Schmidt, L. Emsell, **A. Leemans**, C. Scanlon, P. Dockery, P. McCarthy, G.J. Barker, C. McDonald, and D. Cannon, *"Altered Interhemispheric and Temporal Lobe White Matter Microstructural Organisation in Severe Chronic Schizophrenia"*, Neuropsychopharmacology, Vol. 39(4), p. 944-954, 2014

121. N.J. Forde, L. Ronan, J. Suckling, C. Scanlon, S. Neary, L. Holleran, **A. Leemans**, R. Tait, C. Rua, P.C. Fletcher, B. Jeurissen, C.M. Dodds, S.R. Miller, E.T. Bullmore, C. McDonald, P.J. Nathan, D.M. Cannon, *"Structural Neuroimaging Correlates of Allelic Variation of the BDNF Val66met Polymorphism"*, NeuroImage, Vol. 90, p. 280-289, 2014

122. S.H. Aarnink, S.B. Vos, **A. Leemans**, T.L. Jernigan, K. Skak Madsen, W.F.C. Baaré, *"Automated Longitudinal Intra-Subject Analysis (ALISA) for diffusion MRI tractography"*, NeuroImage, Vol. 86, p. 404-416, 2014

123. D.K. Thompson, D. Thai, C.E. Kelly, **A. Leemans**, J.-D. Tournier, M.J. Kean, K.J. Lee, T.E. Inder, L.W. Doyle, P.J. Anderson, R.W. Hunt, "Alterations in the Optic Radiations of Very Preterm Children - Perinatal Predictors and Relationships with Visual Outcomes", NeuroImage: Clinical, Vol. 4, p. 145-153, 2014

124. S.M. Heringa, Y.D. Reijmer, **A. Leemans**, H.L. Koek, L.J. Kappelle, and G.J. Biessels, *"Multiple microbleeds are related to cerebral network disruptions in patients with early Alzheimer's disease"*, Journal of Alzheimer's Disease, Vol 38(1), p. 211-221, 2014

125. C.M.W. Tax, B. Jeurissen, S.B. Vos, M.A. Viergever, and **A. Leemans**, *"Recursive calibration of the fiber response function for spherical deconvolution of diffusion MRI data"*, NeuroImage, Vol. 86, p. 67-80, 2014

126. J. McGrath, K. Johnson, E. O'Hanlon, H. Garavan, L. Gallagher, and **A. Leemans**, *"White matter and visuospatial processing in autism: A constrained spherical deconvolution tractography study"*, Autism Research, Vol.6(5), p. 307-319, 2013

127. U. Roine, T. Roine, J. Salmi, T. Nieminen-von Wendt, S. Leppämäki, P. Rintahaka, P. Tani, **A. Leemans**, and M. Sams, *"Increased coherence of white matter fiber tract organization in adults with Asperger syndrome: A diffusion tensor imaging study"*, Autism Research, Vol. 6(6), p. 642-650, 2013

128. S.B. Vos, M.A. Viergever, **A. Leemans**, *"Multi-fiber tractography visualizations for diffusion MRI data"*, PLoS One, Vol. 8(11), p. e81453, 2013

129. J. McGrath, K. Johnson, E. O'Hanlon, H. Garavan, **A. Leemans**, and L. Gallagher, *"Atypical functional connectivity in autism spectrum disorder is associated with disrupted white matter microstructural organization"*, Frontiers in Human Neuroscience, Vol. 7(434), p. 1-18, 2013

130. B. Jeurissen, **A. Leemans**, J-D Tournier, D.K. Jones, and J. Sijbers, *"Investigating the prevalence of complex fiber configurations in white matter tissue with diffusion MRI"*, Human Brain Mapping, Vol. 34(11), p. 2747-2766, 2013

131. J. Veraart, J. Rajan, R.R. Peeters, **A. Leemans**, S. Sunaert, and J. Sijbers, *"A comprehensive framework for accurate diffusion MRI parameter estimation"*, Magnetic Resonance in Medicine, Vol. 70(4), p. 972-984, 2013

132. G. Kristo, **A. Leemans**, M. Raemaekers, G.J. Rutten, B. de Gelder, and N.F. Ramsey, *"Reliability of two clinically relevant fibre pathways reconstructed with constrained spherical deconvolution"*, Magnetic Resonance in Medicine, Vol. 70(6), p. 1544-1556, 2013

133. S. Deprez, T. Billiet, S. Sunaert, and **A. Leemans**, *"Diffusion tensor MRI of chemotherapy-induced cognitive impairment in non-CNS cancer patients: A review"*, Brain Imaging and Behavior, Vol. 7(4), p. 409-435, 2013

134. J. Veraart, J. Sijbers, S. Sunaert, **A. Leemans**, and B. Jeurissen, *"Weighted linear least squares estimation of diffusion MRI parameters: strengths, limitations, and pitfalls"*, NeuroImage, Vol. 81, p. 335-346, 2013

135. Y. Surova, F. Szczepankiewicz, J. Lätt, M. Nilsson, B. Eriksson, **A. Leemans**, O. Hansson, D. van Westen, and C. Nilsson, *"Assessment of Global and Regional Diffusion Changes along White Matter Tracts in Parkinsonian Disorders by MR Tractography"*, PLoS One, Vol. 8(6), p. e66022, 2013

136. L. Emsell, C. Langan, W. Van Hecke, G. Barker, **A. Leemans**, S. Sunaert, P. McCarthy, R. Nolan, D.M. Cannon, and C. McDonald, *"White matter differences in euthymic bipolar I disorder: a combined MRI and DTI voxel-based study"*, Bipolar Disorders, Vol. 15(4), p. 365-376, 2013

137. Y.D. Reijmer, W.M. Freeze, **A. Leemans**, and G.J. Biessels, *"The effect of lacunar infarcts on white matter tract integrity"*, Stroke, Vol. 44, p. 2019-2021, 2013

138. F. Szczepankiewicz, J. Lätt, R. Wirestam, **A. Leemans**, P. Sundgren, D. van Westen, F. Ståhlberg, and M. Nilsson, *"Variability in diffusion kurtosis imaging: Impact on study design, statistical power and interpretation"*, NeuroImage, Vol. 76, p. 145-154, 2013

139. M.H. Heitger, D.J. Goble, T. Dhollander, P. Dupont, K. Caeyenberghs, **A. Leemans**, S. Sunaert, and S.P. Swinnen, *"Bimanual motor coordination in older adults is associated with increased functional brain connectivity - a graph-theoretical analysis"*, PLoS One, Vol. 8(4), p. e62133, 2013

140. Y.D. Reijmer, **A. Leemans**, M. Brundel, L.J. Kappelle, and G.J. Biessels, *"Disruption of the cerebral white matter network is related to slowing of information processing speed in patients with type 2 diabetes"*, Diabetes, Vol. 62(6), p. 2112-2115, 2013

141. A.M. Heemskerk, **A. Leemans**, A. Plaisier, K. Pieterman, M.H. Lequin, and J. Dudink, *"Acquisition guidelines and quality assessment tools for analyzing neonatal diffusion tensor MRI data"*, American Journal of Neuroradiology, Vol. 34(8), p. 1496-1505, 2013

142. Y.D. Reijmer, **A. Leemans**, K. Caeyenberghs, S.M. Heringa, D.L. Koek, and G.J. Biessels, *"Disruption of cerebral networks and cognitive impairment in Alzheimer's disease"*, Neurology, Vol. 15, p. 1370-1377, 2013

143. L.R. Kozák, S. Dávid, G. Rudas, Z. Vidnyánszky, **A. Leemans**, Z. Nagy, *"Investigating the need of triggering the acquisition for infant diffusion MRI: a quantitative study including bootstrap statistics"*, NeuroImage, Vol. 69, p. 198-205, 2013

144. L. Emsell, **A. Leemans**, C. Langan, W. Van Hecke, G. Barker, P. McCarthy, D.M. Cannon, S. Sunaert, and C. McDonald, *"Limbic and callosal white matter changes in euthymic bipolar I disorder: An advanced diffusion MRI tractography study"*, Biological Psychiatry, Vol. 73(2), p. 194-201, 2013

145. K. Caeyenberghs, **A. Leemans**, I. Leunissen, K. Michiels, S.P. Swinnen, *"Topological correlations of structural and functional networks in patients with traumatic brain injury"*, Frontiers in Human Neuroscience, Vol7(726), p. 1-11, 2013

146. G. Kristo, **A. Leemans**, B. de Gelder, M.A.H. Raemaekers, G.J.M. Rutten, N.F. Ramsey, *"Reliability of the corticospinal tract and arcuate fasciculus reconstructed with DTI based tractography: implications for clinical practice"*, European Radiology, Vol. 23(1), p. 28-36, 2013

147. J. Gooijers, K. Caeyenberghs, H. Sisti, M. Geurts, M. Heitger, **A. Leemans**, and S.P. Swinnen, *"Callosal contributions to bimanual coordination: effects of task complexity and sensory feedback"*, Human Brain Mapping, Vol. 34(1), p. 241-252, 2013

148. Y.D. Reijmer, M. Brundel, J. de Bresser, L.J. Kappelle, **A. Leemans**, G.J. Biessels, *"Microstructural white matter abnormalities and cognitive function in type 2 diabetes: a diffusion tensor imaging study"*, Diabetes Care, Vol. 1(36), p. 137-144, 2013

149. T. De Bondt, W. Van Hecke, **A. Leemans**, J. Sijbers, Y. Jacquemyn, and P.M. Parizel, *"Does the use of hormonal contraceptives cause microstructural changes in cerebral white matter? Preliminary results of a DTI and tractography study"*, European Radiology, Vol. 23, p. 57-64, 2013

150. D.L. Polders, **A. Leemans**, P.R. Luijten, and H. Hoogduin, *"Uncertainty estimations for quantitative in-vivo MRI T1 mapping"*, Journal of Magnetic Resonance, Vol. 224, p. 53-60, 2012

151. C.M. Metzler-Baddeley, S. Hunt, D.K. Jones, **A. Leemans**, J.P. Aggleton, and M.J. O'Sullivan, *"Temporal association tracts and the breakdown of episodic memory in mild cognitive impairment"*, Neurology, Vol.79(23), p. 2233-2240, 2012

152. H.C. Wang, J.L. Hsu, and **A. Leemans**, *"Diffusion Tensor Imaging of Vascular Parkinsonism: Structural Changes in Cerebral White Matter and the Association with Clinical Severity"*, Archives of Neurology, Vol. 69(10), p. 1340-1348, 2012

153. M.A. Hemels, J. Nijman, **A. Leemans**, B.J.M. van Kooij, M.A. Verboon-Maciolek, M.J.N.L. Benders, C. Koopman, I.C. van Haastert, L.S. de Vries, T.G. Krediet, and F. Groenendaal, *"Cerebral white matter and neurodevelopment of preterm infants after coagulase-negative staphylococcal sepsis"*, Pediatric Critical Care Medicine, Vol. 13(6), p. 678-684, 2012

154. K. Caeyenberghs, **A. Leemans**, C. De Decker, M. Heitger, D. Drijkoningen, C. Vander Linden, S. Sunaert, and S.P. Swinnen, *"Brain connectivity and postural control in young traumatic brain injury patients: A diffusion MRI based network analysis"*, NeuroImage: Clinical, Vol. 1, p. 106-115, 2012

155. Y.D. Reijmer, **A. Leemans**, S.M. Heringa, I. Wielaard, B. Jeurissen, H.L. Koek, and G.J. Biessels, *"Improved Sensitivity to Cerebral White Matter Abnormalities in Alzheimer's Disease with Spherical Deconvolution Based Tractography"*, PLoS One, Vol. 7(8), e44074, 2012

156. H.M. Sisti, M. Geurts, J. Gooijers, M.H. Heitger, K. Caeyenberghs, I.A.M. Beets, L. Serbruyns, **A. Leemans**, S.P. Swinnen, *"Microstructural Organization of Corpus Callosum Projections to Prefrontal Cortex Predicts Motor Learning"*, Learning and Memory, Vol. 19(8), p. 351-357, 2012

157. P.K.N. van der Jagt, P. Dik, M. Froeling, T.C. Kwee, R.A.J. Nievelstein, B. ten Haken, and **A. Leemans**, *"Architectural configuration and microstructural properties of the sacral plexus: A diffusion tensor MRI and tractography study"*, NeuroImage, Vol. 62(3), p. 1792-1799, 2012

158. J.S. Verhoeven, N. Rommel, E. Prodi, **A. Leemans**, I. Zink, E. Vandewalle, I. Noens, J. Wagemans, J. Steyaert, B. Boets, A. Van de Winckel, P. De Cock, L. Lagae, and S. Sunaert, *"Is there a common neuro-anatomical substrate of language deficit between Autism Spectrum Disorder and Specific Language Impairment?"*, Cerebral Cortex, Vol. 22(10), p. 2263-2271, 2012

159. S.B. Vos, B. Jeurissen, D.K. Jones, M.A. Viergever, and **A. Leemans**, *"The influence of complex white matter architecture on the mean diffusivity in diffusion tensor MRI of the human brain"*, NeuroImage, Vol. 59(3), p. 2208-2216, 2012

160. K. Caeyenberghs, **A. Leemans**, M.H. Heitger, I. Leunissen, M. Geurts, T. Dhollander, P. Dupont, and S.P. Swinnen, *"Graph analysis of functional brain networks for cognitive control in traumatic brain injury"*, Brain, Vol. 135(4), p. 1293-1307, 2012

161. A. Carballedo, F. Amico, I. Ugwu, A.J. Fagan, C. Fahey, D. Morris, J.F. Meaney, **A. Leemans**, and T. Frodl, *"Reduced fractional anisotropy in the uncinate fasciculus in patients with major depression carrying the met-allele of the Val66Met brain-derived neurotrophic factor genotype"*, Am J Med Genet B Neuropsychiatr Genet, Vol. 159(5), p. 537-548, 2012

162. N. De Geeter, G. Crevecoeura, L. Dupré, W. Van Hecke, and **A. Leemans**, *"A DTI-based model for TMS using the independent impedance method with frequency-dependent tissue parameters"*, Physics in Medicine and Biology, Vol. 57(8), p. 2169-2188, 2012

