

OF

SIEMENS . Healthineers

# PROGRAM BOOK

# ISMRM Benelux

### **ANNUAL MEETING 2025**

# Annual Meet

Ó

YS

Ò

January, 2025 Gooilar



ANNUAL MEETING 2025

### WELCOME

Dear participants and guests,

I would like to extend to you a warm welcome to the ISMRM Benelux Chapter Meeting 2025! We are thrilled to have you join us in Hilversum for a day filled with exciting new developments, knowledge exchange and networking opportunities.

This year's meeting brings together an exceptional community of MR scientists, researchers, clinicians, and industry leaders from all across the Benelux. We encourage you to take full advantage of the scientific sessions, interactive workshops, and networking opportunities that have been carefully designed to foster learning and innovation.

The future of MRI holds immense promise, with advancements such as enhanced resolution, faster imaging techniques, portable low-field scanners, and novel contrast mechanisms paving the way for even greater insights into animal health disease. and human and These developments will continue to transform both research and clinical applications, driving the field forward.

We look forward to a memorable day of inspiration, discovery, and connecting with like-minded professionals in MRI!

Best regards, Fieke Prinse On behalf of the ISMRM Benelux Meeting Committee 2025



# INDEX

Board and committee members	6
<u>Floor plan</u>	7
<u>Detailed program</u>	8
Power pitches	10
Parallel session I	11
<u>Workshops</u>	15
Parallel session II	16
Parallel session III	20
Poster index	24

# PHILIPS

# The new reality in MR



Helium is a non-renewable resource,

and its prices have increased in recent years for most users due to its scarcity. Transition to helium free MR operations with BlueSeal, forget about helium-related complications, manage risk and achieve clinical and operational excellence.

Visit our **BlueSeal** web page





Proven technology with +1000 systems around the world

Our industry's first and only helium-free 1.5T MR portfolio increases access to care for more people in more places and provides clinicians with high diagnostic quality.

\* The amount of liquid helium saved is a calculation compared to a classic magnet with 1500 liters of helium

#### Experience the benefits of Philips BlueSeal



Reduce Consumption of helium



Manage Risk and avoid downtime



Improve Image quality and speed



Unlock New siting options

#### ISMRM Benelux Board —

President	Anja van der Kolk, Radboud UMC
Annual Meeting Representative	Rosanne Govaarts, Leiden UMC
Clinical Representative	Vera Keil, Amsterdam UMC
Communication Manager	Beatrice Lena, Leiden UMC
Secretary	Daan Christiaens, KU Leuven
Treasurer	Rob Holtackers , Maastricht UMC+

#### ---- ORGANIZING COMMITTEE

Chair	Fieke Prinse, Erasmus MC & Leiden UMC
Treasurer/Proceedings	Fatimah Al Darwish, Amsterdam UMC
Treasurer/Sponsoring	Michael McGrory, UMC Utrecht
Location/Sponsoring	Vanja Curcic, UMC Utrecht
Location/Challenge	Kars van der Weijden, UMC Groningen
Communications/Proceedings	Justyna Gula, Maastricht UMC+
Communications/Proceedings	Rebeca Gavrila, KU Leuven
Communications/Sponsoring	Georgia Kanli, Luxembourg Institute of Health
Clinical/Challenge	Irene Frenay, Amsterdam UMC
Board representative	Rosanne Govaarts, Leiden UMC

# FLOOR PLAN Ground floor



1	PROGRAM	Terre
8.30	Registration + Coffee	Registration area + Green Center
9.15	<b>Opening plenary session</b> Keynote by Martijn Froeling	Theater
10.30	Poster session I + coffee break Canon Medical	Showroom + Green Lounge
11.25	Parallel session I	
	Neuroimaging	Theater
	MRI acquisition	Cineac
	Oncology	On Air
12.25	Lunch	Green Lounge + Green Center
	General assembly meeting (ALV)	On Air
13.20	Workshops	
	Hyperpolarized 13C MRI by NVision	Theater
	AI applications in MRI by GE HealthCare	Cineac
	Thesis Production: Get started the right way! by Proefschriftmaken	On Air
13.55	Parallel session II	
	Neuroimaging	Theater
	Image reconstruction and postprocessing	Cineac
	Body MRI	On Air
14.55	Poster session II + coffee break	Showroom + Green Lounge
15.50	Parallel session III	
	Cardiovascular MRI	Theater
	Hardware development	Cineac
	Simulation and modeling	On Air
16.40	Closing ceremony, awards	Theater
17.00	Networking Drinks	Green Lounge + Green Center
18.00- 20.00	Dinner	Green Lounge + Green Center

