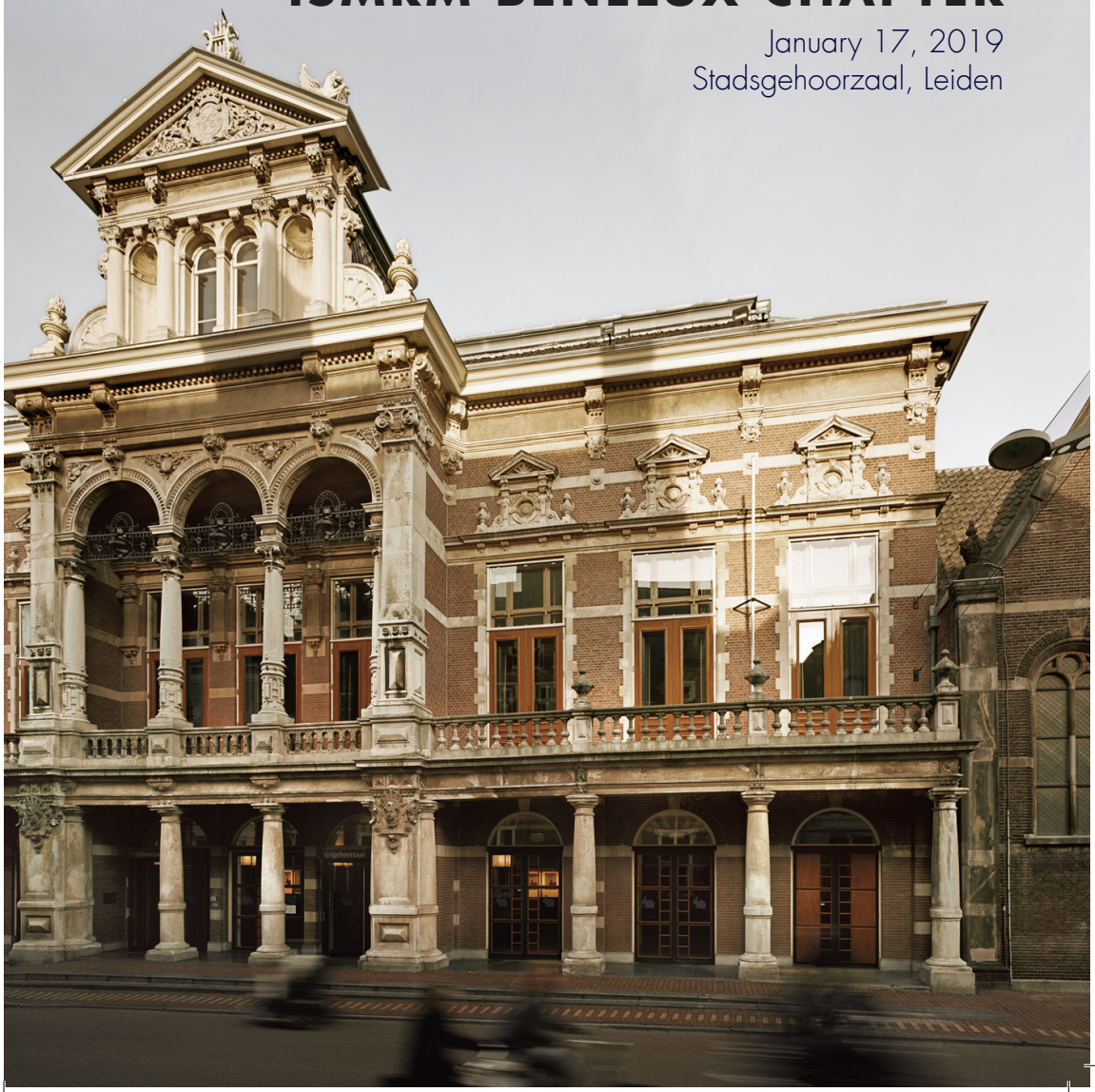
ISMRM Benelux Chapter

11TH ANNUAL MEETING
ISMRM BENELUX CHAPTER

January 17, 2019
Stadsgehoorzaal, Leiden



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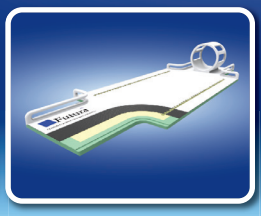

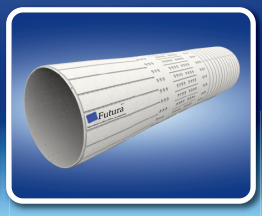

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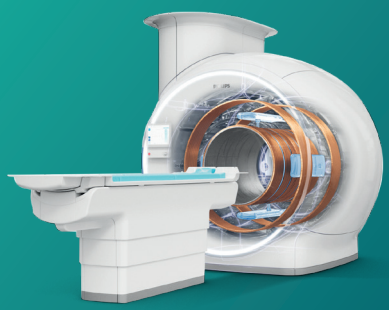

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1. Compared to the Ingenia 1.5T ZBO magnet.
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Welcome

Dear fellow MR-lovers,

Welcome to the 11th ISMRM Benelux chapter meeting!

We are especially proud to welcome you to the Stadsgehoorzaal in the beautiful city of Leiden. The Stadsgehoorzaal was completed in 1891, 127 years ago, and has since been used for concerts and entertainment events. As a neo-Renaissance architectural building, the Stadsgehoorzaal is one of a few in the Netherlands. Please walk into the Grote Zaal and the Breezaal paying attention to the interior: these two rooms are to date still originally decorated.

The ISMRM Benelux Chapter is known as a meeting that brings MR-lovers from Belgium, the Netherlands and this year also Luxembourg (welcome!) together. We, as the organizing committee, worked hard to make this day as inspiring and productive as possible. For that, we created a program to broaden your knowledge, meet fellow MR colleagues from the Benelux region and initiate a comfortable and professional atmosphere.

As every year, excellent junior researchers will have the chance to present their latest work during the power poster session. Six interesting parallel sessions have been put together with inspiring talks from young researchers about the latest advances in MR research, as well as two poster sessions. Have you noticed the new session names already?

We are being supported by our loyal sponsors, as well as some new sponsors this year! Please make sure to visit their booths during the poster sessions, coffee breaks and lunchtime. They are happy to talk about their work, inform you about new products and might even have job openings that could be of interest to some of you. This year we are also happy to announce four helpful and interesting workshops: Philips, Bruker, Proefschriftmaken & open science!

At the end of this exciting day, if you registered for the dinner, please join us at the Second Level. They will prepare a delicious buffet in a marvellous ambience for us. Additionally, we will have time to discuss new ideas, socialize and relax with our fellow Benelux colleagues.

Finally, we'd like to thank our sponsors, all the reviewers, moderators, the authors of all the abstracts and you for making this day possible.

Let's have fun and get inspired!

Antonia Kaiser,
on behalf of the organizing committee 2019!