163. J.L. Hsu, Y.L. Chen, J.G. Leu, F.S. Jaw, C.H. Lee, Y.F. Tsai, C.Y. Hsu, C.H. Bai, and **A. Leemans**, *"Microstructural white matter abnormalities in type 2 diabetes mellitus: A diffusion tensor imaging study"*, NeuroImage, Vol. 59(2), p. 1098-1105, 2012

164. S. Deprez, F. Amant, A. Smeets, R. Peeters, **A. Leemans**, W. Van Hecke, M-R. Christiaens, J. Vandenberghe, M. Vandenbulcke, S. Sunaert, *"Longitudinal assessment of chemotherapy-induced structural changes in cerebral white matter and its correlation with impaired cognitive functioning"*, Journal of Clinical Oncology, Vol. 30(3), p. 274-281, 2012

165. M. Langen, **A. Leemans**, P. Johnston, C. Ecker, E. Daly, C.M. Murphy, F. dell'Acqua, S. Durston, the AIMS Consortium, and D.G.M. Murphy, *"Fronto-striatal circuitry and inhibitory control in autism: Findings from diffusion tensor imaging tractography"*, Cortex, Vol. 48(2), p. 183-193, 2012

166. E.J. Anderson, D.K. Jones, R.L. O'Gorman, **A. Leemans**, M. Catani, and M. Husain, *"Cortical network for gaze control in humans revealed using multimodal MRI"*, Cerebral Cortex, Vol. 22(4), p. 765-775, 2012

167. N.E. van der Aa, **A. Leemans**, F.J. Northington, H.L.M. van Straaten, I.C. van Haastert, F. Groenendaal, M.N.J.L. Benders, and L.S. de Vries, *"Does DTI-based tractography at three months contribute to the prediction of motor outcome following perinatal arterial ischemic stroke?"*, Stroke, Vol. 42(12), p. 3410-3414, 2011

168. C.R. Blain, S. Brunton, V.C. Williams, **A. Leemans**, M.R. Turner, P.M. Andersen, M. Catani, B.R. Stanton, J. Ganesalingham, D.K. Jones, S.C. Williams, P.N. Leigh, and A. Simmons, *"Differential corticospinal tract degeneration in homozygous 'D90A' SOD-1 ALS and sporadic ALS"*, Journal of Neurology Neurosurgery and Psychiatry, Vol. 82(8), p. 843-849, 2011

169. K. Caeyenberghs, **A. Leemans**, J. Coxon, M. Geurts, J. Gooijers, K. Michiels, S. Sunaert, and S.P. Swinnen, *"Bimanual coordination and corpus callosum microstructure in young adults with traumatic brain injury: A diffusion tensor imaging study"*, Journal of Neurotrauma, Vol. 28(6), p. 897-913, 2011

170. K. Caeyenberghs, **A. Leemans**, M. Geurts, T. Taymans, C. Vander Linden, B.C.M. Smits-Engelsman, S. Sunaert, and S.P. Swinnen, *"Correlations between white matter integrity and motor function in traumatic brain injury patients"*, Neurorehabilitation and Neural Repair, Vol. 25(6), p. 492-502, 2011

171. J.D. Tournier, S. Mori, and **A. Leemans**, *"Diffusion tensor imaging and beyond"*, Magnetic Resonance in Medicine, Vol. 65(6), p. 1532-1556, 2011

172. D.J. Polders, **A. Leemans**, J. Hendrikse, M.J. Donahue, J.M. Hoogduin, and P.R. Luijten, *"SNR and Uncertainty in DTI at 1.5, 3.0 and 7.0 Tesla"*, Journal of Magnetic Resonance Imaging, Vol. 33(6), p. 1456-1463, 2011

173. S.B. Vos, D.K. Jones, M.A. Viergever, and **A. Leemans**, *"Partial volume effect as a hidden covariate in DTI analyses"*, NeuroImage, Vol. 55(4), p. 1566-1576, 2011

174. S. Deprez, F. Amant, R. Yigit, K. Porke, J. Verhoeven, J. Van den Stock, A. Smeets, M.-R. Christiaens, **A. Leemans**, W. Van Hecke, J. Vandenberghe, M. Vandenbulcke, S. Sunaert,

*"Chemotherapy-induced structural changes in cerebral white matter and its correlation with impaired cognitive functioning in breast cancer patients"*, Human Brain Mapping, Vol. 32(3), p. 480-493, 2011

175. B. Jeurissen, **A. Leemans**, D.K. Jones, J.-D. Tournier, and J. Sijbers, *"Probabilistic fiber tracking using the residual bootstrap with constrained spherical deconvolution"*, Human Brain Mapping, Vol. 32(3), p. 461-479, 2011

176. W. Van Hecke, **A. Leemans**, C.A. Sage, J. Veraart, J. Sijbers, S. Sunaert, and P.M. Parizel, *"The effect of template selection on diffusion tensor voxel based analysis results"*, NeuroImage, Vol. 55(2), p. 566-573, 2011

177. J. de Bresser, M.P. Portegies, **A. Leemans**, G.J. Biessels, L.J. Kappelle, and M.A. Viergever, *"A comparison of MR based segmentation methods for measuring brain atrophy progression"*, NeuroImage, Vol. 54(2), p. 760-768, 2011

178. K. Caeyenberghs, **A. Leemans**, M. Geurts, T. Taymans, C. Vander Linden, B.C.M. Smits-Engelsman, S. Sunaert, and S.P. Swinnen, *"Brain-behavior relationships in young traumatic brain injury patients: Fractional anisotropy measures are highly correlated with dynamic visuomotor tracking performance",* Neuropsychologia, Vol. 48(5), p. 1472-1482, 2010

179. K. Caeyenberghs, **A. Leemans**, M. Geurts, T. Taymans, C. Vander Linden, B.C.M. Smits-Engelsman, S. Sunaert, and S.P. Swinnen, *"Brain-behavior relationships in young traumatic brain injury patients: DTI metrics are highly correlated with postural control"*, Human Brain Mapping, Vol. 31(7), p. 992-1002, 2010

180. W. Van Hecke, G. Nagels, **A. Leemans**, J. Sijbers, and P.M. Parizel, *"Correlation of cognitive dysfunction and diffusion tensor MRI measures in patients with mild and moderate multiple sclerosis"*, Journal of Magnetic Resonance Imaging, Vol. 31(6), p. 1492-1498, 2010

181. J.S. Verhoeven, C.A. Sage, **A. Leemans**, W. Van Hecke, D. Callaert, R. Peeters, P. De Cock, L. Lagae, and S. Sunaert, *"Construction of a stereotaxic DTI atlas with full diffusion tensor information for studying white matter maturation from childhood to adolescence using tractography-based segmentations"*, Human Brain Mapping, Vol. 31(3), p. 470-486, 2010

182. J.-L. Hsu, W. Van Hecke, C.-H. Bai, C.-H. Lee, Y.-F. Tsai, H.-C, Chiu, F.-S. Jaw, C.-Y. Hsu, J.-G. Leu, W.-H. Chen, and **A. Leemans**, *"Microstructural white matter changes in normal aging: A diffusion tensor imaging study with higher-order polynomial regression models"*, NeuroImage, Vol. 49(1), p. 32-43, 2010

183. W. Van Hecke, **A. Leemans**, S. De Backer, B. Jeurissen, P.M. Parizel, and J. Sijbers, *"Comparing isotropic and anisotropic smoothing for voxel based DTI analyses: a simulation study"*, Human Brain Mapping, Vol. 31(1), p. 98-114, 2010

184. G. De Groof, M. Verhoye, C. Poirier, **A. Leemans**, M. Eens, V.M. Darras, and A. Van der Linden, *"Structural changes between seasons in the songbird auditory forebrain"*, Journal of Neuroscience, Vol. 29(43), p. 13557-13565, 2009

185. W. Van Hecke, G. Nagels, G. Emonds, **A. Leemans**, J. Sijbers, J. Van Goethem, and P.M. Parizel, *"A diffusion tensor imaging group study of the spinal cord in multiple sclerosis patients with and without T(2) spinal cord lesions"*, Journal of Magnetic Resonance Imaging, vol. 30(1), p. 25-34, 2009

186. N. Van Camp, I. Blockx, M. Verhoye, C. Casteels, F. Coun, **A. Leemans**, J. Sijbers, V. Baekelandt, K. Van Laere, and A. Van der Linden, *"Diffusion tensor imaging in a rat model of Parkinson's disease after lesioning of the nigrostriatal tract"*, NMR in Biomedicine, Vol. 22(7), p. 697-706, 2009

187. C.A. Sage, W. Van Hecke, R. Peeters, J. Sijbers, W. Robberecht, P.M. Parizel, G. Marchal, **A. Leemans**, and S. Sunaert, *"Quantitative diffusion tensor imaging in amyotrophic lateral sclerosis: revisited"*, Human Brain Mapping, Vol. 30(11), p. 3657-3675, 2009

188. W. Van Hecke, J. Sijbers, S. De Backer, D. Poot, P.M. Parizel, and **A. Leemans**, *"On the construction of a ground truth framework for evaluating voxel-based diffusion tensor MRI analysis methods"*, NeuroImage, Vol. 46(3), p. 692-707, 2009

189. **A. Leemans** and D.K. Jones, *"The B-matrix must be rotated when correcting for subject motion in DTI data"*, Magnetic Resonance in Medicine, Vol. 62(1), p. 1336-1349, 2009

190. W. Van Hecke, J. Sijbers, E. D'Agostino, F. Maes, S. De Backer, E. Vandervliet, P.M. Parizel, **A. Leemans**, *"On the construction of an inter-subject diffusion tensor magnetic resonance atlas of the healthy human brain"*, NeuroImage, Vol. 43(1), p. 69-80, 2008

191. C. Lebel, L. Walker, **A. Leemans**, L. Phillips, and C. Beaulieu, *"Microstructural Maturation of the Human Brain from Childhood to Adulthood"*, NeuroImage, Vol. 40(3), p. 1044-1055, 2008

192. W. Van Hecke, **A. Leemans**, J. Sijbers, E. Vandervliet, J. Van Goethem, and P.M. Parizel, *"A tracking-based diffusion tensor imaging segmentation method for the detection of diffusion-related changes of the cervical spinal cord with aging"*, Journal of Magnetic Resonance Imaging, Vol. 27(5), p. 978-991, 2008

193. J.-L. Hsu, **A. Leemans**, C.-H. Bai, C.-H. Lee, Y.-F. Tsai, H.-C. Chiu, W.-H. Chen, *"Gender differences and age-related white matter changes of the human brain: a diffusion tensor imaging study"*, NeuroImage, Vol. 39(2), p. 566-577, 2008

194. W. Van Hecke, **A. Leemans**, E. D'Agostino, S. De Backer, E. Vandervliet, P.M. Parizel, and J. Sijbers, *"Nonrigid coregistration of diffusion tensor images using a viscous fluid model and mutual information"*, IEEE Transactions in Medical Imaging, Vol. 26(11), p. 1598-1612, 2007

195. P.M. Parizel, V. Van Rompaey, R. Van Loock, W. Van Hecke, J.W. Van Goethem, **A. Leemans**, and J. Sijbers. *"Influence of user-defined parameters on diffusion tensor tractography of the corticospinal tract"*, Neuroradiology Journal, Vol. 20, p. 139-147, 2007

196. **A. Leemans**, J. Sijbers, S. De Backer, E. Vandervliet, and P.M. Parizel, *"Multiscale white matter fiber tract coregistration: a new feature-based approach to align diffusion tensor data"*, Magnetic Resonance in Medicine, Vol. 55(6), p. 1414-1423, 2006

197. G. De Groof, M. Verhoye, V. Van Meir, I. Tindemans, **A. Leemans**, and A. Van der Linden, *"In vivo diffusion tensor imaging (DTI) of brain subdivisions and vocal pathways in songbirds"*, NeuroImage, Vol. 29(3), p. 754-763, 2006

198. **A. Leemans**, J. Sijbers, M. Verhoye, A. Van der Linden, and D. Van Dyck, *"Mathematical framework for simulating diffusion tensor MR neural fiber bundles"*, Magnetic Resonance in Medicine, Vol. 53(4), p. 944-953, 2005

- **National Journal Articles (in Dutch)**

199. C.M.W. Tax and **A. Leemans**, "Hoe magnetisme en diffusie kunnen bijdragen aan hersenonderzoek: Toepassingen van diffusie MRI tractografie", NeuroPraxis, Vol. 18(3), p. 92-105, 2014

200. S.M. Koudijs, J. van Campen, O. Braams, **A. Leemans**, O. van Nieuwenhuizen, F. Jansen, and K. Braun, *"Witte stofafwijkingen en intelligentie bij kinderen met tubereuze sclerose"*, Epilepsie, Vol. 8, Nr. 3, p. 19-21, 2010

201. **A. Leemans** and J. Sijbers, *"Nieuwe scantechniek kijkt virtueel in het brein: hersenen anders bekeken"*, EOS magazine (Scientific American - Dutch language edition), Vol. 7-8 (July-August) p. 102-105, 2006

- **Peer-reviewed International Conference Proceedings (full paper)**

202. S. St-Jean, A. De Luca, M.A. Viergever, **A. Leemans**, *"Automatic, fast & robust characterization of noise distributions for diffusion MRI"*, International Conference on Medical Image Computing and Computer-Assisted Intervention, LNCS 11070, p. 304-312, 2018

203. H.J. Kuijf, C.M.W. Tax, K. Zaanen, W.H. Bouvy, J. de Bresser, **A. Leemans**, M.A. Viergever, G.J. Biessels, K.L. Vincken, *"The added value of diffusion tensor imaging for automated white matter hyperintensity segmentation"*, Computational Diffusion MRI, MICCAI Workshop, p. 45-53, Boston, USA, 2014