# MAGNETOM Terra.X

Make the difference. siemens-healthineers.com/terrax



MAGNETOM Terra.X\* introduces the next generation 7T MRI that will enable you to make the difference. With its groundbreaking Ultra IQ Technology, it will deliver unprecedented image clarity that allows you to confidently assess subtle pathological details. In combination with our AI-powered Deep Resolve, MAGNETOM Terra.X ultimately will take clinical routine to a new level. MAGNETOM Terra.X makes the

difference for clinicians and scientists.



StudyID: 4aaaa0264 / 8Tx32Rx head coil



### PLENARY SESSION Power Pitches

#### 10:10 - Theater

#### PP-001 Maaike Konig

Dynamic imaging of deuterated glucose in the stomach, portal vein, and liver using 3D deuterium MRSI at 7T

Imaging and Oncology, University Medical Center Utrecht, Utrecht, The Netherlands

#### PP-002 Britt van den Heuvel

#### Linking brain and eye fluid dynamics: Multi-b-value diffusion derived interstitial fluid volume relates to tear fluid AQP5 levels

Department of Radiology & Nuclear Medicine, Maastricht University Medical Center+, Maastricht, The Netherlands

#### PP-003 Zarah van der Pal

#### Long-term stimulant treatment and development of brain and behaviour: a naturalistic long-term follow-up of boys and men with ADHD

Department of Radiology & Nuclear Medicine, Amsterdam University Medical Center, Amsterdam, The Netherlands

#### PP-004 Gerrit Arends

# Bilateral breast gradient insert prototype for strong diffusion encoding at 3T

Department of Radiology andd Oncology, Centrer for Image Sciences, University Medical Center Utrecht, Utrecht, The Netherlands

#### PP-005 Stephanie Gonzalez Riedel

#### Design and Evaluation of an Educational MRI Simulator: eduMRIsim

Biomedical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands

#### PP-006 Madda Debiasi

#### Highly-accelerated CSF-STREAM: two-fold faster CSF-mobility and FA measurement in PVS, via locally low rank reconstruction

C.J. Gorter MRI Center, Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands

# PARALLEL SESSION I Neuroimaging

11:25 - Theater

#### Moderators

Chloé Najac Leiden UMC Merel van der Thiel Maastricht UMC+

#### O-001 Bas Schilder

# Detecting dopaminergic degeneration in clinically uncertain parkinsonian syndrome patients using fast MR-STAT

#### relaxometry

Computational Imaging Group for MRI Therapy & Diagnostics, Department of Radiotherapy, University Medical Center Utrecht, Utrecht, The Netherlands

#### O-002 Mathijs Dijsselhof

#### Cardiovascular risk factors are associated with brain ageing

Radiology and Nuclear Medicine, Amsterdam University Medical Center, Amsterdam, The Netherlands

#### O-003 Navid Jabarimani

#### Characterizing differences between white and gray matter TIW-based segmentations at 0.6T and 1.5T

C.J. Gorter MRI Center, Radiology, Leiden University Medical Center, Leiden, The Netherlands

#### O-004 Joëlle van Rijswijk

#### Longitudinal assessment of changes in the BBB water permeability in a mouse model of Huntington's Disease using multi-TE ASL MRI

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

#### O-005 Emiel Roefs

# Bi-directional BOLD-CSF coupling using sagittal BOLD imaging with additional saturation slab for glymphatic function

#### assessment

C.J. Gorter MRI Center, Radiology, Leiden University Medical Center, Leiden, The Netherlands PARALLEL SESSION I MRI Acquisition 11:25 - Cineac

Moderators

Miha Fuderer UMC Utrecht Kyungmin Nam UMC Utrecht

#### O-011 Vladislov Koloskov

#### Improving Fetal MRI: The Impact of a Flexible Metasurfacebased Pad

Magnetic Detection & Imaging Group, TechMed Centre, University of Twente, Enschede, The Netherlands