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Program Overview

All the rooms are sponsored by

8:45 **Registration and Coffee** - *Grote Zaal*

9:30 **Morning Program** - *Aalmarktzaal*

- Welcome
- 9:35 Sponsor Pitches
- 9:45 Statement on 14T project - Peter Luijten
- 9:50 Challenge Pitches
- 10:20 Challenge 2018 Reports
- 10:40 Power Poster Presentations

11:00 **Coffee Break + Poster Session 1 + Sponsor Booths** - *Grote Zaal*
Odd-numbered posters and Power Posters

11:45 **Parallel Session 1: Oral Presentations**

- Brain Matters - *Aalmarktzaal*
- Acquisition 2.0 - *Breezaal*

12:45 **Lunch + Sponsor Booths** - *Grote Zaal*

13:45 **Parallel Session 2: Workshops + Annual Members Meeting**

ISMRM Benelux Annual Members Meeting - *Cornelis Schuytzaal*
Workshops (Registration Required)

- **Bruker** - *Breezaal*
- *'Pre-clinical imaging: prehistoric or prerequisite?'*
- **Proefschriftmaken** - *Jan Willem Schaapfoyer*
- *'Workshop Thesis Production'*
- **Philips** - *Aalmarktzaal*
- *'Speed done right, every time'*
- **Open Science Discussion** - *Waalse Kerkfoyer*

14:30 **Parallel Session 3: Oral Presentations**

- Body Language - *Aalmarktzaal*
- Loops & Wires - *Breezaal*

16:00 **Coffee Break + Poster Session 2 + Sponsor Booths** - *Grote Zaal*
Even-numbered posters and Postdoc Highlight posters

16:45 **Parallel Session 4: Oral Presentations**

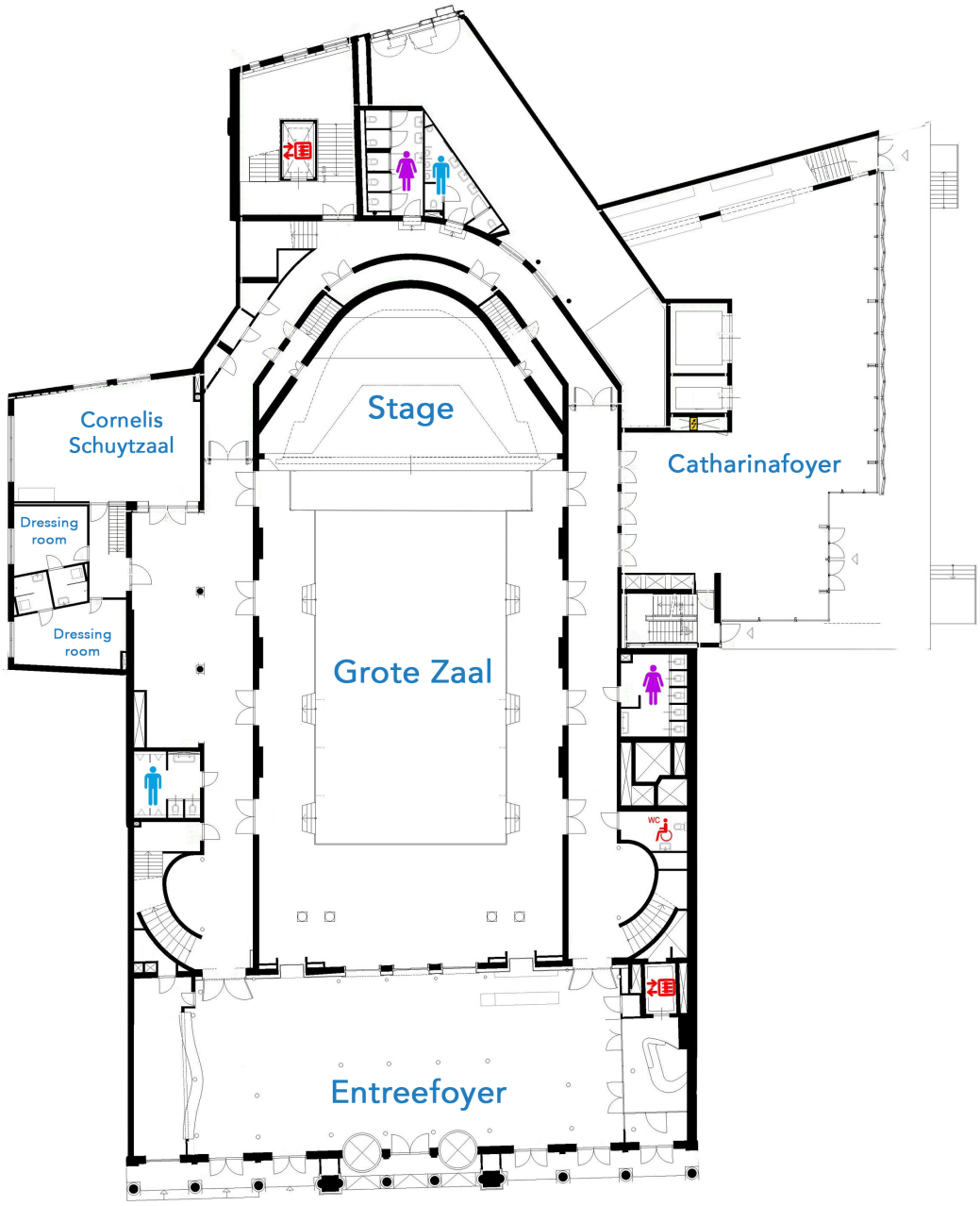
- Work That Data - *Aalmarktzaal*
- Brain Storm - *Breezaal*