204. W. Huizinga, D.H.J. Poot, J.-M. Guyader, H. Smit, M. van Kranenburg, R.J.M. van Geuns, A. Uitterdijk, H.M.M. van Beusekom, B.F. Coolen, **A. Leemans**, W.J. Niessen, S. Klein, *"Non-rigid groupwise image registration for motion compensation in quantitative MRI"*, International Workshop on Biomedical Image Registration, LNCS 8545, p. 184-193, London, UK, 2014

205. W. Huizinga, C.T. Metz, D.H.J. Poot, M. de Groot, W.J. Niessen, **A. Leemans**, and S. Klein, *"Groupwise registration for correcting subject motion and eddy current distortions in diffusion MRI using a PCA based dissimilarity metric"*, p. 163-174, Computational Diffusion MRI, MICCAI workshop, Nagoya, Japan, 2013

206. H.J. Kuijf, **A. Leemans**, M.A. Viergever, and K.L. Vincken, *"Assessment of methods to extract the mid-sagittal plane from brain MR images"*, Proceedings of SPIE - The International Society for Optical Engineering, Vol. 8673, p. 86731K, San Diego, California, USA, 2013

207. P. Moeskops, M.J.N.L. Benders, P.C. Pearlman, K.J. Kersbergen, **A. Leemans**, M.A. Viergever, and I. Isgum, *"Assessment of quantitative cortical biomarkers in the developing brain of preterm infants"*, Proceedings of SPIE - The International Society for Optical Engineering, Vol. 8670, p. 867011, 2013

208. **A. Leemans**, *"Theory and applications of diffusion MRI"*, 7th IEEE International Symposium on Biomedical Imaging, Rotterdam, the Netherlands, p. 628-631, 2010

209. M. de Groot, M.W. Vernooij, S. Klein, **A. Leemans**, R. de Boer, A. van der Lugt, M.M.B. Breteler, and W.J. Niessen, *"Iterative Co-Linearity Filtering and Parameterization of Fiber Tracts in the Entire Cingulum"*, Medical Image Computing and Computer Assisted Intervention, LNCS 5761, p. 853-860, London, UK, 2009

210. B. Jeurissen, **A. Leemans**, J.-D. Tournier, and J. Sijbers, *"Fiber Tracking on the 'Fiber Cup Phantom' using Constrained Spherical Deconvolution"*, Diffusion Modeling and Fiber Cup workshop at the Medical Image Computing and Computer Assisted Intervention, London, UK, 2009

211. B. Jeurissen, **A. Leemans**, J.-D. Tournier, and J. Sijbers, *"Estimation of uncertainty in constrained spherical deconvolution fiber orientations",* 5th IEEE International Symposium on Biomedical Imaging, Paris, France, p. 907-910, 2008

212. W. Van Hecke, **A. Leemans**, E. D'Agostino, S. De Backer, E. Vandervliet, P.M. Parizel, and J. Sijbers, *"The evaluation of a population based diffusion tensor image atlas using a ground truth method"*, SPIE Medical Imaging, San Diego, USA, Vol. 6914, p. 9140-49, 2008

213. **A. Leemans**, J. Sijbers, S. De Backer, E. Vandervliet, and P.M. Parizel, *"Affine coregistration of diffusion tensor magnetic resonance images using mutual information"*, IEEE Advanced Concepts for Intelligent Vision Systems (ACIVS) – Lecture Notes in Computer Science, Antwerp, Belgium, Vol. 3708, p. 523-530, 2005

214. P. M. Parizel, J. Van Goethem, L. van den Hauwe, R. Salgado, E. Vandervliet, and **A. Leemans**, *"Characterization of brain tumors"*, European Society of NeuroRadialogy – XXX Congress & 14th Advanced Course, Barcelona, Spain, Vol. 47, p. S80-S83, 2005

215. **A. Leemans** and J. Sijbers, "*Multiresolutional rigid-body registration for space curves*", IEEE Advanced Concepts for Intelligent Vision Systems (ACIVS), p. 215-221, Brussels, Belgium, 2004

216. **A. Leemans**, J. Sijbers, M. Verhoye, A. Van der Linden, and D. Van Dyck, *"A Simulated Phantom for Diffusion Tensor Fiber Tracking"*, IEEE Advanced Concepts for Intelligent Vision Systems (ACIVS), p. 281-285, Ghent, Belgium, 2003

- **Peer-reviewed International Conference Proceedings (abstracts)**

217. D. Klooster, I. Vos, K. Caeyenberghs, **A. Leemans**, S. David, R. Besseling, B. Aldenkamp, C. Baeken, *"Structural connectivity between dorsolateral prefrontal cortex and cingulate cortex predicts clinical response to accelerated iTBS in major depression"*, Brain Stimulation: Basic, Translational, and Clinical Research in Neuromodulation, Vol. 12(2), p. 449-450, 2019

218. A. De Luca, F. Guo, **A. Leemans**, *"Estimation of multiple fiber orientation distributions (mFODs) from diffusion MRI data using spherical deconvolution"*, International Society Magnetic Resonance in Medicine, Montreal, Canada, 2019

219. A. De Luca, S. Franklin, C. Lucci, J. Hendrikse, M. Froeling, **A. Leemans**, *"Investigation of the dependence of free water and pseudo-diffusion MRI estimates on the cardiac cycle"*, International Society Magnetic Resonance in Medicine, Montreal, Canada, 2019

220. C.M. Tax, F. Grussu, E. Kaden, L. Ning, U. Rudrapatna, J. Evans, S. St-Jean, **A. Leemans**, S. Puch, M. Rowe, P. Rodrigues, V. Prčkovska, S. Koppers, D. Merhof, A. Ghosh, R. Tanno, D.C. Alexander, C. Charron, S. Kusmia, D.E.J. Linden, D.K. Jones, J. Veraart, *"Cross-vendor and Cross-protocol harmonisation of diffusion MRI data: A comparative study"*, International Society Magnetic Resonance in Medicine, p. 471, Paris, France, 2018

221. V. Sairanen, **A. Leemans**, C.M.W. Tax, *"Robust estimation of diffusion MRI metrics based on slicewise outlier detection (SOLID)"*, International Society Magnetic Resonance in Medicine, p. 467, Paris, France, 2018

222. V. Sairanen, D.K. Jones, **A. Leemans**, C.M.W. Tax, *"Rebooting diffusion MRI uncertainty distributions in the presence of outliers with ROBOOT"*, International Society Magnetic Resonance in Medicine, p. 5346, Paris, France, 2018

223. V Golkov, P Swazinna, M Schmitt, QA Khan, CMW Tax, M Serahlazau, F. Pasa, F. Pfeiffer, G.J. Biessels, **A. Leemans**, D. Cremers, *"q-Space Deep Learning for Alzheimer's Disease Diagnosis: Global Prediction and Weakly-Supervised Localization"*, International Society Magnetic Resonance in Medicine, p. 1580, Paris, France, 2018

224. A. De Luca, L. Schlaffke, J. Siero, M. Froeling, **A. Leemans**, *"Brain activations during a motor cortex paradigm: a diffusion MRI signal perspective"*, International Society Magnetic Resonance in Medicine, p. 5384, Paris, France, 2018

225. A. De Luca, **A. Leemans**, M. Froeling, *"A comparison of multi-ADC and DTI fit metrics of diffusion MRI data acquired with Stejskal-Tanner and asymmetric bipolar gradients at identical echo time"*, International Society Magnetic Resonance in Medicine, p. 1613, Paris, France, 2018

226. F. Guo, **A. Leemans**, M.A. Viergever, F. Dell'Acqua, A. De Luca, *"Damped Richardson-Lucy deconvolution for multi-shell diffusion MRI"*, International Society Magnetic Resonance in Medicine, p. 1554, Paris, France, 2018

227. F. Guo, G. Parker, A. De Luca, D.K. Jones, M.A. Viergever, **A. Leemans**, C.M.W. Tax, *"The influence of gradient nonlinearity on spherical deconvolution approaches: to correct or not to correct?"*, International Society Magnetic Resonance in Medicine, p. 1591, Paris, France, 2018

228. S. St-Jean, A. De Luca, M.A. Viergever, **A. Leemans**, *"Investigating noise distribution changes after motion correction and its effects on subsequent diffusion MRI processing"*, International Society Magnetic Resonance in Medicine, p. 1574, Paris, France, 2018

229. H.Y. Mesri, S. David, M.A. Viergever, **A. Leemans**, *"Investigating the effect of gradient nonlinearities on Diffusional Kurtosis Imaging parameters: Results from the Human Connectome Project"*, International Society Magnetic Resonance in Medicine, p. 1647, Paris, France, 2018

230. H.Y. Mesri, S. David, M.A. Viergever, **A. Leemans**, *"Investigating the performance of Diffusional Kurtosis Imaging for group-wise analyses: A study from the Human Connectome Project"*, International Society Magnetic Resonance in Medicine, p. 3097, Paris, France, 2018

231. A. De Luca, M. Froeling, **A. Leemans**, *"A multi-shell self-calibrating Richardson-Lucy deconvolution approach for the simultaneous quantification of ODF and tissue properties of*

*different diffusion domains in the kidneys"*, International Society Magnetic Resonance in Medicine, p. 1564, Paris, France, 2018

232. B. van den Munckhof, A.F. Zwart, L.C. Weeke, **A. Leemans**, M.J.N.L. Benders, K.P.J. Braun, L.S. de Vries, F.E. Jansen, *"Electrical status epilepticus in sleep after thalamic injury: Clinical and neuroimaging predictors in 26 children"*, Epilepsia, Vol. 58, p. S13, 2017

233. J.K. Gool, R. Fronczek, **A. Leemans**, D.A. Kies, G.J. Lammers, Y.D. Van der Werf, *"idespread white matter connectivity abnormalities in narcolepsy type 1 patients: a diffusion tensor imaging study"*, Sleep Medicine, p. e115, 2017

234. F. Guo, A. De Luca, C. Tax, M. Viergever, **A. Leemans**, *"Characterization of CSD fit with different response functions: insights of a residuals-based analysis"*, 34th Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 457, Barcelona, Spain, 2017

235. H. Mesri, M.C. Konijn, M. Viergever, **A. Leemans**, *"Baseline measures for diffusional kurtosis imaging in the human brain: Results from the Human Connectome Project"*, 34th Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 371, Barcelona, Spain, 2017

236. S. David, A. Heemskerk, M. Viergever, **A. Leemans**, *"Closing the Venetian blinds: A processing strategy for correcting stripe artifacts in diffusion MRI data"*, 34th Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 571, Barcelona, Spain, 2017

237. F. Movahedian Attar, S.A. Hossein Batouli, M. Froeling, S.B. Vos, **A. Leemans**, M. A. Oghabian, *"Along-track White Matter Fiber Bundle Template of 100 Normal Adults"*, Annual Meeting of Organization for Human Brain Mapping, p. 1602, Vancouver, Canada, 2017

238. F. Movahedian Attar, E. Kirilina, Y. Lee, B. Wilm, **A. Leemans**, K.P. Pruessmann, N. Weiskopf, Z. Nagy, ***"****Utility of Concurrent Magnetic Field Monitoring in Tracking Short Cortico-Cortical Fibers"*, Annual Meeting of Organization for Human Brain Mapping, p. 1604, Vancouver, Canada, 2017

239. L. Matthews, P. Anderson, **A. Leemans**, C. Adamson, R. Beare, J. Chen, C. Kelly, W. Yen Loh, L. Doyle, A. Spittle, J. Cheong, M. Seal, D. Thompson, ***"****Neonatal MRI of the Preterm Cerebellum: Early Vulnerability Relates to 2-Year Functional Impairment"*, Annual Meeting of Organization for Human Brain Mapping, p. 3829, Vancouver, Canada, 2017

240. J. Gooijers, **A. Leemans**, S. Swinnen, ***"****Bimanual deficits in TBI in relation to transcallosal connectivity within the motor network"*, Annual Meeting of Organization for Human Brain Mapping, p. 1566, Vancouver, Canada, 2017

241. H. Mesri, M. Froeling, M.A. Viergever, A. Heemskerk, **A. Leemans**, *"Investigating the Adverse Effect of Gradient Nonuniformities on Diffusion MRI Measures: Do We Need to Worry?"*, International Society Magnetic Resonance in Medicine, p. 3534, Honolulu, USA, 2017

242. Y. Lee, B. Wilm, T. Ganepola, **A. Leemans**, M. Sereno, D. Alexander, K. Pruessmann, Z. Nagy, *"Investigating the Effects of Concurrent Magnetic Field Monitoring on High Angular Resolution Diffusion Imaging: Application to Cortical Parcellation"*, International Society Magnetic Resonance in Medicine, p. 1784, Honolulu, USA, 2017

243. **A. leemans**, *"Measuring Connectivity with Diffusion MRI"*, International Society Magnetic Resonance in Medicine, Honolulu, USA, 2017

244. W. Haakma, M. Stam, M. Froeling, M. Philippens, C. Bos, **A. Leemans**, L. Van der Pol, J. Hendrikse, *"MR Imaging of the Cervical Spinal Cord in Patients with Spinal Muscular Atrophy and Healthy Controls"*, International Society Magnetic Resonance in Medicine, p. 1756, Honolulu, USA, 2017

245. S. St-Jean, M.A. Viergever, **A. Leemans**, *"A Unified Framework for Upsampling and Denoising of Diffusion MRI Data"*, International Society Magnetic Resonance in Medicine, p. 3533, Honolulu, USA, 2017

246. T. Billiet, L. Emsell, M. Vandenbulcke, R. Peeters, D. Christiaens, **A. Leemans**, W. Van Hecke, A. Smeets, F. Amant, S. Sunaert, S. Deprez, *"Investigating possible recovery of chemotherapy-induced white matter changes in breast cancer"*, 5th Edition of the ICCTF congress, Amsterdam, the Netherlands, p. 62, 2016

247. J. Kenney, S. McInerney, G. McPhilemy, P. Najt, C. Scanlon, S. Arndt, E. Scherz, F. Byrne, **A. Leemans**, B. Jeurissen, G. Donohoe, B. Hallahan, C. McDonald, D. Cannon, "Lateralisation of the arcuate fasciculus in psychosis and the role in verbal learning and auditory verbal hallucinations", ECNP Workshop for Junior Scientists in Europe, Nice, France, p. 76-77, 2016