School of Physics and Engineering, ITMO University, Saint Petersburg, Russia

#### O-012 Ayda Arami

#### Toward Microbubble Imaging in MRI: Detection of Microscopic Spherical Structures with Size-Selective T2 Contrast

Imaging Physics, Delft University of Technology, Delft, The Netherlands

#### O-013 Helena Durrant

# Multi-Echo versus T2-Prepared pCASL: what to use for measuring water transport across the Blood Brain Barrier

C.J. Gorter MRI Center, Radiology, Leiden University Medical Center, Leiden, The Netherlands

#### O-014 Reagan Tompkins

#### Third Trimester Fetal 4D Flow MRI with Motion Correction

Department of Radiology & Nuclear Medicine, Amsterdam University Medical Center, Amsterdam, The Netherlands

#### O-015 Luka Stam

#### Interleaved 2H and 31P MRSI acquisitions of the liver at 7T employing a double tuned transmit bore coil and receive body array

Center for Image Sciences, University Medical Center Utrecht, Utrecht, The Netherlands

### PARALLEL SESSION I Oncology 11:25 - On Air

#### Moderators

Esther Warnert Erasmus MC Osman Akdag Netherlands Cancer Institute

#### O-016 Patrick Tang

# Can arterial spin labeling MRI improve radiotherapy target delineation of glioblastoma?

Brain Tumor Center, Erasmus MC Cancer Institute, University Medical Center Rotterdam, Rotterdam, The Netherlands

#### 0-017 Alvja Mali

#### Ultrastructure-Driven pH Sensitivity in Perfluorocarbon-PLGA Nanoparticles for 19F MRI

Department of Cell Biology and Immunology, Wageningen University and Research, Wageningen, The Netherlands

#### O-018 Li Shen Ho

# Differences in metabolic behavior of liver metastases of colorectal carcinoma: [18F]FDG-PET vs. DMI at 7T

Imaging and Oncology, University Medical Center Utrecht, Utrecht, The Netherlands

#### O-019 Karen van der Werff

#### Towards the use of a single bolus in MR Vascular Fingerprinting with DSC-HEPI MRI: an in-vivo exploration

Department of Radiology and Nuclear Medicine, Erasmus MC, University Medical Center Rotterdam, Rotterdam, The Netherlands

#### O-020 Romy Buijs

#### Metabolic modeling using Deuterium Metabolic Imaging data in healthy, epileptogenic and glioblastoma brain tissue

Center for Image Sciences, University Medical Center Utrecht, Utrecht, The Netherlands

# NVISI ON Hyperpolarized MRI made simple



Easy to use • Fast • Reliable Contact us to learn more: info@nvision-imaging.com



# WORKSHOPS

# N V I S I 🛇 N

NVision is a developer of fast, reliable, and user-friendly 13C MRI and corresponding hyperpolarizers hyperpolarized imaging agents. Our PHIP-based technology enables precise the assessment of in vivo metabolism using standard MRI, supporting preclinical and clinical applications such as cancer diagnostics and therapy response monitoring. Deployment of preclinical polarizers began in October 2024. This workshop, Hyperpolarized 13C MRI: A Practical Overview and Latest Advances, will provide attendees with a clear understanding of what is needed to integrate hyperpolarization into MR research, emphasizing the simplicity of the process. Topics include the required hardware, pulse sequences, data processing strategies, and the unique value of metabolic imaging for unraveling real-time biochemical processes. We will also introduce POLARIS, our cutting-edge preclinical polarizer, and discuss the latest advancements in hyperpolarized 13C MRI.



GE HealthCare leading global medical is a technology, pharmaceutical diagnostics, and digital solutions innovator. Join our workshop to learn about AI applications in MRI, about the great public-private partnerships potential to solve today's of challenges in healthcare and about our perspective on career planning in industry.



Thesis Production: Get started the right way! We will go into detail about the production of your thesis, layout possibilities, and your sustainable digital thesis. After our workshop, you will know everything you need to get started with the production of your thesis!