17:45 **Award Ceremony & Reception** - *Grote Zaal*

19:15 **Dinner at Second Level (Registration Required)**

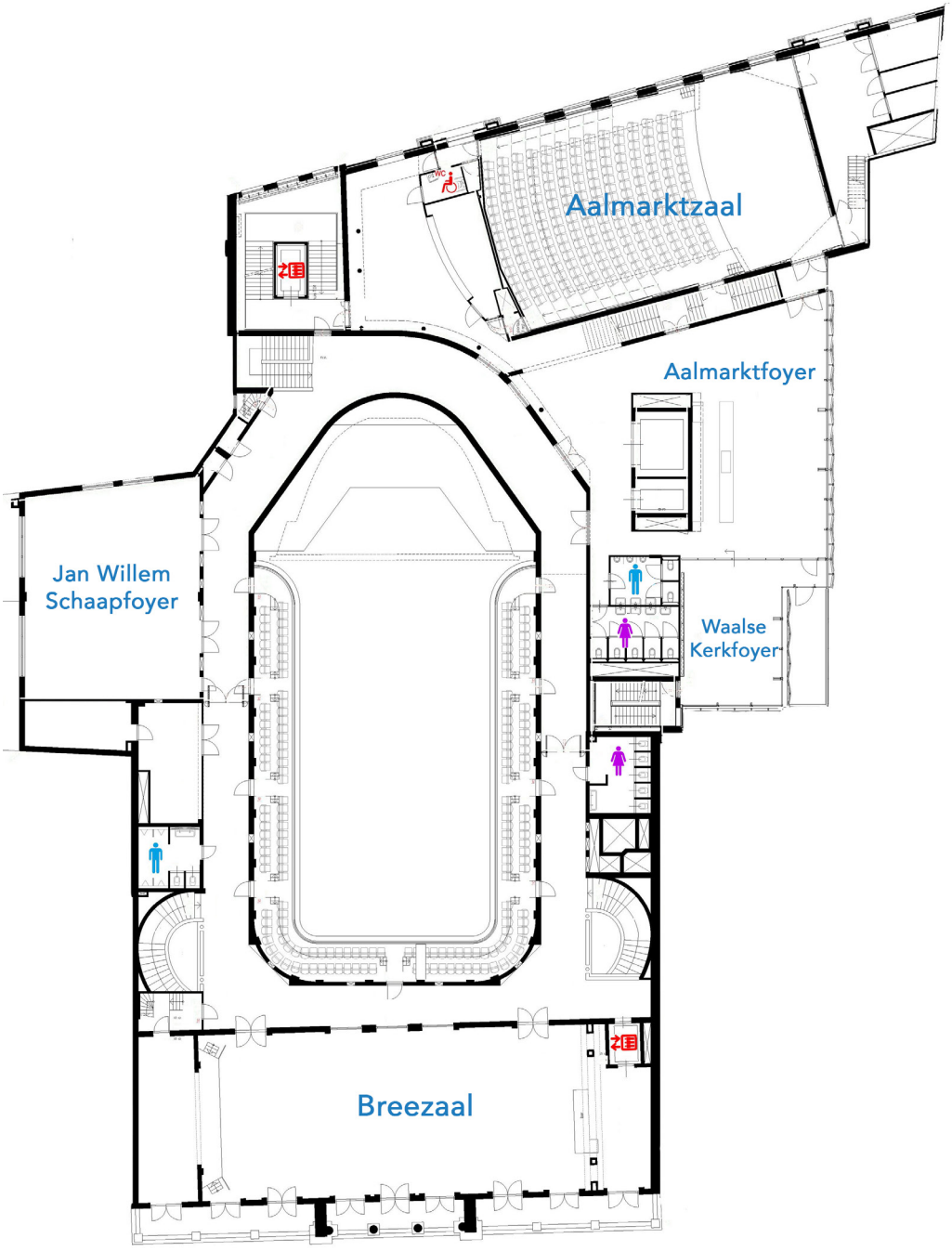
Floor Plan

Ground Floor



Floor Plan

First Floor



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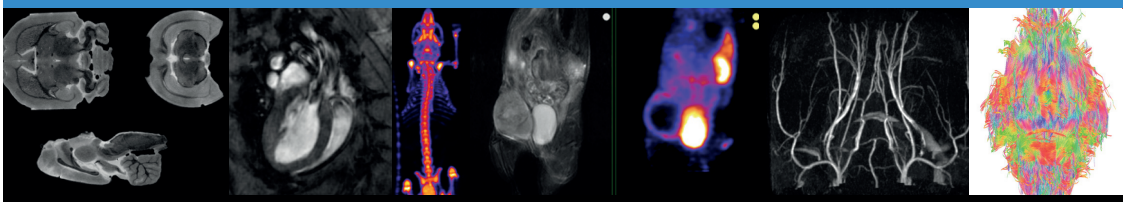

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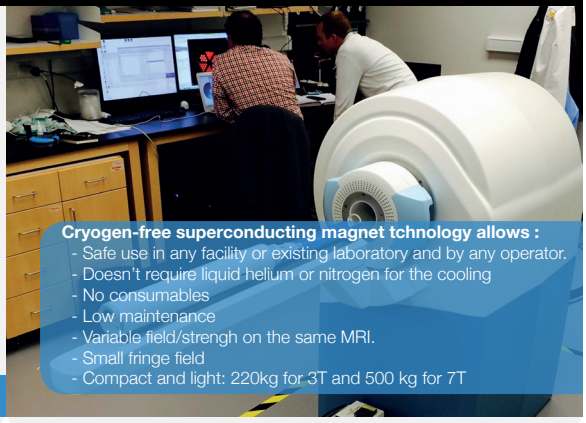

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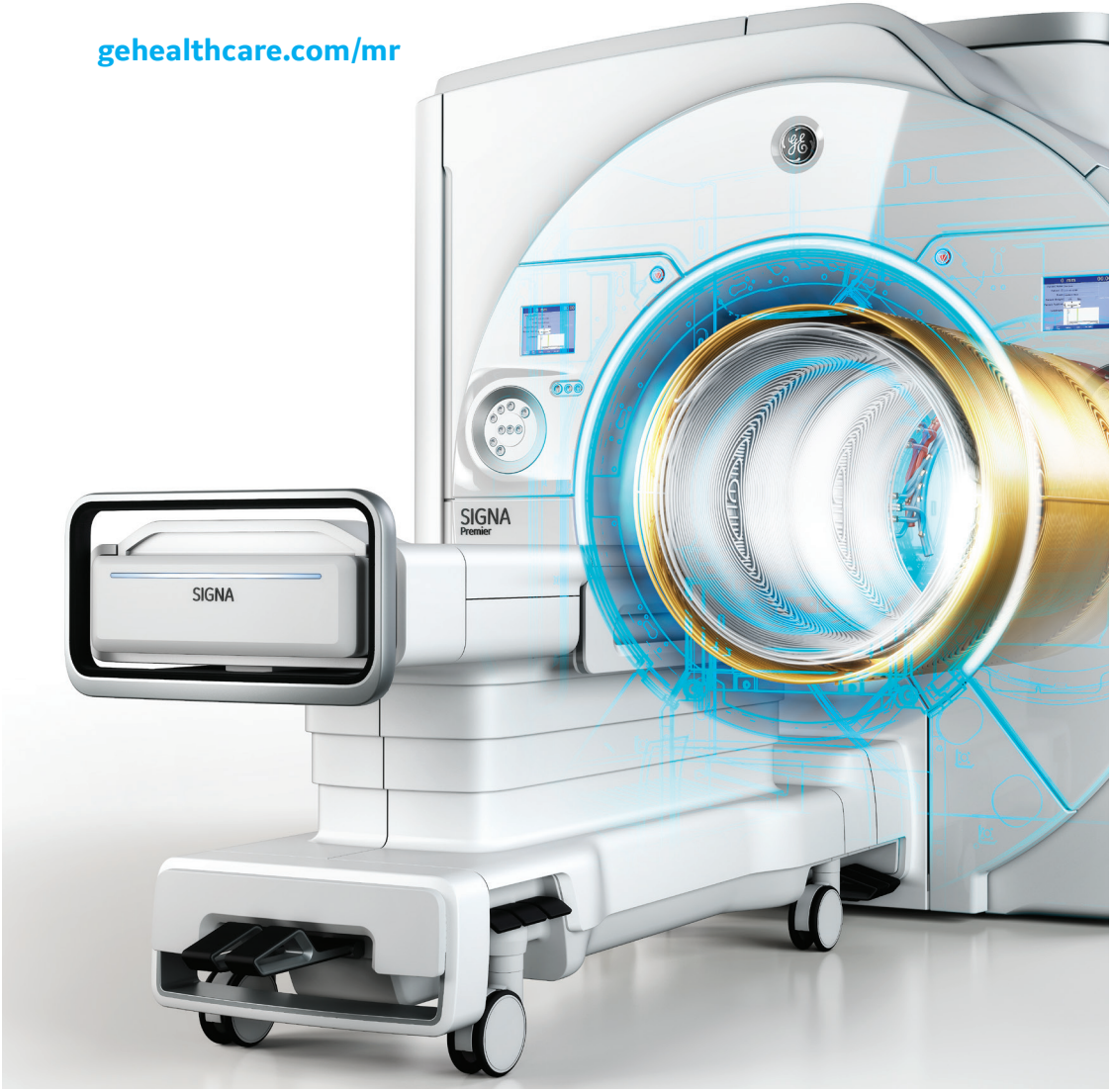

ISMRM Benelux Challenges 2019

Dear fellow MR-researchers,

After the success of last year, two new research grants will be awarded during this years' meeting! Applicants in two different categories were asked to come up with creative ideas and a detailed planning of the entire project.

Applications were scored in different domains and the top proposals of each category will be pitched at the plenary session. Three senior scientists from different institutes will jury the challenges and the winners of both categories will be awarded €25.000,- each!

Pioneer Award 2019

The ISMRM Benelux Pioneer Award 2019 is targeted at young and ambitious MR-scientists and provides PhD-students with the opportunity to independently carry out creative plans or ideas that are completely out-of-the box in an early phase of their career.