248. S. St-Jean, M.A. Viergever, G.J. Biessels, **A. Leemans**, *"Correcting spatial misalignment between fiber bundles segments for along-tract group analysis"*, International Society Magnetic Resonance in Medicine, p. 2048, Singapore, 2016

249. W. Haakma, J. Hendrikse, A.M. Heemskerk, P.R. Luijten, M. Pedersen, **A. Leemans**, M. Froeling, *"7T diffusion MRI of the forearm nerves"*, International Society Magnetic Resonance in Medicine, p. 3473, Singapore, 2016

250. H.Y. Mesri, A.M. Heemskerk, M.A. Viergever, **A. Leemans**, *"Caveats of Probabilistic Tractography for Assessing Fiber Connectivity Strength"*, International Society Magnetic Resonance in Medicine, p. 3033, Singapore, 2016

251. A. Leemans, *"Diffusion Imaging: From the Oops to the Aha"*, International Society Magnetic Resonance in Medicine, Singapore, 2016

252. Sz. Dávid, A.M. Heemskerk, M.A. Viergever, **A. Leemans**, *"The Effect of Subject Motion on Fractional Anisotropy Estimates: A Simulation Study of Angular Bias"*, International Society Magnetic Resonance in Medicine, p. 3051, 2016

253. C.M.W. Tax, T. Dela Haije, A. Fuster, C.-F. Westin, M.A. Viergever, L. Florac, **A. Leemans**, *"Mapping the Brain's Sheet Probability Index (SPI) with Diffusion MRI: Sheet Happens?!"*, International Society Magnetic Resonance in Medicine, p. 791, 2016

254. T. Roine, B. Jeurissen, D. Perrone, J. Aelterman, W. Philips, J. Sijbers, **A. Leemans**, *"Methodological Considerations on Graph Theoretical Analysis of Structural Brain Networks"*, International Society Magnetic Resonance in Medicine, p. 3437, 2016

255. W. Haakma, L. Kuster, M. Froeling, L. Uhrenholt, M. Pedersen, J. Hendrikse, **A. Leemans**, L. Warner Thorup Boel, *"Post-Mortem Diffusion MRI of Cervical Spine and Nerves Roots"*, International Society Magnetic Resonance in Medicine, p. 926, 2016

256. C.M.W. Tax, C.-F. Westin, T. Dela Haije, A. Fuster, M.A. Viergever, L. Florac, **A. Leemans**, *"Robust Assessment of the Brain's Sheet Structure Using Normalized Convolution"*, International Society Magnetic Resonance in Medicine, p. 2073, 2016

257. H.Y. Mesri, D. Novikov, M.A. Viergever, **A. Leemans**, *"Simulating Axon Packing for Investigating White Matter Tissue Characteristics with Diffusion MRI"*, International Society Magnetic Resonance in Medicine, p. 3084, 2016

258. N.H.P. Claessens, K.J. Kersbergen, F. Leroy, P. Moeskops, I. Isgum, M.A. Viergever, **A. Leemans**, F. Groenendaal, L.S. de Vries, J. Dubois, M.J.N.L. Benders, *"Related Changes in Microstructure and Cortical Folding in Preterm Infants"*, Pediatric Academic Societies Annual Meeting, San Diego, USA, 2015

259. S. Deprez, T. Billiet, F. Amant, R. Peeters, A. Smeets, **A. Leemans**, L.Emsell, M.-R. Christiaens, M. Vandenbulcke, S. Sunaert, *"Investigating possible recovery of chemotherapy-induced structural changes in cerebral white matter and its relation with cognitive functioning in breast cancer patients"*, 32nd Annual Scientific Meeting of the European Society Magnetic Resonance in Medicine and Biology, p. 22, Edinburgh, United Kingdom, 2015

260. **A. Leemans**, *"Structural brain connectivity"*, 32nd Annual Scientific Meeting of the European Society Magnetic Resonance in Medicine and Biology, p. 184, Edinburgh, United Kingdom, 2015

261. C.M.W. Tax, D.S. Novikov, E. Garyfallidis, M.A. Viergever, M. Descoteaux, **A. Leemans**, *"Localizing and characterizing single fiber populations throughout the brain"*, International Society Magnetic Resonance in Medicine, p. 473, Toronto, Canada, 2015

262. C.E. Kelly, D.K. Thompson, J. Chen, **A. Leemans**, C.L. Adamson, T.E. Inder, J.L.Y. Cheong, L.W. Doyle, P.J. Anderson, *"Differing Contributions of Whole Brain Fractional Anisotropy, Axon Density and Axon Dispersion to Neurodevelopmental Outcomes of Children Born Very Preterm"*, International Society Magnetic Resonance in Medicine, p. 836, Toronto, Canada, 2015

263. L. Gabra Fam, J.L.Y. Cheong, **A. Leemans**, C.L. Adamson, R. Beare, M.L. Seal, P.J. Anderson, L.W. Doyle, A.J. Spittle, D.K. Thompson, *"Mapping the preterm newborn brain: A diffusion tensor study of the cerebellum's early neural connections"*, International Society Magnetic Resonance in Medicine, p. 1265, Toronto, Canada, 2015

264. S.B. Vos, W. Haakma, H. Versnel, M. Froeling, L. Speleman, P. Dik, M.A. Viergever, **A. Leemans**, W. Grolman, *"Diffusion tensor imaging of the auditory nerve in patients with long-term single-sided deafness"*, International Society Magnetic Resonance in Medicine, p. 2291, Toronto, Canada, 2015

265. A.M. Heemskerk, M. Thiebaut de Schotten, M. Catani, S. Sarubbo, L. Petit, M.A. Viergever, D.K. Jones, J. Evans, T. Paus, **A. Leemans**, *"A new fiber bundle pathway identified with diffusion MRI fiber tractography: Fact or fantasy?"*, International Society Magnetic Resonance in Medicine, p. 2855, Toronto, Canada, 2015

266. Sz. Dávid, C.M.W. Tax, M.A. Viergever, A.M. Heemskerk, **A. Leemans**, *"Choices in processing steps for diffusion MRI analyses: Does it really matter?"*, International Society Magnetic Resonance in Medicine, p. 2981, Toronto, Canada, 2015

267. M. Froeling, P.R. Luijten, **A. Leemans**, *"Correcting for perfusion and isotropic free diffusion in diffusion weighted imaging and DTI and CSD analysis"*, International Society Magnetic Resonance in Medicine, p. 2988, Toronto, Canada, 2015

268. W. Haakma, B. Jongbloed, M. Froeling, C. Bos, S.H. Goedee, M. Pedersen, L. van der Pol, **A. Leemans**, J. Hendrikse, *"Diffusion tensor imaging of forearm nerves for early diagnosis of multifocal motor neuropathy"*, International Society Magnetic Resonance in Medicine, p. 3004, Toronto, Canada, 2015

269. W. Haakma, M. Pedersen, M. Froeling, L. Uhrenholt, J. Hendrikse, **A. Leemans**, L. Warner Thorup Boel, *"Diffusion tensor imaging of the lumbar and sacral plexus in post mortem subjects"*, International Society Magnetic Resonance in Medicine, p. 3015, Toronto, Canada, 2015

270. M. Paquette, C.M.W. Tax, **A. Leemans**, M. Descoteaux, *"Moving away from single-shell?: A study on angular accuracy of constrained spherical deconvolution"*, International Society Magnetic Resonance in Medicine, p. 3037, Toronto, Canada, 2015

271. N. Sauwen, D. Sima, S. Van Cauter, J. Veraart, **A. Leemans**, F. Maes, U. Himmelreich, S. Van Huffel, *"Hierarchical non-negative matrix factorization using multi-parametric MRI to assess tumor heterogeneity within gliomas"*, International Society Magnetic Resonance in Medicine, p. 4387, Toronto, Canada, 2015

272. C.M.W. Tax, T.C.J. Dela Haije, A. Fuster, R. Duits, M.A. Viergever, E. Calabrese, G.A. Johnson, L.M.J. Florack, and **A. Leemans**, *"Towards Quantification of the Brain's Sheet Structure in Diffusion MRI Data"*, International BASP Frontiers Workshop, p. 74, 2015

273. C.E. Kelly, D.K. Thompson, J. Chen, **A. Leemans**, C.L. Adamson, T.E. Inder, J.L.Y. Cheong, L.W. Doyle, P.J. Anderson, *"Differing Contributions of Whole Brain Fractional Anisotropy, Axon Density and Axon Dispersion to Neurodevelopmental Outcomes of Children Born Very Preterm"*, 19th Annual Conference of Perinatal Society of Australia and New Zealand (PSANZ), 2015

274. K. Keunen, M.J. Benders, **A. Leemans**, L.H. Scholtens, M.M. Uniken-Venema, K.J. Kersbergen, M.A. Viergever, R.S. Kahn, F. Groenendaal, L.S. de Vries, M.P. van den Heuvel, *"The Neonatal Connectome in Relation to Long-term Cognitive Outcome Following Preterm Birth"*, 2015 Pediatric Academic Societies Annual Meeting, San Diego, USA, 2015

275. K. Keunen, F. Groenendaal, **A. Leemans**, N. van der Aa, N. Wagenaar, K.J. Kersbergen, M.M. Uniken-Venema, M.A. Viergever, M.P. van den Heuvel, L.S. de Vries, M.J. Benders, *"White Matter Microstructure at Term is Strongly Associated with Cognition at Age 5.5"*, 2015 Pediatric Academic Societies Annual Meeting, San Diego, USA, 2015

276. C.E. Kelly, D.K. Thompson, J. Chen, **A. Leemans**, C.L. Adamson, T.E. Inder, J.L.Y. Cheong, L.W. Doyle, P.J. Anderson, *"Contributions of Whole Brain Fractional Anisotropy, Axon Density and Axon Dispersion To Neurodevelopmental Outcomes of Children Born Very Preterm"*, 2015 Pediatric Academic Societies Annual Meeting, San Diego, USA, 2015

277. A. Versace, H. Acuff, M.A. Bertocci, G. Bebko, J.R.C. Almeida, S.B. Perlman, **A. Leemans**, C. Schirda, H. Aslam, A. Dwojak, L. Bonar, M. Travis, and M.L. Phillips, *"Emotion Regulation Circuitry in Youth with Behavioral and Emotional Dysregulation Disorders: A Global Probabilistic Tractographic Study"*, 69th Annual Scientific Convention and Meeting of the Society-of-Biological-Psychiatry, New York, USA, Vol. 75(9), p. 150-151, 2014

278. E. O'Hanlon, **A. Leemans**, M.C. Clarke, I. Kelleher, F. Amico, T. Frodl, M. Cannon, *"The 'fibre' path to psychosis? Can advanced diffusion imaging capture white matter brain anomalies in adolescents experiencing psychotic symptoms?"*, 4th Biennial Schizophrenia International Research Conference, p. 210, 2014

279. W. Haakma, P. Dik, B. ten Haken, M. Froeling, R.J. Nievelstein, J. Hendrikse, I. Cuppen, T. de Jong, and **A. Leemans**, *"Diffusion tensor MRI and tractography of the sacral plexus in children with spina bifida"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 60, 2014

280. C.E. Kelly, D.K. Thompson, **A. Leemans**, C. Adamson, J. Chen, T.E. Inder, J.L.Y. Cheong, L.W. Doyle, and P.J. Anderson, *"Tract-Based Spatial Statistics Analysis of Diffusion Tensor Data in Very Preterm 7 year-olds"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 136, 2014

281. K. Pieterman, A. Plaisier, P. Govaert, **A. Leemans**, M.H. Lequin, and J. Dudink, *"Data quality in diffusion tensor imaging studies of the preterm brain"*, The 5th Congress of the European Academy of Paediatric Societies – EAPS, Barcelona, Spain, p. 976, 2014

282. C.M.W. Tax, T.C.J. Dela Haije, A. Fuster, R. Duits, M.A. Viergever, L.M.J. Florack, and **A. Leemans**, *"Towards Quantification of the Brain's Sheet Structure: Evaluation of the Discrete Lie Bracket"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 975, 2014

283. S.B. Vos, C.M.W. Tax, M. Froeling, and **A. Leemans**, *"In vivo investigations of accuracy and precision of fiber orientations in crossing fibers in spherical deconvolution-based HARDI methods"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 976, 2014

284. D.K. Thompson, C.E. Kelly, **A. Leemans**, L. Gabra Fam, M.L. Seal, L.W. Doyle, P.J. Anderson, A.J. Spittle, and J.L.Y. Cheong, *"White Matter Microstructure in Moderate and Late Preterm Infants assessed using Tract-Based Spatial Statistics"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 1753, 2014

285. D.K. Thompson, L. Van Bijnen, K.J. Lee, **A. Leemans**, L. Pascoe, S.E. Scratch, C. Adamson, G.F. Egan, L.W. Doyle, T.E. Inder, and P.J. Anderson, *"Microstructural development of the corpus callosum 'catches up' between term and 7 years in children born <30 weeks' gestation or <1250 g"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 1754, 2014

286. T. Billiet, S. Deprez, B. Maedler, R. Peeters, H. Zhang, **A. Leemans**, T. Dhollander, D. Christiaens, F. Amant, A. Smeets, B. Van den Bergh, M. Vandenbulcke, E. Legius, S. Sunaert, and L. Emsell, *"Investigating the long-term effects of systemic chemotherapy on brain white matter using multi-shell diffusion MRI and myelin water imaging"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 1915, 2014

287. T. Billiet, S. Deprez, B. Maedler, F. D'Arco, E. Plasschaert, R. Peeters, H. Zhang, **A. Leemans**, B. Van den Bergh, M. Vandenbulcke, E. Legius, S. Sunaert, and L. Emsell, *"Improved Microstructural Characterisation of T2-Hyperintense Lesions by Combining Multi-Shell Diffusion Mri and Myelin Water Imaging"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 1919, 2014

288. O. Odish, **A. Leemans**, R. Reijntjes, S. van den Bogaard, E. Dumas, R. Wolterbeek, C.M.W. Tax, H.J. Kuijf, K.L. Vincken, J. van der Grond and, *"Diffusion Tensor Imaging In Hd: A Two Year Follow-up – Results From The Track-hd Study"*, 8th European Huntington's Disease Network Plenary Meeting, Barcelona, Spain, 2014.