### PARALLEL SESSION II Neuroimaging 13:55 - Theater

#### Moderators

Leon Munting Leiden UMC Monica van den Berg University of Antwerp

#### O-006 Damon Verstappen

#### DCE-MRI reveals elevated blood-brain barrier leakage of heterogeneous white matter in cerebral small vessel disease

Department of Radiology & Nuclear Medicine, Maastricht University Medical Center+, Maastricht, The Netherlands

#### O-007 Diogo Fernandes

#### Effects of acetazolamide and caffeine on blood-brain-barrier water permeability measured by non-invasive ASL-based MRI sequences

Radiology and Nuclear Medicine, Amsterdam University Medical Center, Amsterdam, The Netherlands

#### O-008 Ellen van Hulst

#### Detection of Cardiac-Induced Volumetric Brain Tissue Pulsations and Compressions in a Post-Trauma Craniectomy Patient: An MRI Case Report

Translational Neuroimaging group, Center for Image Sciences, University Medical Center Utrecht, Utrecht, The Netherlands

#### O-009 Guus Vorst

#### Brain shrinkage may lead to skull thickening: a study in leukodystrophies and multiple sclerosis

Dept of Child Neurology, Amsterdam Leukodystrophy Centre, Emma Children's Hospital, and Amsterdam Neuroscience, Amsterdam UMC, Vrije Universiteit, Amsterdam, The Netherlands

#### O-010 Judith van Rooij

# Short-term caloric restriction or resveratrol supplementation alters large-scale brain network connectivity in male and female rats

Bio-Imaging lab, University of Antwerp, Antwerp, Belgium

PARALLEL SESSION II Image Reconstruction and Postprocessing

#### 13:55 - Cineac

Moderators

Daniel Uher Maastricht UMC+ Yiming Dong Leiden UMC

#### O-026 Fei Xu

#### More accurate synthetic MRI to shorten clinical protocols

Computational Imaging Group for MR diagnostics & therapy, Center for Image Sciences, University Medical Center Utrecht, Utrecht, The Netherlands

#### O-027 Marius Burman Ingeberg

# Evaluating the performance of poroelastic and poroviscoelastic models in intrinsic MR elastography

Translational Neuroimaging Group, Center for Image Sciences, University Medical Center Utrecht Utrecht, The Netherlands

#### O-028 Eva Aalbregt

# Automated post-processing of longitudinal 4D flow MRI in patients with an abdominal aortic aneurysm

Department of Radiology and Nuclear Medicine, Amsterdam University Medical Center, Amsterdam, The Netherlands

#### O-029 Natalia Korobova

#### Uncertainty in Deep Learning of DCE-MRI Parameter Estimation

Radiology and Nuclear Medicine, Amsterdam University Medical Center, Amsterdam, The Netherlands

#### O-030 Chinmay Rao

#### Accelerated FLAIR Imaging at 0.6T using T2W-guided Multicontrast Deep Learning-based Reconstruction using a Zeroshot Approach

Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands



Apollo is an AI-based software suite designed to enable on-table detection of critical findings such as infarcts, intracranial tumors and hemorrhages.

It provides real-time alerts on critical conditions

for priority reading and real-time adaptation of MR scanning protocols, helping radiology departments achieve excellence - from image acquisition to diagnosis.

#### Apollo Software Suite:



Apollo monitors scans in real- time, flagging critical findings as they emerge.



Apollo's proactive approach to detect critical conditions allows to guide protocol adaptation real-time.



Apollo prioritizes brain MRI scans in a consolidated worklist, based on the severity and urgency of detected findings.

#### Apollo enables:



Improve operational efficiency





Faster turnaround time for acute findings



Reduce patient recalls



Improved patient journeys

## PARALLEL SESSION II Body MRI

13:55 - On Air

#### Moderators

Pandichelvam Veeraiah Radboud UMC Pim Pullens Ghent University

#### O-024 Luuk Vos

#### Time-resolved 3D-PC MRI measurements of the upper leg muscles during dynamic knee flexion: the effect of the fatigue threshold

Biomedical Engineering and Physiscs, Amsterdam University Medical Center, Amsterdam, The Netherlands

#### O-023 Max van Riel

#### 4D Time-Resolved Strain Tensor Analysis Using Spectro-Dynamic MRI Reveals Muscle Activation Patterns

Computational Imaging Group for MR diagnostics & therapy, Center for Image Sciences, University Medical Center Utrecht, Utrecht, The Netherlands

#### O-022 David Heesterbeek

#### Quantitative in-vivo analysis of biomechanical properties reveals tissue stiffness changes during contraction of the thigh muscles

Computational Imaging Group for MR diagnostics & therapy, University Medical Center Utrecht, Utrecht, The Netherlands