Women in MR Award 2019

Specifically thought for female researchers, the Women in MR Award aims to boost careers and create scientific opportunities. This challenge is sponsored by an NWO Aspasia grant to the Spinoza Centre for Neuroimaging, but non-neuro projects were more than welcome to apply!

We received almost two dozen applications from all areas of MR research this year. Two ambitious and exciting ideas per challenge are being presented today. The two winners will be awarded at the end of the day. The awarded winners will present their results at the 2020 meeting. If you are curious to know what the winners from last year have been doing, take a look at the schedule!

We would like to thank all applicants for their submissions, with a special thanks to the reviewers and today's jury members.

May the odds be with you - enjoy the challenges!

Challenge Pitches

Moderators

Jan-Willem Beenakker
Leiden University Medical Center

André Sprengers
Academic Medical Center, Amsterdam

ISMRM Benelux Pioneer Award 2019

Jordy K. van Zandwijk
Visualizing gravity-dependent endograft migration
Magnetic Detection & Imaging, University of Twente, NL

Joao Tourais
Fully quantitative high-resolution free-breathing perfusion cardiac MRI
Department BioMedical Engineering, Technical University of Eindhoven, NL

Women in MR Award 2019

Lydiane Hirschler
Non-invasive assessment of clearance mechanisms in the human brain
Leiden University Medical Center, NL

Irena Zivkovic
Neonatal brain MRI with a flexible head array at low field
C. J. Gorter Center for High Field MRI, Leiden, NL

Moderators

Jan-Willem Beenakker
Leiden University Medical Center

André Sprengers
Academic Medical Center, Amsterdam

Out of the BOX Challenge

Sophie Schmid

Venous Velocity Selective Inversion for OEF determination

C.J. Gorter Center, Radiology, Leiden University Medical Center, NL

For the ISMRM Benelux Out of the box challenge 2018 I proposed to develop a non-invasive method to image the oxygen extraction fraction (OEF) at tissue level for the whole brain. Current methods to measure the OEF have limited SNR and slice coverage, therefore OEF can only be determined in large veins. I implemented velocity-selective spin labeling inversion (VSI), and was able to target the post venular blood pool using pulsed ASL for arterial nulling and a multi-slice readout for whole brain coverage. By combining the venous VSI with a T2-preparation module the OEF could be estimated in the venous blood pool.

Abroad Internship Challenge

Gabriel Ramos-Llordén

Enabling higher acceleration rates in diffusion MRI by exploiting joint information from the k-q space: a GRAPPA-based methodology

Psychiatry Neuroimaging Laboratory, Brigham and Women's Hospital and Harvard Medical School, Boston, USA

Shortening the acquisition time of dMRI is a longstanding goal for the MRI community. Conventionally, dMRI is limited to in-plane acceleration factors of 2 or 3. Recent work has shown that higher acceleration rates may be obtained by exploiting information from coil-channels and redundancies across multiple images with different contrasts. In this presentation, we showcase an extended version of conventional GRAPPA reconstruction, where the missing k-space lines are learned not only from coil channels but also from k-space data acquired with different q-space points. Substantial gain in quality is achieved at high acceleration rates, where conventional GRAPPA usually breaks down.

Moderators

Jan-Willem Beenakker
Leiden University Medical Center

André Sprengers
Academic Medical Center, Amsterdam

PP-001 Linda Heskamp

Behavioural intervention in myotonic dystrophy type 1 assessed by longitudinal MRI of skeletal muscles

Department of Radiology, Radboud University Medical Center, Nijmegen, NL

A behavioural intervention, directed to increase physical activity, had a beneficial effect on lower extremity muscle function in patients with myotonic dystrophy type 1 (DM1). Here, we evaluated potential causes of the effect of this intervention with quantitative MRI in the 20 lower extremity muscles of 27 DM1 patients. We showed that it leads to a ~4% average increase in muscle mass, especially in healthy appearing muscle. Fat infiltration was not decelerated. Therefore, we conclude that some muscles in DM1 patients are trainable, preferably early on in the course of the disease.

PP-002 Suzanne L. Franklin

The influence of the cardiac cycle on Velocity Selective and Acceleration Selective Arterial Spin Labeling, using retrospective triggering

C.J. Gorter Center for High Field MRI, Department of Radiology, Leiden University Medical Centre, Leiden, NL; Center for imaging sciences, University Medical Centre Utrecht, Utrecht, NL

In this study, the influence of the cardiac cycle on the amount of label produced by velocity-selective (VSASL) and acceleration-selective arterial spin labeling (AccASL) was investigated. A sequence combining pCASL and VSASL(AccASL) was developed to isolate the arterial blood pool. Results showed significant arterial signal fluctuations in the amount of label produced by VSASL, AccASL and pCASL over the cardiac cycle. Hence, in order to become independent of the cardiac cycle, sufficient averages need to be taken when applying these techniques. Alternatively, these findings could be highly interesting for the purpose of quantifying pulsatility higher up in the vascular tree. physiological details beyond current resolution limitations.

PP-003 Gerhard Drenthen

T_2 relaxometry reveals frontal demyelination in children with childhood absence epilepsy

Department of Electrical Engineering, Eindhoven University of Technology, Eindhoven, NL;
School for Mental Health and Neuroscience, Maastricht University Medical Center, Maastricht, NL;
Department of Radiology and Nuclear Medicine, Maastricht University Medical Center, Maastricht, NL

Childhood absence epilepsy (CAE) is characterized by daily occurring brief episodes of unconsciousness in otherwise normally developing children. While CAE is generally believed to be benign, previous studies revealed a higher incidence of attentional deficits. Moreover, previous diffusion weighted imaging (DWI) studies found structural abnormalities, suggesting that myelin might play a role. In this study, myelination was studied in children with CAE and controls, by applying myelin imaging using T2 relaxometry. We found a decreased frontal myelin content in patients with CAE compared to controls. This is the first study to show an effect using a specific myelin modality.

Moderators

Jan-Willem Beenakker
Leiden University Medical Center

André Sprengers
Academic Medical Center, Amsterdam

PP-004 Niels de Joode

Functional Magnetic Resonance Spectroscopy of response inhibition

Amsterdam University Medical Center, Vrije Universiteit, Amsterdam, NL

Ten volunteers performed a Go/NoGo task during MRS acquisition at 7T to assess if event-related fMRS could detect dynamic glutamate changes during response inhibition. Metabolite spectra were acquired using a semiLASER sequence (to assess task-induced fluctuations in glutamate and lactate) and were interleaved with water-unsuppressed spectra (to assess the BOLD response-induced water linewidth changes). The voxel was placed in the dorsomedial prefrontal cortex. Although an fMRI pilot confirmed the voxel location, no significant differences in metabolite concentrations or water amplitude between NoGo and Go trials was detected.

PP-005 Rukun Hinz

Bottom-up sensory processing can decrease activity and functional connectivity in the default mode like network in rats

Bio-Imaging Lab, University of Antwerp, Antwerp, BE

The default mode network is a large-scale brain network that is active during rest and deactivates as well as decreases its functional connectivity during externally oriented attention demanding cognitive tasks (top-down). However, it is not sufficiently understood whether attentional guidance by externally driven factors such as visual stimulation (bottom-up) could also result in similar reduction of activity and connectivity in the DMN. In this study we investigated whether bottom-up visual processing can influence the default mode network activity and its functional connectivity in rats.