289. S. van Baalen, **A. Leemans**, P. Dik, B. ten Haken, and M. Froeling, *"Characterizing the microstructural and architectural organization of healthy kidney tissue using diffusion tensor imaging, fiber tractography and intra-voxel incoherent motion"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 2193, 2014

290. M. Froeling, C.M.W. Tax, S.B. Vos, P.R. Luijten, and **A. Leemans**, *"MASSIVE: Multiple Acquisitions for Standardization of Structural Imaging Validation and Evaluation"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 2582, 2014

291. S.B. Vos, C.M.W. Tax, F. Visser, P.R. Luijten, **A. Leemans**, and M. Froeling, *"The importance of correcting for B0-drift-induced global signal decrease in diffusion MRI"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 4460, 2014

292. C.M.W. Tax, S.B. Vos, M.A. Viergever, M. Froeling, and **A. Leemans**, *"Transforming Grids to Shells and Vice Versa: An Evaluation of Interpolation Methods in Diffusion MRI q- and b-Space"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 4485, 2014

293. T. Roine, B. Jeurissen, W. Philips, **A. Leemans**, and J. Sijbers, *"Improving fiber orientation estimation in constrained spherical deconvolution under non-white matter partial volume effects"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 4492, 2014

294. C.M.W. Tax, M. van Stralen, M.A. Viergever, N. Ramsey, and **A. Leemans**, *"Orientation-Dependent Rendering of Diffusion Fiber Tractography Streamlines for Improved Visualization of Complex Tissue Organization"*, Joint ISMRM-ESMRMB Annual Meeting in Milan, Italy, p. 4529, 2014

295. N.J. Forde, C. Scanlon, L. Emsell, S. O'Donoghue, C. Chaddock, **A. Leemans**, B. Jeurissen, D.M. Cannon, R. Murray, C. McDonald, *"Structural brain network analysis in families multiply affected with bipolar 1 disorder"*, Annual Meeting of the International Forum of Psychosis and Bipolarity (IRPB), Athens, Greece, 2014

296. T. Billiet, S. Deprez, B. Maedler, R. Peeters, H. Zhang, **A. Leemans**, T. Dhollander, D. Christiaens, F. Amant, A. Smeets, B. Van den Bergh, M. Vandenbulcke, E. Legius, S. Sunaert, and, L. Emsell, *"Investigating the long-term effects of systemic chemotherapy on brain white matter using multi-shell diffusion MRI and myelin water imaging"* ICCTF Conference, Seattle, USA, 2014

297. S.B. Vos, C.M.W. Tax, and **A. Leemans**, *"Importance of tractography seeding resolution for super-resolution in tract density imaging"*, ISMRM Workshop on Diffusion as a Probe of Neural Tissue Microstructure, 2013

298. C.M.W. Tax, T.C.J. Dela Haije, A. Fuster, M.A. Viergever, L.M.J. Florack, and **A. Leemans**, *"Considerations on the theory of sheet structure of cerebral pathways"*, ISMRM Workshop on Diffusion as a Probe of Neural Tissue Microstructure, 2013

299. C.M.W. Tax, B. Jeurissen, S.B. Vos, M.A. Viergever, and **A. Leemans**, *"Recursive calibration of the fiber response function for spherical deconvolution diffusion ODF sharpening"*, ISMRM Workshop on Diffusion as a Probe of Neural Tissue Microstructure, 2013

300. A. Carballedo, F. Amico, I. Ugwu, A. Fagan, C. Fahey, D. Morris, J. Meaney, **A. Leemans**, and T. Frodl, *"Reduced fractional anisotropy in the uncinate fasciculus in patients with major*

*depression carrying the met-allele of the Val66Met brain-derived neurotrophic factor genotype"*, 21st European Congress of Psychiatry, Nice, France, p.1269, 2013

301. J. McGrath, K.A. Johnson, H. Garavan, E. O'Hanlon, **A. Leemans**, and L. Gallagher, *"Abnormal Functional Connectivity Is Associated with Disrupted Organisation of White Matter in Autism"*, IMFAR (the International Meeting for Autism Research), Donostia, Spain, 2013

302. C.M.W. Tax, B. Jeurissen, S.B. Vos, M.A. Viergever, **A. Leemans**, *"Recursive calibration of the response function to resolve crossing fibers from spherical deconvolution in diffusion MRI"*, ICT.OPEN, p. 91, 2013

303. A. Plaisier, K. Pieterman, **A. Leemans**, M.H. Lequin, P. Govaert, A.M. Heemskerk, I.K.M. Reiss, J. Dudink, *"The impact of quality and postprocessing methods of diffusion tensor imaging on fiber tractography of the preterm brain"*, 54th Annual Meeting of the European Society for Paediatric Research (ESPR), 2013

304. M.L. Tataranno, L.S. De Vries, K.J. Kersbergen, T. Alderliesten, F. Groenendaal, L.G.M. Van Rooij, **A. Leemans**, G. Buonocore, M.C. Toet, M.J.L. Benders, *"aEEG and FA of the plic in very preterm infants: the possible link between function and structure on early MRI"*, 54th Annual Meeting of the European Society for Paediatric Research (ESPR), 2013

305. L. Serbruyns, J. Gooijers, A. Van Impe, K. Caeyenberghs, R.L. Meesen, K. Cuypers, H.M. Sisti, **A. Leemans**, and S.P. Swinnen, *"Multiple Bimanual Motor Deficits in Elderly Predicted By Diffusion Tensor Imaging Metrics of Corpus Callosum Subregions"*, International Conference on Aging & Cognition, Dortmund, Nordrhein-Westfalen, Germany, p. 69, 2013

306. F. Szczepankiewicz, J. Lätt, R. Wirestam, **A. Leemans**, P. Sundgren, D. van Westen, F. Ståhlberg, and M. Nilsson, *"A Critical Consideration on the Absence of Significance and the Impact of Structure Size When Interpreting DTI and DKI Results"*, International Society for Magnetic Resonance in Medicine – 21st Scientific Meeting in Salt Lake City, USA, p. 781, 2013

307. **A. Leemans**, *"Diffusion Tensor Imaging: From Pulse Sequence to Clinical Applications in the Brain"*, International Society for Magnetic Resonance in Medicine – 21st Scientific Meeting in Salt Lake City, USA, 2013

308. J. Veraart, J. Rajan, R.R. Peeters, **A. Leemans**, S. Sunaert, and J. Sijbers, *"Estimation of Spatially Variable Rician Noise Map in Diffusion MRI"*, International Society for Magnetic Resonance in Medicine – 21st Scientific Meeting in Salt Lake City, USA, p. 2081, 2013

309. S.B. Vos, M. Aksoy, Z. Han, S.J. Holdsworth, C. Seeger, J.R. Maclaren, A. Brost, **A. Leemans**, and R. Bammer, *"HARDI and Fiber Tractography at 1 mm Isotropic Resolution"*, International Society for Magnetic Resonance in Medicine – 21st Scientific Meeting in Salt Lake City, USA, p. 842, 2013

310. S.B. Vos, M. Aksoy, J.R. Maclaren, Z. Han, S.J. Holdsworth, A. Brost, C. Seeger, **A. Leemans**, and R. Bammer, *"High-Spatial and High-Angular Resolution Diffusion Imaging with a Fragmented Acquisition Scheme"*, International Society for Magnetic Resonance in Medicine – 21st Scientific Meeting in Salt Lake City, USA, p. 3195, 2013

311. T. De Bondt, W. Van Hecke, J. Veraart, **A. Leemans**, J. Sijbers, S. Sunaert, Y. Jacquemyn, and P.M. Parizel, *"Hormonal Contraceptives Dependency of Quantitative Diffusion Kurtosis Parameters in the Limbic System: A Voxel Based Approach"*, International Society for Magnetic Resonance in Medicine – 21st Scientific Meeting in Salt Lake City, USA, p. 3095, 2013

312. B. Jeurissen, **A. Leemans**, and J. Sijbers, *"How to Make Sure You Are Using the Correct Gradient Orientations in Your Diffusion MRI Study"*, International Society for Magnetic Resonance in Medicine – 21st Scientific Meeting in Salt Lake City, USA, p. 2047, 2013

313. C.M.W. Tax, W.M. Otte, M.A. Viergever, R.M. Dijkhuizen, and **A. Leemans**, *"REKINDLE: Robust Extraction of Kurtosis INDices with Linear Estimation"*, International Society for Magnetic Resonance in Medicine – 21st Scientific Meeting in Salt Lake City, USA, p. 700, 2013

314. C.M.W. Tax, B. Jeurissen, M.A. Viergever, and **A. Leemans**, *"Robust Fiber Response Function Estimation for Deconvolution Based Diffusion MRI Methods"*, International Society for Magnetic Resonance in Medicine – 21st Scientific Meeting in Salt Lake City, USA, p. 3149, 2013

315. M. Bach, B. Stieltjes, F.B. Laun, **A. Leemans**, and K.H. Fritzsche, *"Voxel Misassignments and Their Consequences in DTI Skeleton-Based Group Analyses"*, International Society for Magnetic Resonance in Medicine – 21st Scientific Meeting in Salt Lake City, USA, p. 3028, 2013

316. S. Van Cauter, F. De Keyser, D. Sima, J. Veraart, F. D'Arco, **A. Leemans**, R.R. Peeters, S. Van Gool, S. Sunaert, and U. Himmelreich, *"Combining diffusion kurtosis imaging, dynamic susceptibility contrast-enhanced perfusion MR and short echo time chemical shift imaging in the grading of gliomas"*, 29th Annual meeting European Society for Magnetic Resonance in Medicine and Biology, Lisbon, Portugal, p. 398, 2012

317. J. Veraart, J. Rajan, R.R. Peeters, **A. Leemans**, S. Sunaert, and J. Sijbers, *"Diffusion MRI: Estimation of spatially variable Rician noise"*, 29th Annual meeting European Society for Magnetic Resonance in Medicine and Biology, Lisbon, Portugal, p. 201-202, 2012

318. A. jansonius, P. van der Jagt, **A. leemans**, and P. Dik, *"Diffusion tensor MRI and tractography of the sacral plexus"*, Annual AUA Meeting – Atlanta, USA – 2012

319. A. Plaisier, A.M. Heemskerk, I.K.M. Reiss, M.H. Lequin, **A. Leemans**, and J. Dudink, "The effect of head motion on data quality for neonatal DTI", European Society for Paediatric Research, Istanbul, Turkey, 2012

320. B. Jeurissen, **A. Leemans**, J.-D.Tournier, D.K. Jones, and J. Sijbers, *"Assessing the Implications of Complex Fiber Configurations for DTI Metrics in Real Data Sets"*, International Society for Magnetic Resonance in Medicine - 20th Scientific Meeting in Melbourne, Australia, p. 3585, 2012

321. A.M. Heemskerk, A. Plaisier, I. Reiss, M.H. Lequin, **A. Leemans**, and J. Dudink, *"DTI in neonates: data corruption due to motion"*, International Society for Magnetic Resonance in Medicine - 20th Scientific Meeting in Melbourne, Australia, p. 3171, 2012

322. C.M.W. Tax, S.B. Vos, J. Veraart, J. Sijbers, M.A. Viergever, and **A. Leemans**, *"The Effect of the Kurtosis on the Accuracy of Diffusion Tensor Based Fiber Tractography"*, International Society for Magnetic Resonance in Medicine - 20th Scientific Meeting in Melbourne, Australia, p. 3629, 2012

323. B. Jeurissen, **A. Leemans**, J.-D. Tournier, and J. Sijbers, *"HARDI-Based Methods for Fiber Orientation Estimation"*, International Society for Magnetic Resonance in Medicine – 20th Scientific Meeting in Melbourne, Australia, p. 3584, 2012

324. F. Szczepankiewicz, A. Leemans, P. Sundgren, R. Wirestam, F. Ståhlberg, D. Van Westen, J. Lätt, and M. Nilsson, *"Power and Variability Analysis in Diffusion Kurtosis Imaging: Sample Size Estimation in Three White Matter Structures"*, International Society for Magnetic Resonance in Medicine - 20th Scientific Meeting in Melbourne, Australia, p. 3628, 2012

325. S.B. Vos, M.A. Viergever, and **A. Leemans**, *"Tract Coherence Imaging (TCI): Quantifying the Intra-Voxel Fiber Tract Heterogeneity"*, International Society for Magnetic Resonance in Medicine - 20th Scientific Meeting in Melbourne, Australia, p. 3586, 2012

326. D. Polders, **A. Leemans**, P. Luijten, and H. Hoogduin, *"Uncertainty of Quantitative T1 Mapping in Healthy Volunteers at 7.0 Tesla"*, International Society for Magnetic Resonance in Medicine - 20th Scientific Meeting in Melbourne, Australia, p. 2393, 2012

327. S.B. Vos, M.A. Viergever, and **A. Leemans**, *"Visualizing Fiber Pathways in Regions with Complex White Matter Architecture"*, International Society for Magnetic Resonance in Medicine - 20th Scientific Meeting in Melbourne, Australia, p. 1914, 2012

328. L. Emsell, **A. Leemans**, W. Van Hecke, C. Langan, G.J. Barker, P. McCarthy, S. Sunaert, D. Cannon, and C. McDonald, *"White Matter Microstructural Changes in Bipolar Disorder: A HARDI CSD Tractography Study"*, International Society for Magnetic Resonance in Medicine - 20th Scientific Meeting in Melbourne, Australia, p. 122, 2012

329. **A. Leemans**, “Diffusion Basics”, International Society for Magnetic Resonance in Medicine - 20th Scientific Meeting in Melbourne, Australia, 2012

330. A. jansonius, P. van der Jagt, **A. leemans**, and P. Dik, *“Diffusion tensor MRI and tractography of the sacral plexus”*, 23rd Annual ESPU Congress – Zurich, Switzerland – 2012

331. K. Caeyenberghs, **A. Leemans**, M. Heitger, D. Drijkoningen, C.V. Linden, S. Sunaert, and S. Swinnen, *“Altered structural networks in children and adolescents with traumatic brain injury: A graph theoretical analysis”*, 9th World Congress on Brain Injury, Edinburgh, Scotland, p.419-420, 2012

332. Y.D. Reijmer, **A. Leemans**, K. Caeyenberghs, S.M. Heringa, H.L. Koek, and G.J. Biessels, *“Vascular brain lesions impair structural network efficiency in patients with early Alzheimer’s disease”*, AAICAD, Vancouver, Canada, 2012

333. E. O’Hanlon, S. Roddy, L. Tiedt, M. Hosheit, J. Tabisch, I. Kelleher, **A. Leemans**, T. Frodl, M. Cannon, *“Diffusion imaging reveals early white matter changes in adolescents reporting subclinical psychotic symptoms: A Pilot Investigation”*, 3rd Biennial Schizophrenia International Research Society Conference, Florence, Italy, 2012

334. S. Deprez, F. Amant, A. Smeets, R. Peeters, M-R. Christiaens, J. Verhoeven, A. Leemans, W. Van hecke, J. Vandenberghe, M. Vandenbulcke, and S. Sunaert, *“Longitudinal assessment of chemotherapy-induced structural changes in cerebral white matter and its correlation with impaired cognitive functioning in breast cancer patients”*, International Cognition and Taskforce, Paris, France, 2012

335. M. Kudzinava, **A. Leemans**, W. Philips, D. Perrone, J. Aelterman, J. Dudink, and J. Sijbers, *“Distortion correction of DKI data: affine approach”*, Belgian Day on Biomedical Engineering - IEEE/EMBS Benelux Symposium, Leuven, Belgium, 2011

336. D. Perrone, J. Aelterman, J. Sijbers, A. Pižurica, W. Philips, and **A. Leemans**, *“Gibbs ringing artifact suppression in DT-MRI”*, Belgian Day on Biomedical Engineering - IEEE/EMBS Benelux Symposium, Leuven, Belgium, 2011

337. Y.D. Reijmer, **A. Leemans**, S.M. Heringa, I. Wielaard, B. Jeurissen, H.L. Koek, and G.J. Biessels, *“Constrained spherical deconvolution based tractography and cognition in Alzheimer’s disease”*, 5th Congress of the International Society for Vascular, Cognitive and Behavioural Disorders, Lille, France, 2011

338. L. Emsell, W. Van Hecke, C. Langan, G. Barker, **A. Leemans**, S. Sunaert, P. McCarthy, R. Skinner, D.M. Cannon, C. McDonald, *“White Matter Alterations in Euthymic Bipolar I Disorder, a DTI Voxel-Based Analysis”*, 9th International Conference on Bipolar Disorder, Pittsburgh, Pennsylvania, USA, 2011

339. I. Wielaard, Y.D. Reijmer, A. Leemans, S.M. Heringa, B. Jeurissen, H.L. Koek, G.J. Biessels, on behalf of the Vascular Cognitive Impairment Study group, “Diffusion tensor imaging and cognition in Alzheimer’s disease: the influence of crossing fibers”, Endo-Neuro Psycho Meeting, the Netherlands, 2011

340. P.K.N. van der Jagt, **A. Leemans**, M. Froeling, T.C. Kwee, R.A.J. Nievelstein, B. ten Haken, and P. Dik, *“Diffusion tensor MRI and tractography of the sacral plexus and its branching nerves; feasibility and initial results”*, The 55th Annual Meeting of the Society for Research into Hydrocephalus and Spina Bifida, Nottingham, UK, 2011

341. Y.D. Reijmer, **A. Leemans**, S.M. Heringa, I. Wielaard, B. Jeurissen, H.L. Koek, and G.J. Biessels, *“Constrained spherical deconvolution based tractography and cognition in Alzheimer’s disease”*, International Conference on Alzheimer's Disease, Paris, France, 2011

342. P.K.N. van der Jagt, **A. Leemans**, M. Froeling, T.C. Kwee, R.A.J. Nievelstein, B. ten Haken, and P. Dik, *“Diffusion tensor MRI and tractography of the sacral plexus and its branching nerves; feasibility and initial results”*, The 8th Annual World Congress of IBMISPS on Brain, Spinal Cord Mapping & Image Guided Therapy, San Francisco, USA, 2011

343. S.B. Vos, D.K. Jones, M.A. Viergever, and **A. Leemans**, *"The appearance of the apparent diffusion coefficient in complex fiber architecture"*, International Society for Magnetic Resonance in Medicine - 19th Scientific Meeting in Montreal, Canada, p.1999, 2011

344. S.B. Vos, M.A. Viergever, and **A. Leemans**, *"The anisotropic bias of fractional anisotropy in anisotropically acquired DTI data"*, International Society for Magnetic Resonance in Medicine - 19th Scientific Meeting in Montreal, Canada, p.1945, 2011

345. S.B. Vos, M.A. Viergever, **A. Leemans**, *"Mean diffusivity changes in crossing fiber voxels in DTI"*, CONNECT Symposium: MRI of Brain Micro-Structure & Connectivity, Tel Aviv, Israel, 2011

346. M. Froeling, G.J. Strijkers, B. Jeurissen, M.P. van der Paardt, J. Stoker, K. Nicolay, A.J. Nederveen, and **A. Leemans**, *"Fiber architecture of the female pelvic floor: An exploratory investigation using different diffusion MRI tractography algorithms"*, International Society for Magnetic Resonance in Medicine - 19th Scientific Meeting in Montreal, Canada, p.3260, 2011

347. S. Bells, M. Cercignani, S. Deoni, Y. Assaf, O. Pasternak, C.J. Evans, **A. Leemans**, and D.K. Jones, *"Tractometry – Comprehensive Multi-modal Quantitative Assessment of White Matter Along Specific Tracts"*, International Society for Magnetic Resonance in Medicine - 19th Scientific Meeting in Montreal, Canada, p. 678, 2011

348. L. Emsell, W. Van Hecke, C. Langan, G. Barker, **A. Leemans**, S. Sunaert, P. McCarthy, R. Skinner, D.M. Cannon, and C. McDonald, *"White Matter Alterations in Euthymic Bipolar I Disorder, a DTI Voxel-Based Analysis"*, International Society for Magnetic Resonance in Medicine - 19th Scientific Meeting in Montreal, Canada, p. 2341, 2011

349. J.S. Verhoeven, E. Prodi, S. Deprez, N. Rommel, **A. Leemans**, W. Van Hecke, R. Peeters, P. De Cock, L. Lagae, and S. Sunaert, *"Do the language deficit in autism and specific language impairment (SLI) have a common neuro-anatomical substrate?"*, International Society for Magnetic Resonance in Medicine - 19th Scientific Meeting in Montreal, Canada, p. 4219, 2011

350. S. Deprez, F. Amant, J. Verhoeven, A. Smeets, M.-R. Christiaens, **A. Leemans**, R. Peeters, W. Van Hecke, J. Vandenberghe, M. Vandenbulcke, and S. Sunaert, *"Longitudinal assessment of chemotherapy-induced structural changes in cerebral white matter and its correlation with impaired cognitive functioning in breast cancer patients"*, International Society for Magnetic Resonance in Medicine - 19th Scientific Meeting in Montreal, Canada, p. 4220, 2011

351. B. Jeurissen, M. Naeyaert, **A. Leemans**, and J. Sijbers, *"Registration based correction of DWI gradient orientations"* , International Society for Magnetic Resonance in Medicine - 19th Scientific Meeting in Montreal, Canada, p. 1944, 2011

352. W. Van Hecke, L. Emsell, **A. Leemans**, C. Sage, J. Veraart, S. Sunaert, J. Sijbers, and P.M. Parizel, *"The effect of atlas selection on voxel based analyses of DTI data"* , International Society for Magnetic Resonance in Medicine - 19th Scientific Meeting in Montreal, Canada, p. 1947, 2011

353. **A. Leemans**, *"Experimental Design, Artifacts & Confounds"*, International Society for Magnetic Resonance in Medicine - 19th Scientific Meeting in Montreal, Canada, 2011

354. S.M. Koudijs, J.S. van Campen, O.B. Braams, **A. Leemans**, O. van Nieuwenhuizen, K.P.J. Braun, and F.E. Jansen, *"Structural integrity of normal appearing white matter relates to intelligence in tuberous sclerosis complex"*, 9th European Paediatric Neurology Society Congress, Cavtat, Croatia, 2011

355. Y.D. Reijmer, **A. Leemans**, S.M. Heringa, I. Wielaard, B. Jeurissen, H.L. Koek, and G.J. Biessels, "Constrained spherical deconvolution based tractography and cognition in Alzheimer's disease", OHBM, 2011

356. M.A. Hemels, A. van den Hoogen, **A. Leemans**, B.J. van Kooij, M.J. Benders, M.A. Verboon-Maciolek, L.S. de Vries, J. Nijman, T.G. Krediet, and F. Groenendaal, *"Cerebral white matter apparent diffusion coefficients after sepsis due to coagulase-negative staphylococci in preterm*

*infants at term-equivalent age"*, 3rd Congress of the European Academy of Paediatric Societies, 2010

357. K-J. Jung, **A. Leemans**, J. Migliozzi, M. Behrmann, and W. Schneider, *"Removal of the partial volume effect of free water by substituting the acquired b0 image with a synthetic b0 image in diffusion MRI"*, 16th Annual Meeting of Organization for Human Brain Mapping, Barcelona, Spain, 2010

358. K. Caeyenberghs, **A. Leemans**, B.C.M. Smits-Engelsman, S. Sunaert, and S.P. Swinnen, *"Bimanual coordination and corpus callosum microstructure in young adults with traumatic brain injury"*, 16th Annual Meeting of Organization for Human Brain Mapping, Barcelona, Spain, 2010

359. W. Van Hecke, J. Sijbers, **A. Leemans**, G. Nagels, E. Vandervliet, and P.M. Parizel, *"A Voxel Based Diffusion Tensor Image Analysis on Cognitive Decline in Mildly and Moderately Impaired Multiple Sclerosis Patients"*, International Society for Magnetic Resonance in Medicine - 18th Scientific Meeting in Stockholm, Sweden, p. 2100, 2010

360. K. Caeyenberghs, **A. Leemans**, I. Leunissen, J. Coxon, M. Geurts, K. Michiels, H. Beyens, C. Kiekens, S. Sunaert, and S.P. Swinnen, *"Bimanual coordination and corpus callosum microstructure in young adults with traumatic brain injury"*, International Society for Magnetic Resonance in Medicine - 18th Scientific Meeting in Stockholm, Sweden, p. 279, 2010.

361. B. Jeurissen, **A. Leemans**, J.-D. Tournier, D.K. Jones, and J. Sijbers, *"Estimating the number of fiber orientations in diffusion MRI voxels: A constrained spherical deconvolution study"*, International Society for Magnetic Resonance in Medicine - 18th Scientific Meeting in Stockholm, Sweden, p. 573, 2010

362. D.L. Polders, **A. Leemans**, J.M. Hoogduin, J. Hendrikse, M. Donahue, and P. Luijten, *"Evaluating the uncertainty of DTI parameters at 1.5, 3.0 and 7.0 Tesla"*, International Society for Magnetic Resonance in Medicine - 18th Scientific Meeting in Stockholm, Sweden, p. 1641, 2010

363. S. Vos, D.K. Jones, M.A. Viergever, **A. Leemans**, *"Partial volume effect as a hidden covariate in tractography based analyses of fractional anisotropy: Does size matter?"*, International Society for Magnetic Resonance in Medicine - 18th Scientific Meeting in Stockholm, Sweden, p.113, 2010

364. M. Langen, P. Johnston, **A. Leemans**, C. Ecker, E. Daly, C. Murphy, M. Catani, F. dell'Acqua, S. Durston, H. van Engeland, and D.G.M. Murphy, *"Corticostriatal circuitry and inhibitory control in autism: Findings from diffusion tensor imaging tractography"*, The 9th Annual International Meeting for Autism Research (IMFAR), Philadelphia, Pennsylvania, USA, 2010

365. J. Verhoeven, C. Sage, **A. Leemans**, W. Van Hecke, D. Callaert, R. Peeters, P. De Cock, L. Lagae, and S. Sunaert, *"Construction of a Stereotaxic DTI Atlas with Full Diffusion Tensor Information for Studying White Matter Maturation From Childhood to Adolescence Using Tractography-Based Segmentations"*, The 9th Annual International Meeting for Autism Research (IMFAR), Philadelphia, Pennsylvania, USA, 2010

366. N.E. van der Aa, **A. Leemans**, B.J.M. van Kooij, B.S. Stone, F.J. Northington, M.J.N.L. Benders, F. Groenendaal, and L.S. de Vries, *"Tractography in 3-month old infants with a perinatal arterial stroke can predict development of hemiplegia"*, 2010 Pediatric Academic Societies' Annual Meeting, Vancouver, Canada, 2010

367. L. Emsell, L. Holleran, **A. Leemans**, C. Langan, G. Barker, W. van der Putten, P. McCarthy, R. Skinner, C. McDonald, and D.M. Cannon, *"White Matter Tracts in Euthymic Bipolar 1 Disorder: A DTI Study of the Cingulum Bundle and Uncinate Fasciculus"*, Annual Conference Neuroscience Ireland, Dublin, Ireland, 2009

368. L. Emsell, **A. Leemans**, C. Langan, G. Barker, W. van der Putten, R. Skinner, P. McCarthy, C. McDonald, and D.M. Cannon, *"A DTI Tractography Study of the Cingulum Bundle in Euthymic Bipolar I Disorder"*, Collegium Internationale Neuro-Psychopharmacologicum - Thematic Meeting on Major Psychoses and Substance Abuse, Edinburgh, Scotland, 2009