Moderators

Aneta Keliris
University of Antwerp

Anouk Schrantee
Academic Medical Center, Amsterdam

O-001 - Laura Vergoossen

Do physical inactivity and sedentary time associate with measures of brain connectivity? - Novel insights from The Maastricht Study

Department of Radiology & Nuclear Medicine, Maastricht University Medical Center (MUMC+), Maastricht, NL; School for Mental Health and Neuroscience (MHeNs), Maastricht University (UM), Maastricht, NL

O-002 - Gwen Schroyen

Longitudinal brain volume changes in pre-menopausal breast cancer patients treated with chemotherapy

Department of Imaging and Pathology, KU Leuven, Leuven, BE

O-003 - Merlin Weeda

The deep learning lesion segmentation method nicMSlesions only needs one manually delineated subject to outperform commonly used unsupervised methods

Department of Radiology and Nuclear Medicine, MS Center Amsterdam, Amsterdam Neuroscience, Amsterdam UMC - location VUmc, Amsterdam, NL

O-004 - Ilse Kant

Preoperative brain MRI features and postoperative delirium

Department of Intensive Care, UMC Utrecht, Utrecht, NL

O-005 - Ahmed Radwan

The temporo-insular projection system: a multisubject fiber tractography study using connectome diffusion data

Department of Imaging and pathology, Translational MRI, KU Leuven, Leuven, BE

Breezaal

Acquisition 2.0

11:45

Moderators

Ot Bakermans
Academic Medical Center, Amsterdam

Wyger Brink
Leiden University Medical Center

O-006 - Niek Huttinga

Prospective 3D+t non-rigid motion estimation at high frame-rate from highly undersampled k-space data: validation and preliminary in-vivo results

Center for image sciences, University Medical Center Utrecht, Utrecht, NL;
Utrecht University, Utrecht, NL

O-007 - Beatrice Lena

Flip angle optimization and in vitro demonstration of 2D DESPOT1-based fat thermometry

Image Sciences Institute, University Medical Center Utrecht, Utrecht, NL

O-008 - Joao Tourais

High-Resolution motion-corrected 2D Myocardial Perfusion MRI using Locally Low Rank and Wavelet Sparsity Constraints

Division MR Clinical Science, Philips, Best, NL;
Dept. of Biomedical Engineering, Eindhoven University of Technology, Eindhoven, NL

O-009 - Kemal Sumser

In vivo Temperature Monitoring by Multipeak Multi Echo Modelling PRFS MR Thermometry

Department of Radiation Oncology, Erasmus Medical Center Cancer Institute, Rotterdam, NL

O-010 - Tom Bruijnen

Prospective GIRF-based RF phase cycling to prevent eddy current-induced steady-state disruption in balanced SSFP imaging

Department of Radiotherapy, University Medical Center Utrecht, Utrecht, NL

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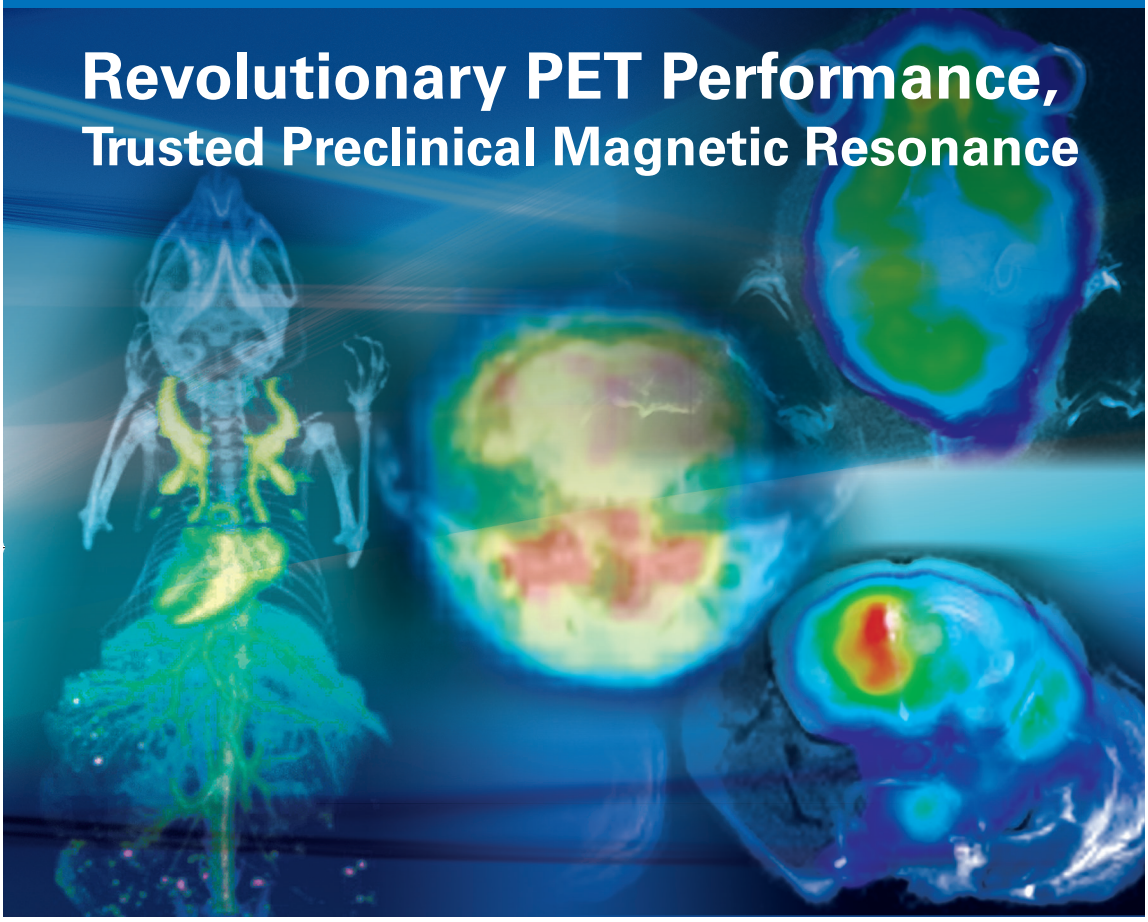

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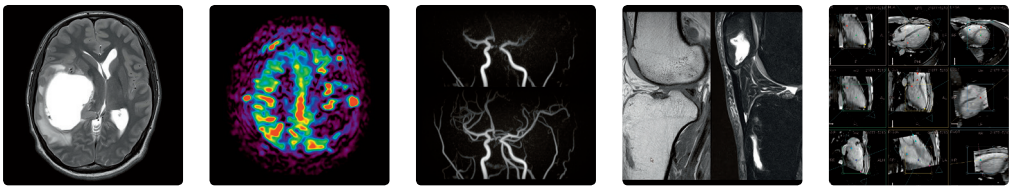

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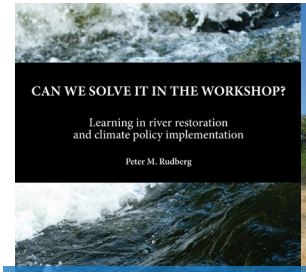

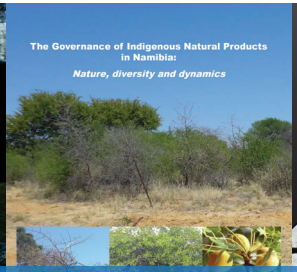

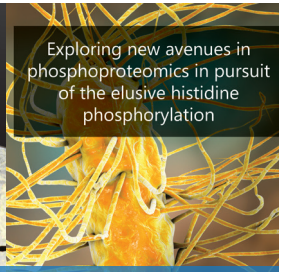

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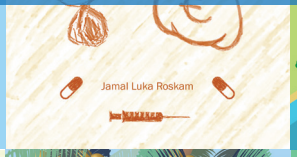

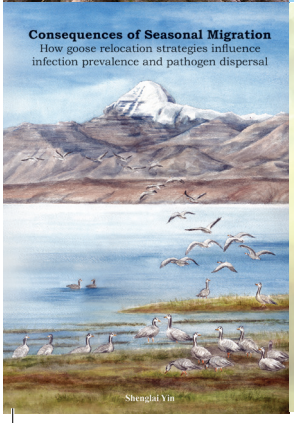

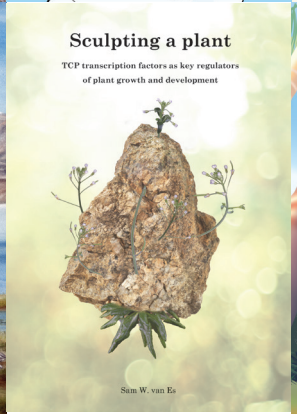

Workshops 13:45

This year, some of our sponsors are offering informative workshops in a short parallel session after lunch. The annual members meeting of our chapter, to which all participants of the meeting are invited, will also be held at the same time.