369. **A. Leemans** and D.K. Jones, *"Improved Model Fitting Through Improved Eddy Current Distortion Correction in DTI"*, 15th Annual Meeting of Organization for Human Brain Mapping, San Francisco, USA, 2009

370. N.E. van der Aa, **A. Leemans**, B.J.M. van Kooij, B.S. Stone, F.J. Northington, M.J.N.L. Benders, F. Groenendaal, and L.S. de Vries, *"Tractography in 3-month old infants with a perinatal arterial stroke can predict development of hemiplegia"*, 10th International Congress of the European Society of Magnetic Resonance in Neuropediatrics, Zurich, Switzerland, 2009

371. M. De Groot, M.W. Vernooij, S. Klein, **A. Leemans**, R. de Boer, A. van der Lugt, N.M.B. Breteler, and W. Niessen, *"Asymmetry analysis along the entire cingulum in the general population"*, 15th Annual Meeting of Organization for Human Brain Mapping, San Francisco, USA, 2009

372. W. Van Hecke, G. Nagels, **A. Leemans**, E. Vandervliet, J. Sijbers, and P.M. Parizel, *"Brain connectivity in patients with mild and moderate multiple sclerosis"*, 15th Annual Meeting of Organization for Human Brain Mapping, San Francisco, USA, 2009

373. L. Emsell, **A. Leemans**, C. Langan, G. Barker, W. van der Putten, R. Skinner, P. McCarthy, C. McDonald, and D.M. Cannon, *"A DTI Tractography Study of the Cingulum Bundle in Euthymic Bipolar I Disorder"*, Society of Biological Psychiatry - 64th Annual Scientific Convention & Meeting in Vancouver, Canada, 2009

374. B. Jeurissen, **A. Leemans**, J.-D. Tournier, and J. Sijbers, *"Probabilistic fiber tracking using the residual bootstrap with constrained spherical deconvolution MRI"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p. 1129, 2009

375. D.K. Jones, **A. Leemans**, C.J. Evans, K.D. Singh, and S.D. Muthukumaraswamy, *"Exploring the white matter microstructure underpinning electrophysiological dynamics: A combined DT-MRI and MEG study"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p. 7, 2009

376. **A. Leemans** and D.K. Jones, *"A new approach to fully automated fiber tract clustering using affinity propagation"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p. 2018, 2009

377. W. Van Hecke, **A. Leemans**, S. De Backer, P.M. Parizel, and J. Sijbers, *"Simulated DTI data sets for the evaluation of voxel based analysis methods"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p.1475, 2009

378. C.A. Sage, W. Van Hecke, R. Peeters, J. Sijbers, W. Robberecht, P. Parizel, G. Marchal, **A. Leemans**, and S. Sunaert, *"Improved results of voxel-based DTI analyses by using non-rigid coregistration and a population-based DTI atlas"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p. 1476, 2009

379. J. Verhoeven, C.A. Sage, S. Deprez, P. De Cock, L. Lagae, **A. Leemans**, W. Van Hecke, and S. Sunaert, *"Construction of a DTI atlas of the healthy human brain with diffusion full tensor information in ICBM-81 space: an application for studying the maturation of white matter"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p. 1713, 2009

380. **A. Leemans**, B. Jeurissen, J. Sijbers, and D.K. Jones, *"ExploreDTI: a graphical toolbox for processing, analyzing, and visualizing diffusion MR data"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p. 3537, 2009

381. K. Caeyenberghs, **A. Leemans**, B.C.M. Smits-Engelman, and S.P. Swinnen, *"Static and dynamic visuomotor task performance in children with traumatic brain injury: A diffusion tensor imaging study"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p. 1737, 2009

382. S. Deprez, J. Verhoeven, M. Vandenbulcke, F. Amant, R. Yigit, J. Vandenberghe, M-R. Christiaens, C.A. Sage, R. Peeters, **A. Leemans**, W. Van Hecke, and S. Sunaert, *"Treatment-induced structural changes in cerebral white matter and its correlation with impaired cognitive*

*functioning in breast cancer patients"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p. 3291, 2009

383. L. Emsell, **A. Leemans**, C. Langan, G. Barker, W. van der Putten, P. McCarthy, R. Skinner, C. McDonald, and D.M. Cannon, *"A DTI tractography study of the cingulum in euthymic bipolar I disorder"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p. 4041, 2009

384. W. Van Hecke, **A. Leemans**, S. De Backer, P.M. Parizel, and J. Sijbers, *"How to smooth diffusion tensor images in a voxel based analysis?"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, p. 5056, 2009

385. G. De Groof, M. Verhoye, **A. Leemans**, M. Eens, V.M. Darras, A. Van der Linden, *"DTI Eigenvalues in Grey Matter: A Songbird's Perspective"*, International Society for Magnetic Resonance in Medicine - 17th Scientific Meeting in Honolulu, Hawaii, USA, p. 1501, 2009

386. N.E. van der Aa, **A. Leemans**, B.J.M. van Kooij, B.S. Stone, F.J. Northington, M.J.N.L. Benders, L.S. de Vries, F. Groenendaal, *"Tractography in 3-month old infants with a perinatal arterial stroke can predict development of hemiplegia"*, International Symposium "Treatment of paretic hand in childhood: new approaches", Calambrone Pisa, Italy, 2009

387. W. Van Hecke, **A. Leemans**, J. Sijbers, P.M. Parizel, and J.W.M. Van Goethem, *"Diffusion tensor tractography reveals white matter alterations in the normal appearing spinal cord of Multiple Sclerosis patients"*, European Society for Magnetic Resonance in Medicine and Biology - 25th Annual Meeting, Valencia, Spain, 2008

388. **A. Leemans** and D.K. Jones, *"A new fiber tract color-encoding scheme based on diffusion tensor model residuals"*, International Society for Magnetic Resonance in Medicine - 16th Scientific Meeting in Toronto, p. 3309, Canada, 2008

389. **A. Leemans**, C.J. Evans, and D.K. Jones, *"To rotate B or not to rotate B? The importance of reorienting the B-matrix during motion correction of DT-MRI data"*, International Society for Magnetic Resonance in Medicine - 16th Scientific Meeting in Toronto, p. 140, Canada, 2008

390. **A. Leemans**, C.J. Evans, and D.K. Jones, *"Quality assessment through analysis of residuals of diffusion image fitting"*, International Society for Magnetic Resonance in Medicine - 16th Scientific Meeting in Toronto, p. 3300, Canada, 2008

391. W. Van Hecke, **A. Leemans**, S. De Backer, P.M. Parizel, and J. Sijbers, *"On the construction of a ground truth methodology to evaluate VBM analysis results of diffusion tensor images"*, European Society for Magnetic Resonance in Medicine and Biology - 25th Annual Meeting, Valencia, Spain, 2008

392. K. Caeyenberghs, **A. Leemans**, B.C.M. Smits-Engelsman, and S.P. Swinnen, *"Diffusion tensor imaging in children with traumatic brain injury: neural correlates of motor dysfunction"*, ISMRM-ESMRB White Matter Workshop, Krakow, Poland, 2008

393. B. Jeurissen, **A. Leemans**, J.-D. Tournier, and J. Sijbers, *"Can residual bootstrap reliably estimate uncertainty in fiber orientation obtained by spherical deconvolution from diffusion-weighted MRI?",* 14th annual meeting of the Organization of Human Brain Mapping, Melbourne, Australia, 2008

394. W. Van Hecke, **A. Leemans**, E. Vandervliet, P.M. Parizel, and J. Sijbers, *"A ground truth analysis of the preservation of diffusion tensor information in a population specific atlas"*, International Society for Magnetic Resonance in Medicine - 16th Scientific Meeting in Toronto, Canada, p. 1837, 2008

395. B. Jeurissen, **A. Leemans**, J.-D. Tournier, and J. Sijbers, *"Bootstrap methods for estimating uncertainty in constrained spherical deconvolution fiber orientations"*, International Society for Magnetic Resonance in Medicine - 16th Scientific Meeting in Toronto, Canada, p. 3324, 2008

396. K. Caeyenberghs, **A. Leemans**, S. Sunaert, B.C.M. Smits-Engelsman, and S.P. Swinnen, *"Diffusion tensor imaging in children with traumatic brain injury: neural correlates of motor dysfunction"*, Seventh World Congress on Brain Injury, Lisbon, Portugal, 2008

397. **A. Leemans** and S. Paisey, *"Whole brain studies: methods and applications in neuroimaging"*, Young Neuroscientists' Day, Bristol, United Kingdom, 2007

398. W. Van Hecke, E. D'Agostino, **A. Leemans**, J. Sijbers, P.M. Parizel, and J.W.M. Van Goethem, *"On the construction of a healthy brain inter-subject diffusion tensor image and tractography atlas"*, 32nd Annual Meeting of the European Society of Neuro Radiology, Genoa, Italy, 2007

399. W. Van Hecke, **A. Leemans**, J. Sijbers, P.M. Parizel, and J.W.M. Van Goethem, *"Diffusion tensor tractography reveals spinal cord alterations in patients with Multiple Sclerosis"*, 32nd Annual Meeting of the European Society of Neuro Radiology, Genoa, Italy, 2007

400. W. Van Hecke, **A. Leemans**, N. De Brabander, A. Laridon, B. Ceulemans, J. Van Goethem, and P.M. Parizel, *"Diffusion tensor fiber tracking reveals Probst bundles in patients with agenesis of the corpus callosum"*, 32nd Annual Meeting of the European Society of Neuro Radiology, Genoa, Italy, 2007

401. C. Lebel, L. Walker, **A. Leemans**, L. Phillips, and C. Beaulieu, *"Magnetic resonance imaging of Brain Development"*, 6th Annual Meeting of the Canadian Language & Literacy Research Network, Calgary, Alberta, Canada, 2007

402. J. Dudink, M. Lequin, P. Govaert, and **A. Leemans**, "*DTI Brain Atlas of the VLBW Preterm*", Radiological Society of North America, Chicago, USA, 2007

403. W. Van Hecke, **A. Leemans**, E. Vandervliet, P.M. Parizel, and J. Sijbers, *"An optimized tensor orientation strategy for non-rigid alignment of DT-MRI data"*, Joint Annual Meeting ISMRM-ESMRMB, Berlin, Germany, p. 1599, 2007

404. D.K. Jones and **A. Leemans**, "*Dead Presidents*", Joint Annual Meeting ISMRM-ESMRMB, Art'n Artifacts Exhibition, Berlin, Germany, 2007

405. C. Lebel, L. Walker, **A. Leemans**, L. Phillips, and C. Beaulieu, *"DTI Demonstrates Non-linear White Matter Tract Development from Childhood to Adulthood"*, Joint Annual Meeting ISMRM-ESMRMB, Berlin, Germany, p. 666, 2007

406. **A. Leemans**, W. Van Hecke, C. Lebel, L. Walker, J. Sijbers, and C. Beaulieu, *"A model based approach for voxelwise analysis of multi-subject diffusion tensor data"*, Joint Annual Meeting ISMRM-ESMRMB, Berlin, Germany, p. 73, 2007

407. **A. Leemans**, *"Diffusion MRI (The Methods): Clustering of tracts"*, Joint Annual Meeting ISMRM-ESMRMB, Berlin, Germany, 2007

408. W. Van Hecke, **A. Leemans**, S. De Backer, E. Vandervliet, P.M. Parizel, E. D'Agostino, and J. Sijbers, *"Multi-channel coregistration of diffusion tensor images based on a viscous fluid model"*, Belgian Day on Biomedical Engineering - IEEE/EMBS Benelux Symposium, p. 139-142, Brussels, Belgium, 2006

409. E. Vandervliet, G. Nagels, A. Heinecke, W. Van Hecke, **A. Leemans**, J. Sijbers, and P.M. Parizel, *"On the cause and mechanisms of the negative BOLD response in fMRI"*, 23rd Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 308, Warsaw, Poland, 2006

410. N. Van Camp, I. Blockx, L. Camon, N. de Vera, M. Verhoye, **A. Leemans**, E. Martinez, J. Sijbers, A. Planas, and A. Van der Linden, *"White and grey matters changes in a rat model for Huntington's disease discerned with in vivo DTI"*, 23rd Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 210-211, Warsaw, Poland, 2006

411. W. Van Hecke, **A. Leemans**, J. Sijbers, P.M. Parizel, and J. Van Goethem, *"A comparison of diffusion tensor analysis methods for detecting age-related changes of the normal appearing*

*spinal cord"*, 23rd Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 293-294, Warsaw, Poland, 2006

412. W. Van Hecke, **A. Leemans**, S. De Backer, E. Vandervliet, P.M. Parizel, J. Sijbers, and E. D'Agostino, *"Non-rigid coregistration of diffusion tensor images using a viscous fluid model"*, 23rd Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 191-192, Warsaw, Poland, 2006

413. W. Van Hecke, **A. Leemans**, N. De Brabander, A. Laridon, B. Ceulemans, and P.M. Parizel, *"Diffusion tensor fiber tracking in patients with agenesis of the corpus callosum"*, 23rd Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 34-35, Warsaw, Poland, 2006

414. G. De Groof, M. Verhoye, **A. Leemans**, and A. Van der Linden, *"Using diffusion tensor imaging (DTI) to assess the neuronal plasticity and neuroconnectivity in the brain of a songbird"*, Molecular & Cellular Basis of Neuroconnectivity, Leuven, Belgium, 2006

415. G. De Groof, M. Verhoye, **A. Leemans**, and J. Sijbers, and A. Van der Linden, *"Paired voxel-wise statistical mapping of in vivo Diffusion Tensor Imaging (DTI) data to assess the seasonal neuronal plasticity in the brain of a songbird"*, 1st Annual Meeting - European Society of Molecular Imaging, Paris, France, 2006

416. G. De Groof, M. Verhoye, **A. Leemans**, and A. Van der Linden, *"Using diffusion tensor imaging (DTI) to assess the neuronal plasticity in the brain of a songbird"*, XXème Congrès du Groupement d'Etudes de Résonance Magnétique, Blankenberge, Belgium, 2006

417. W. Van Hecke, **A. Leemans**, P.M. Parizel, J.W.M. Van Goethem, and J. Sijbers, *"DTI of normal appearing spinal cord in elderly"*, American Society of Neuroradiology, San Diego, USA, 2006

418. **A. Leemans**, J. Sijbers, S. De Backer, E. Vandervliet, and P. Parizel, *"Multiscale white matter fiber tract coregistration: a new feature-based approach to align diffusion tensor data"*, International Society for Magnetic Resonance in Medicine - 14th Scientific Meeting in Seattle, USA, p. 437, 2006

419. **A. Leemans**, S. De Backer, J. Sijbers, E. Vandervliet, and P. Parizel,*"TRACT: Tissue Relative Anisotropy based Curvature Thresholding for deterministic MR diffusion tensor tractography"*, 22th Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 289, Basle, Switzerland, 2005

420. G. Vanhoutte, B. Van Broeck, S. Kumar-Singh, C. Van Broeckhoven, **A. Leemans**, and A. Van der Linden, "*Altered Molecular Organization in both Gray and White Matter is discerned by Diffusion Tensor Fractional Anisotropy Measurements in a Mouse Model for Alzheimer's Disease*", 4th annual meeting of the Society of Molecular Imaging, Keulen, Germany, 2005

421. G. De Groof, M. Verhoye, **A. Leemans**, and A. Van der Linden. "*DTI parameters: fractional anisotropy, radial and axial diffusivity reveal seasonal neuroplasticity in the adult songbird brain*", 4th annual meeting of the Society of Molecular Imaging, Keulen, Germany, 2005

422. **A. Leemans**, S. De Backer, J. Sijbers, E. Vandervliet, and P. Parizel, *"End point clustering for diffusion tensor white matter fiber bundle tractography"*, 22th Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 129-130, Basle, Switzerland, 2005

423. **A. Leemans**, J. Sijbers, and P. Parizel, *"A Graphical Toolbox for Exploratory Diffusion Tensor Imaging and Fiber Tractography"*, Section for Magnetic Resonance Technologists (SMRT) - 14th Annual Meeting in Miami Beach, Florida, USA, 2005

424. S. Delputte, **A. Leemans**, E. Fieremans, Y. D'asseler, I. Lemahieu, R. Achten, J. Sijbers, and R. Van de Walle, *"Density Regularized Fiber Tractography of the Brain White Matter using Diffusion Tensor MRI"*, International Society for Magnetic Resonance in Medicine - 13th Scientific Meeting in Miami Beach, Florida, USA, p. 1309, 2005

425. **A. Leemans**, J. Sijbers, M. Verhoye, and A. Van der Linden, *"Entropy-based coregistration for DT-MR images using an efficient tensor shape preserving reorientation strategy"*, International Society for Magnetic Resonance in Medicine - 13th Scientific Meeting in Miami Beach, Florida, USA, p. 227, 2005

426. G. De Groof, M. Verhoye, **A. Leemans**, and A. Van der Linden, *"Seasonal changes in neuronal connectivity in the songbird brain discerned by repeated in vivo DTI"*, International Society for Magnetic Resonance in Medicine - 13th Scientific Meeting in Miami Beach, Florida, USA, p. 715, 2005

427. M. Verhoye, G. De Groof, V. Van Meir, I. Tindemans, **A. Leemans**, and A. Van der Linden. "*In vivo visualization of the neuroanatomy and brain connectivity of starling brain through diffusion tensor imaging*", 34rd Annual Meeting of the Society for Neuroscience, San Diego, USA, 2004

428. **A. Leemans**, J. Sijbers, W. Van den Broek, and Z. Yang, *"An Interactive Curvature Based Rigid-body Image Registration Technique: an Application to EFTEM"*, 13th European Microscopy Congress, Antwerp, Belgium, 2004

429. **A. Leemans**, J. Sijbers, M. Verhoye, and A. Van der Linden, *"Experimental Evaluation of Synthetic DT-MRI Models"*, 21th Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 40-41, Copenhagen, Denmark, 2004

430. **A. Leemans**, J. Sijbers, M. Verhoye, and A. Van der Linden, *"A Library of 3D synthetic DT-MRI models for testing White Matter fiber Tractography Algorithms"*, 21th Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 42, Copenhagen, Denmark, 2004

431. N. Van Camp, M. Verhoye, **A. Leemans**, A. Postnov, D. Beque, J. Van den Eynden, J. Nuyts, E. Lauwers, A. Verbruggen, Z. Debyzer, V. Baekelandt, N. De Clerck, J. Sijbers, K. Van Laere, and A. Van der Linden, *"In vivo multimodal imaging of a rat model for Parkinson's disease: high resolution micro-MRI, micro-SPECT and micro-CT"*, 21th Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 22-23, Copenhagen, Denmark, 2004

432. M. Verhoye, G. De Groof, V. Van Meir, I. Tindemans, **A. Leemans**, and A. Van der Linden, *"In vivo neuroanatomy of the songbird brain, visualized through diffusion tensor imaging"*, 21th Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 161, Copenhagen, Denmark, 2004

433. **A. Leemans**, J. Sijbers, M. Verhoye, A. Van der Linden, and D. Van Dyck, *"White Matter Fiber Bundle Coregistration for Diffusion Tensor Magnetic Resonance Tractography"*, 13th Annual Meeting - Section for Magnetic Resonance Technologists, Kyoto, Japan, 2004

434. J.H. Waarsing, **A. Leemans**, J. Day, A.G.H. Ederveen, D. Van Dyck, E. Buelens, N. De Clerck, A. Sasov and H. Weinans, *"Effects of Growth and ovariectomy in the Tibia of Individual Rats: an in-vivo Micro-CT Study"*, 30th European Symposium on Calcified Tissues, Rome, Italy, 2003

435. **A. Leemans**, J. Sijbers, M. Verhoye, A. Van der Linden, and D. Van Dyck, *"Simulating Neuronal Fiber Bundles for DT-MRI Tractography"*, 20th Annual Scientific Meeting - European Society for Magnetic Resonance in Medicine and Biology, p. 278, Rotterdam, The Netherlands, 2003

436. J.H. Waarsing, **A. Leemans**, J. Day, A.G.H. Ederveen, D. Van Dyck, E. Buelens, N. De Clerck, A. Sasov and H. Weinans, *"Effects of Growth and OVX in the Tibia of Individual Rats: an in-vivo Micro-CT Study"*, 49th Annual Meeting - Orthopaedic Research Society, New Orleans, LA, USA, 2003

- **Conference Proceedings (national referee system)**

437. T. Billiet, S. Deprez, B. Maedler, R. Peeters, H. Zhang, **A. Leemans**, T. Dhollander, D. Christiaens, F. Amant, A. Smeets, B. Van den Bergh, M. Vandenbulcke, E. Legius, S. Sunaert, and, L. Emsell, *"Investigating the long-term effects of systemic chemotherapy on brain white*

*matter using multi-shell diffusion MRI and myelin water imaging"* ISMRM Benelux Chapter. Maastricht, The Netherlands, 2014

438. T. Roine, B. Jeurissen, A. Leemans, W. Philips, and J. Sijbers, *"Analysis and modeling of isotropic partial volume effects in diffusion MRI"*, INCF symposium in Neuroinformatics, Antwerp, Belgium, 2013

439. N.E. van der Aa, **A. Leemans**, F.J. Northington, F. Groenendaal, M.J.N.L. Benders, L.S. de Vries, *"Vergelijking van neonatale DWI met DTI op de leeftijd van 3 maanden na een perinataal arterieel infarct"*, Dutch Society of Pediatric Neurology, Heerlen, the Netherlands, 2011

440. L. Holleran, A. Mohammed, H. Schmidt, J. McFarland, **A. Leemans**, P. McCarthy, L. Emsell, G.J. Barker, C. McDonald, D.M. Cannon, *"Widespread Microstructural White Matter Alterations in Treatment Resistance Schizophrenia: A DTI Study"*, Wiring the Brain: Making Connections, Powerscourt, Co Wicklow, Ireland, 2011

441. M. Froeling, G.J. Strijkers, B. Jeurissen, M.P. van der Paardt, J. Stoker, K. Nicolay, A.J. Nederveen, and **A. Leemans**, *"Fiber architecture of the female pelvic floor: An exploratory investigation using different diffusion MRI tractography algorithms"*, International Society for Magnetic Resonance in Medicine – Benelux Chapter in Roosendaal, The Netherlands, 2011

442. J. Verhoeven, E. Prodi, S. Deprez, N. Rommel, **A. Leemans**, P. De Cock, L. Lagae, R. Peeters, W. Van Hecke, and S. Sunaert, *"Does the language deficit in autism and specific language impairment (SLI) have a common neuro-anatomical substrate?"*, International Society for Magnetic Resonance in Medicine – Benelux Chapter in Roosendaal, The Netherlands, 2011

443. S. Deprez, F. Amant, J. Verhoeven, A. Smeets, M.R. Christiaens, **A. Leemans**, R. Peeters, W. Van Hecke, J. Vandenberghe, M. Vandenbulcke, and S. Sunaert, *"Longitudinal assessment of chemotherapy-induced structural changes in cerebral white matter and its correlation with impaired cognitive functioning in breast cancer patients"*, International Society for Magnetic Resonance in Medicine – Benelux Chapter in Roosendaal, The Netherlands, 2011

444. B. Jeurissen, **A. Leemans**, J. Sijbers, *"Registration based correction of DWI gradient orientations"* , International Society for Magnetic Resonance in Medicine – Benelux Chapter in Roosendaal, The Netherlands, 2011

445. D. Perrone, J. Aelterman, A. Pizurica, **A. Leemans**, and W. Philips, *"Compressive sensing in DT-MRI"*, 11th PhD Symposium of Engineering – Ghent University, Belgium, 2010

446. D. Polders, **A. Leemans**, H. Hoogduin, J. Hendrikse, M. Donahue, and P. Luijten, *"Evaluating the uncertainty of DTI parameters at 1.5, 3.0, and 7.0 Tesla"*, International Society for Magnetic Resonance in Medicine – 2nd Annual BeNeLux Meeting in Utrecht, the Netherlands, 2010

447. B. Jeurissen, **A. Leemans**, J.-D. Tournier, D.K. Jones, and J. Sijbers, *"Counting the number of fiber orientations in diffusion MRI voxels using constrained spherical deconvolution"*, International Society for Magnetic Resonance in Medicine – 2nd Annual BeNeLux Meeting in Utrecht, the Netherlands, 2010

448. T.K.M. Nguyen, B.J.M. van Kooij, M.J.N.L. Benders, N.E. van der Aa, **A. Leemans**, C. van Pul, and L.S. de Vries, *"MRI afwijkingen in de periventriculaire witte stof bij prematuur geboren kinderen: relatie tussen conventionele MRI en Diffusion Tensor Imaging parameters"*, 31st Congress of Pediatrics, p. 9-10, Veldhoven, The Netherlands, 2009

449. B. Jeurissen, **A. Leemans**, E. Fieremans, and J. Sijbers, *"Fiber tractography on a crossing fiber phantom with constrained spherical deconvolution MRI",* Liége Image Days (Medical Imaging), Liége, Belgium, 2008

450. **A. Leemans**, W. Van Hecke, and J. Sijbers, *"Virtual reconstruction of brain connectivity: art or science?"*, The joint Annual Meeting of the Association Européenne des Illustrateurs Médicaux et Scientifiques and the Medical Artists' Association of Great Britain, Antwerp, Belgium, 2007

451. P.M. Parizel, J.W. Van Goethem, E. Vandervliet, W. Van Hecke, **A. Leemans**, and L. van den Hauwe, "*Functionele beeldvorming bij gliale tumoren: nieuwe concepten*", The Antwerp Medical Seminars (Geneeskundige Dagen van Antwerpen) – Antwerp, Belgium, 2006

452. W. Van Hecke, **A. Leemans**, P.M. Parizel, J.W.M. Van Goethem, and J. Sijbers, *"DTI of normal appearing spinal cord in elderly"*, 21th Annual Symposium - Belgian Hospital Physicists Association, Ghent, Belgium, 2006

453. G. De Groof, M. Verhoye, V. Van Meir, I. Tindemans, **A. Leemans**, and A. Van der Linden, *"In Vivo Visualization of the Neuroanatomy and Brain Connectivity of Starling Brain Through Diffusion Tensor Imaging"*, 6th Bi-Annual Meeting – Belgian Society for Neuroscience, Brussels, Belgium, 2005

454. G. De Groof, M. Verhoye, **A. Leemans**, and A. Van der Linden, *"Using diffusion tensor imaging (DTI) to assess the neuronal plasticity in the brain of a songbird"*, 4th Annual Symposium – Young Belgian Magnetic Resonance Scientists, Brussels, Belgium, 2005

455. **A. Leemans**, J. Sijbers, M. Verhoye, and A. Van der Linden, *"Optimized Fiber Tractography based on Diffusion Tensor Magnetic Resonance Simulations"*, 20th Annual Symposium - Belgian Hospital Physicists Association, Namur, Belgium, 2005

456. J. Sijbers, N. Van Camp, **A. Leemans**, A. J. den Dekker, M. Verhoye and A. Van der Linden, *"Coregistration of Micro-MRI, microCT and microPET"*, Workshop on non Invasive 3D Microscopy, p. 16, Antwerp, Belgium, 2004

457. **A. Leemans**, J. Sijbers, M. Verhoye, A. Van der Linden, and D. Van Dyck, *"A Geometric Color Scheme for Visualizing Diffusion Tensor Magnetic Resonance Fiber Pathways"*, 19th Annual Symposium - Belgian Hospital Physicists Association, Brussels, Belgium, 2004

- **Patents**

458. **A. Leemans**, UMC Utrecht. Processing a dataset representing a plurality of pathways in a three-dimensional space. Bibliographic data: US2012268459 (2012-10-25). Publication details, see: http://worldwide.espacenet.com/publicationDetails/biblio?DB=EPODOC&II=0&ND=3&adjacent=true&FT=D&date=20121025&CC=US&NR=2012268459A1&KC=A1

For other online publication lists, see: Google Scholar | PubMed | Scopus | Orcid | Researcher ID.