ISMRM Benelux Board - *Annual Members Meeting* - *Cornelis Schuytzaal*

In parallel to the sponsored workshops, the board of the ISMRM Benelux will host the annual members meeting of the ISMRM Benelux Chapter. During this year's meeting we will again discuss the current status of the Chapter. The meeting is open to everyone and especially to those willing to participate in future activities of the chapter! More specifically, the agenda points comprise an evaluation of the present and previous annual meeting, a financial report and a discussion on future activities. You are welcome to present your own ideas to bring our chapter into fruition.

Bruker Sponsored Workshop - *Breezaal*
'Pre-clinical imaging: prehistoric or prerequisite?'

The landscape for pre-clinical imaging has changed vastly over the last decade. Pre-clinical imaging has changed from pioneering MRI technological developments to wide-scale application in animal research and pharmacology. On the other hand, there are scientific discussions about data reproducibility and validity of animal models to study human disease, and political movements such as 'Proefdiervrije Innovatie' that have a large impact on our science. During this discussion, we will present the current scientific landscape and discuss with the attendees the steps that we may take to consolidate pre-clinical imaging research now and in the future.

Open Science Discussion - *Waalse Kerkfoyer*

Initiatives like OpenMR Benelux 2019 are important to promote growth, understanding and adoption of open science practices in the field of MRI in medicine. This one-day event (16 January 2019, Leiden) covers a range of topics related to open science in MRI (see the website for full talk abstracts). During the open science workshop on 17 January 2019, we will discuss this event and its successes/failures. Attendees will have the opportunity to be part of the discussion and to contribute towards future improvements. If you are interested in meeting likeminded students/researchers and joining the team that will organise the next OpenMR Benelux event, join us for this open science workshop!

Philips Sponsored Workshop - *Aalmarktzaal*
'Speed done right, every time'

To meet the increased demand for productivity, a technology break-through in acceleration is required. Leveraging our long-standing leadership position in speed (i.e. SENSE), Philips brings a breakthrough in productivity. Compressed SENSE is about accelerating full patient examinations and thus guaranteeing the next level in productivity and image quality to empower your staff to focus where it matters the most, enhanced patient care. During this workshop we will elaborate on the practical use of Compressed SENSE.

Proefschriftmaken Sponsored Workshop - *Jan Willem Schaapfoyer*
'Workshop Thesis Production'

The production of your thesis is a process that should be as smooth and stressless as possible. The workshop will focus on all the aspects of the process, including topics such as the designing, printing and publishing of your thesis, the time schedule and the costs.

Moderators

Lena Vaclavu
Academic Medical Center, Amsterdam

Jeanine Prompers
University Medical Center, Utrecht

O-011 - Carmen Blanken

Pseudo spiral compressed sensing accelerated whole-heart 4D flow MRI: validation against EPI readout

Department of Radiology, Amsterdam University Medical Centers, location AMC, Amsterdam, NL

O-012 - Thom Veeger

Evaluation of inter- and intramuscular differences using multi-slice T_2* measurements after an in-magnet stepping exercise

Radiology, Leiden University Medical Center, Leiden, NL

O-013 - Quincy van Houtum

Full coverage ^{31}P MRSI of the liver with a bodycoil at 7T

Radiology, UMC Utrecht, Utrecht, NL

O-014 - Myriam Jaarsma-Coes

Measuring eye deformation between planning and proton beam therapy position using MRI

Radiology, C.J. Gorter Centre for High Field MRI, Leiden University Medical Centre, Leiden, NL;
Ophthalmology, Leiden University Medical Centre, Leiden, NL

O-015 - Anneloes de Boer

Renal multi-parametric MRI: Ready to launch? A reproducibility study

Department of Radiology, University Medical Center Utrecht, Utrecht, NL

O-016 - Helena Ajo Asensio

Visualization of jugular veins from sitting upright to supine position using low field MRI

Magnetic Detection & Imaging, University of Twente, Enschede, NL

O-017 - Jithsa Monte

Quantitative multi-parametric MRI reveals micro-structural changes in upper-leg muscles after running a marathon

Department of Radiology and Nuclear Medicine, Amsterdam University Medical Centers, University of Amsterdam, Amsterdam, NL

Moderators

Irena Zivkovic
Leiden University Medical Center

Martijn Froeling
University Medical Center, Utrecht

O-018 - Jeroen van Gemert

Optimized High-Permittivity Pads Can Reduce SAR and Increase Transmit Field Homogeneity in Fetal Imaging at 3T

Circuits and Systems Group, Delft University of Technology, Delft, NL

O-019 - Lieke van den Wildenberg

B-0 shimming of the liver using a local array of shim coils in the presence of respiratory motion at 7T

Center for Image Sciences, UMC Utrecht, Utrecht, NL

O-020 - Erik Huijing

Next generation Crusher Coil for suppressing extra cranial lipid signals at 7 Tesla

Imaging Division, University Medical Center, Utrecht, NL

O-021 - Luuk Voskuilen

A 12-channel flexible receive coil for accelerated tongue imaging

Department of Head and Neck Surery and Oncology, Netherlands Cancer Institute/Antoni van Leeuwenhoek Hospital, Amsterdam, NL; Department of Radiology and Nuclear Medicine, Amsterdam UMC, University of Amsterdam, Amsterdam, NL; Department of Oral and Maxillofacial Surgery, Academic Centre for Dentistry Amsterdam and Academic Medical Center, Amsterdam, NL

O-022 - Syed Muhammad Mueez Aizaz

Evaluation of attenuation reduction of a dedicated carotid PET/MRI coil

Radiology and Nuclear Medicine, Maastricht University Medical Center, Maastricht, NL;
CARIM School for Cardiovascular Diseases, Maastricht, NL

O-023 - Ettore F. Meliadò

Experimental Validation of Subject-Specific Local SAR Assessment by Deep Learning

Center for Image Sciences, University Medical Center Utrecht, Utrecht, NL;
MR Code BV, Zaltbommel, NL

O-024 - Edwin Versteeg

Supersonic imaging with a silent gradient axis driven at 20 kHz

Radiology, UMC Utrecht, Utrecht, NL

Moderators

Matthan Caan
Academic Medical Center, Amsterdam

Laura Jonkman
VU University Medical Center, Amsterdam

O-025 - Joe Juffermans

Age of aortic coarctation correction correlates with aortic vessel wall stiffening: evaluation of wall shear stress and pulse wave velocity

Department of Radiology, Leiden University Medical Center, Leiden, NL

O-026 - Kirsten Koolstra

t-Distributed Stochastic Neighbor Embedding (t-SNE) as a Tool for Visualizing the Encoding Capability of Magnetic Resonance Fingerprinting (MRF) Dictionaries

C.J. Gorter Center for High Field MRI, Leiden University Medical Center, Leiden, NL

O-027 - Merel de Leeuw den Bouter

Joint Iterative Image Reconstruction and Field Map Estimation in Low Field MRI

Delft Institute of Applied Mathematics, Delft University of Technology, Delft, NL

O-028 - Riwaj Byanju

Study of key properties behind a good undersampling pattern for quantitative estimation of tissue parameters

Departments of Medical Informatics and Radiology, Erasmus MC, Rotterdam, NL

O-029 - Carlijn Tenbergen

Initial evaluation of an automated acquisition workflow for multiparametric MR (spectroscopic) imaging of the prostate

Radiology and Nuclear Medicine, Radboud University Medical Center, Nijmegen, NL

Moderators

Mario Baez-Yanez
University Medical Center, Utrecht

Elisabeth Jonckers
University of Antwerp

O-030 - Lisanne Canjels

Resting-state low-frequency fluctuations of hippocampal subfields in healthy controls and temporal-lobe epilepsy patients

Department of Radiology and Nuclear Medicine, Maastricht University Medical Center, Maastricht, NL;
School for Mental Health and Neuroscience, Maastricht University, Maastricht, NL

O-031 - Liza Afzali-Hashemi

Can ASL detect white matter perfusion signal in patients with sickle cell disease?

Department of Radiology & Nuclear Medicine, Amsterdam UMC, Amsterdam, NL

O-032 - Icaro Oliveira

Comparing VASO and BOLD response behavior with respect to movement rate at 7T

Spinoza Centre for Neuroimaging, Royal Netherlands Academy of Arts and Sciences, Amsterdam, NL

O-033 - Delphine Sauvage

Assessing physiological changes induced by an experimental anticancertherapy on a murine transgenic model of neuroblastoma, by using in vivo Magnetic Resonance Imaging

Laboratory of Experimental Cancer Research, Department of Oncology, Luxembourg Institute of Health, LU

O-034 - Merlijn van der Plas

Combined estimation of dispersion and macrovascular signal in multi-PLD pCASL data using a two-component model

C.J. Gorter center for High field MRI, Deparment of Radiology, Leiden University Medical Center, Leiden, NL

Poster Index

Poster no.	First author	
Brain Matters		
P-001	Inglese	Structural MRI abnormalities and complement system are correlated with neuroinflammation in Neuropsychiatric Systemic Lupus Erythematous: a retrospective study on a large and well-defined cohort
P-002	van Hespen	Intracranial vessel wall thickness measurements: A post-mortem comparison between hypertensive patients and controls
P-003	van der Pluijm	Reproducibility of neuromelanin sensitive imaging of the substantia nigra: a comparison of three different sequences
P-004	Blommaert	In utero exposure to chemotherapy affects cortical neurodevelopment
P-005	Buikema	Effect of diffusion time dependence on parameter estimation in the clinical time frame: a simulation study using PGSE
P-006	Bulk	Detection of accumulated iron and microglia in the striatum of Huntington's disease patients: evidence from post-mortem MRI and histology
P-007	St-Jean	A separable least squares approach for intravoxel incoherent motion (IVIM) MRI
P-008	Deman	Structural neuroconnectivity in children with developmental stuttering: A DTI study
P-009	Jonkman	Diffuse amyloid-beta relates to lower structural degree and higher local efficiency in the posterior cingulate: a post-mortem MRI and histology study
P-010	de Jong	Quality Assessment in Population Imaging: The Maastricht Study
P-011	Hedouin	Estimation of microstructural properties of white matter from multi-orientation GRE signal simulations of realistic models
P-012	Hirschler	High resolution T2-prepared MRI enables non-invasive assessment of CSF flow in perivascular spaces of the human brain
Loops & Wires		
P-013	de Jong	Development of a 16-Channel Rotated Double Row Transceiver Array for Neuroimaging at 7T
P-014	O'Reilly	The design of a homogenous large-bore Halbach array for low field MRI
P-015	Ali Haghnejad	Uncompromised MRI of knee cartilage while incorporating sensitive sodium MRI
P-016	Welting	B1 performance when excluding RF shields from transmit head coils to simplify multi nuclei and gradient insert setups
P-017	Zijlema	A radiolucent and flexible high impedance coil array to increase the imaging performance of a 1.5T MR-linac
P-018	Tokaya	Explaining current patterns on linear metallic implants during MRI exams using the transfer matrix
P-019	Chavarria	Towards uncompromised merging of 1H and 31P receive arrays for multi nuclear metabolic imaging at the brain at 7T
P-020	van Leeuwen	Split-Ring-Resonator shield improves SAR efficiency and homogeneity of birdcage antenna
P-021	Stijnman	Calculation of the scattered RF field around implants within seconds using low-rank inverse updating method

11:00 - 11:45 Authors of **odd** numbered posters must be available at their poster
16:00 - 16:45 Authors of **even** numbered posters must be available at their poster

Poster Index

Poster no.	First author	
P-022	Steensma	SAR and temperature distributions in a database of realistic human models for 7T cardiac imaging
P-023	Ruytenberg	A transceive array with passively fed dipoles and shielded loop coils for laryngeal imaging at 7T
P-024	Voogt	Approaching the ultimate intrinsic coil performance for 7T body imaging with high-density parallel transmit/receive arrays
P-025	Zivkovic	Highly decoupled shielded loop coils as receive array elements for 7T MRI
Work That Data		
P-026	Leijsen	Improving Tissue Electrical Properties Reconstructions by Exploiting the Benefits of Combining Deep Learning-EPT and 3D Contrast Source Inversion-EPT
P-027	Florkow	The impact of variable MRI acquisition parameters on deep learning-based synthetic CT generation
P-028	van Hoek	Reconstructing Lesions not seen during training using a Recurrent Inference Machine
P-029	van der Heide	Enhanced MR-STAT by a multi-coil reconstruction framework
P-030	Naeyaert	Brain Segmentation using Synthetic MRI in Very Preterm infants: a Validation Study
P-031	Fuchs	Limitations of 2-D Field Structure Assumptions in Electrical Properties Tomography and its 3-D CSI-EPT Solution
P-032	Chan	SEPIA - SuscEptibility mapping PIpeline tool for phAse images
P-033	Khalili	Brain tissue segmentation in fetal MRI using convolutional neural networks with simulated intensity inhomogeneities
P-034	Slotman	Automatic pelvic bone registration of low-field MRI to pre-operative 3T-MRA for vascular interventions
P-035	Harrevelt	Exploration on deep-learning based sorting of k-space data for ECG-free cardiac cine-MRI
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P-037	van Ormondt	Reduction of MRSI postprocessing-time by using coarray-semantics
P-038	Stemkens	Respiratory motion variability in 4D-MRI for MR-guided radiotherapy
P-039	Maspero	Golden angle radial undersampling to accelerate synthetic CT generation with generative adversarial networks for prostate MR-guided Radiotherapy
P-040	Karkalousos	A Deep Learning Accelerated MRI Reconstruction Model's Dependence on Training Data Distribution
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P-042	Oliver-Taylor	A multi-site round robin assessment of ASL using a perfusion phantom
P-043	Heunis	Improving BOLD sensitivity with real-time multi-echo echo-planar imaging: towards a cleaner neurofeedback signal

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Poster Index

Poster no.	First author	
P-044	Naessens	Elucidating brain water management in hypertension: a preclinical MRI study
P-045	van der Loo	Measuring brain tumour physiology with multi-parametric MRI
P-046	Bladt	Beyond the consensus: should measurement of T1 of blood and labeling efficiency be included and should a single- or multi-PLD protocol be used in a five-minute protocol for PCASL?
P-047	Kurban	Dual-echo simultaneous multi-slice spiral acquisition for concurrent CBF and BOLD fMRI at 7T
P-048	Arts	Method for vessel selection effects the outcome and reproducibility of velocity and pulsatility measures in cerebral penetrating arteries
P-049	Jungerius	Contrast dependence of the metabolic and haemodynamic response to visual stimuli in human V1, as measured by fMRS and fMRI
P-050	Salajeghe	Impaired cerebral vascular reactivity in Q175 mouse model of Huntington's disease using Arterial spin labeling
P-051	van den Kerkhof	High-frequency fluctuations in the brainstem using resting-state fMRI - a feasibility study
P-052	Vaclavu	Cerebral hypometabolism measured with intravascular T2-prepared tissue relaxation with inversion recovery (T2-TRIR) and pCASL in adults with sickle cell disease
P-053	Pullens	Influence of multiband factor on temporal SNR limits using a clinical BOLD-EPI sequence
P-054	Schmid	Venous Velocity Selective Inversion for improved selection of the venous blood pool for oxygen extraction fraction determination
P-055	Van Schuerbeek	Denoising in task fMRI
P-056	Kaiser	Targeting emotional dysregulation in adult attention-deficit hyperactivity disorder
Body Language		
P-057	van Heijster	Quantitative assessment of citrate secretion by 13C-labeling in human prostate cancer cell line LNCaP using a probabilistic model
P-058	Keene	Increased fatty infiltration of individual extraocular muscles in myasthenia gravis and graves' orbitopathy
P-059	Veeraiah	Water T2 is altered with hepatic lipid fraction at 3 Tesla
P-060	Acciardo	Metabolic profiling discriminates between BRAFi-sensitive and BRAFi-resistant melanoma cells
P-061	Roos	Reducing B1+ inhomogeneities in the brain at 7T: Pads or Parallel transmit?
P-062	Roumans	High Intrahepatic lipid content is associated with low choline status in humans-a 1H-MRS study at 3 Tesla
P-063	Holtackers	3D whole-heart dark-blood late gadolinium enhancement without additional magnetization preparation for simultaneous detection of both atrial and ventricular fibrosis
P-064	Staal	Isoflurane chemical shift artefact avoidance strategies for high sensitivity *in vivo* 19Fluorine MRI
P-065	Brinkhof	Multiparametric cartilage MRI within 30 minutes
P-066	Núñez González	Accuracy and Repeatability study of MAGiC and MR Fingerprinting
P-067	Nicastro	Liver fibrosis: An IVIM imaging study

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Poster no.	First author	
P-068	Cristobal-Huerta	Knee Cartilage T2 mapping: Comparison for Compressed Sensing 3D-GRASE, CubeQuant and CartiGram
P-069	Simonis	Determining the effect of surgery on pelvic organ position in prolapse patients using upright MRI
P-070	Wüst	The antibiotic doxycycline compromises cardiac mitochondrial and contractile function in diabetic mice
P-071	Turco	Clinical evaluation of dispersion MRI for prostate cancer localization: a multicenter study
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Acquisition 2.0		
P-073	Navest	Understanding the physical origins behind the noise navigator
P-074	Bones	Influence of labeling parameters of velocity selective arterial spin labeling for renal perfusion imaging
P-075	Zhang	High Resolution 3D Isotropic Multi-Contrast Brain Imaging using APIR4EMC
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P-077	Fritz	MESMERISED: Super-accelerated 7T STEAM imaging for quantitative T1w MRI
P-078	Sloots	Cardiac and Respiratory induced 3D Brain Tissue Strain as Marker of Physiological Blood Volume Dynamics at 7T MRI
P-079	van der Krogt	Optimization of enhanced T1-weighted High Resolution Isotropic Volume Excitation protocol for dynamic contrast-enhanced MRI at 3T
P-080	Baas	Investigation of arterial blood T1 measurements using cardiac-triggered acquisitions in a pulsatile flow phantom
P-081	Metere	2D Echo-Planar Imaging with an Inaudible Resonant z-Gradient
P-082	Ercan	Myelin-sensitive imaging of the optic chiasm and optic nerve at 3T using inhomogeneous magnetization transfer (ihMT) with high B1 pulses
P-083	Schulz	2D k-space waves for silent EPI acquisitions

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Postdoc Highlight Posters 16:00

This year, we introduce an exciting new poster session to highlight the excellent work done by our postdoc fellows in the Benelux. Make sure you spend some time visiting their posters and enjoy the fruitful discussion!

BP-001 - Anita Harteveld

Towards systematic evaluation of velocity-selective ASL in the measurement of placental perfusion

Department of Radiology, University Medical Center Utrecht, Utrecht, NL

BP-002 - Chloé Najac

Estimating compartment- and cell-specific microscopic anisotropy in the human brain using double-diffusion encoding spectroscopy at 7T

C.J. Gorter Center for High Field MRI, Department of Radiology, Leiden University Medical Center, Leiden, NL

BP-003 - Evita Wiegers

Elevated brain glutamate levels in type 1 diabetes

Department of Radiology and Nuclear Medicine, Radboud university medical center, Nijmegen, NL

BP-004 - Esther Warnert

Voxelwise correlation between vascular parameters obtained with ASL and DSC as predictor of IDH-mutation status in non-enhancing glioma

Department of Radiology & Nuclear Medicine, Erasmus MC, Rotterdam, NL

BP-005 - Petra J. van Houdt

Quality assurance of quantitative MRI for biomarker discovery in locally advanced cervical cancer

Department of Radiation Oncology, the Netherlands Cancer Institute, Amsterdam, NL

BP-006 - Lionel Mignion

Hyperpolarized pyruvate-lactate exchange assesses metabolic shift in response to the EGFR inhibitor cetuximab in sensitive but not in resistant patient-derived HNSCC xenografts

Biomedical Magnetic Resonance Research Group, Louvain Drug Research Institute, Université Catholique de Louvain, Brussels, BE

Notes

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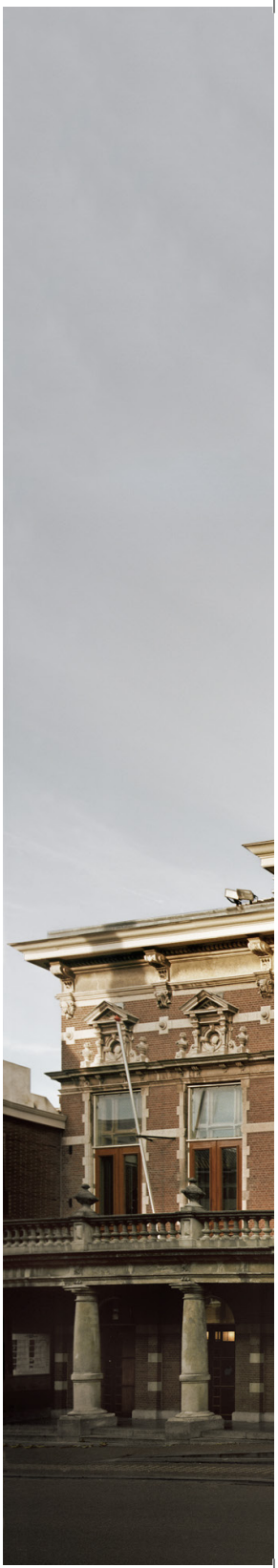
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