#### O-021 Benthe Ariëns

# Impact of hyperglycemia on kidney perfusion of matched T2D and NC adults using multiparametric MRI

Radiology and nuclear medicine, Amsterdam University Medical Center, Amsterdam, The Netherlands

#### O-025 Irina De Alba Alvarez

# Female levator ani muscle defect assessment in supine and upright position

Multi Modality Medical Imaging (M3I), TechMed Centre, University of Twente, Enschede, The Netherlands PARALLEL SESSION III Cardiovascular MRI 15:50 - Theater

#### Moderators

Bram Coolen Amsterdam UMC Maarten Terpstra UMC Utrecht

#### O-035 Thomas Olausson

#### Free-Running Time-Resolved 3D+time CMR at 40 Hz in a One Minute Scan using Cartesian Sampling and CMR-MOTUS

Computational Imaging Group for MR Therapy and Diagnostics, Center for Image Science, University Medical Center Utrecht, Utrecht, The Netherlands

#### O-036 Juul Bierens

# The association between MRI-based Carotid Plaque-RADS and ipsilateral cerebral ischemia recurrence

Department of Radiology & Nuclear Medicine, Maastricht University Medical Center+, Maastricht, The Netherlands

#### O-037 Geoffrey Wendell de Mooij

#### Oxygenation-Sensitive Cardiac Magnetic Resonance: Non-Invasive and Needle-Free Alternative for Assessment of Myocardial Oxygenation-Initial Clinical Experience-

Deptartment of Cardiology, Amsterdam University Medical Center, Amsterdam, The Netherlands

#### O-038 Matic Pusovnik

#### Tracking Endothelial Activation Over Time in Myocardial Ischemia-Reperfusion Injury Using In Vivo MRI and Targeted Iron Oxide Particles

Biomedical MRI, Department of Imaging and Pathology, KU Leuven, Leuven, Belgium

### PARALLEL SESSION III Hardware Development 15:50 - Cineac

#### Moderators

Irena Zivkovic TU Eindhoven Edwin Versteeg UMC Utrecht

#### O-039 Erik van Riel

#### A Low Inductance Nonlinear Gradient Array Design to Mitigate PNS and Reduce Voltage for Extension to Ultrasonic Whole-Body Fast and Silent MRI

Department of Radiology, University Medical Center Utrecht, Utrecht, The Netherlands

#### O-040 Jules Vliem

#### Toroid-inspired RF Volume Coils for Enhanced Transmit Efficiency at Ultra-Low Field 47mT MRI: A Comparison with Solenoid Coils

Department of Electrical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands

#### O-041 Kaiqi Meng

#### An Integrated Unipolar Ultrasonic Gradient for Mitigating PNS and Aliasing in Accelerated Silent MRI

Department of Radiology, University Medical Center Utrecht, Utrecht, The Netherlands

O-042 Lyanne Bude

# Self-decoupled toroid coils for densely packed receive arrays at 3T MRI

Department of Electrical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands

# AIR<sup>™</sup> Recon DL 3D 8-month-old pediatric brain



#### Conventional



**3D BRAVO** Matrix = 264 x 264 FOV = 22 x 22 cm<sup>2</sup> Slice = 0.8 mm / 264 slices Scan time = 7:15 min









### PARALLEL SESSION III Simulation and Modeling 15:50 - On Air

Moderators

Patrick Fuchs University of Antwerp Ayda Arami TU Delft

#### O-031 Koen Custers

#### Optimization and application of MP2RAGE sequence for T1based thermometry in the fat layer of the human calve

Biomedical Engineering, Medical Imaging Analysis, Eindhoven University of Technology, Eindhoven, The Netherlands

#### O-032 Jiying Dai

# Demonstration of substantial overestimation of signal when combining low-SNR signals with self-weighted methods

University Medical Center Utrecht, Utrecht, The Netherlands

#### O-033 Dennis van de Sande

#### A Digital Phantom for 3D MR Spectroscopy Data Simulation

Department of Biomedical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands

#### O-034 Niels Bijl

# Simulation Aided Design of an Integrated MR Receive Array for MR-Guided Radiofrequency Hyperthermia Treatment of the

#### Breast

Department of Electrical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands

PP and ODD posters in poster session I: 10:30-11:20 EVEN posters in poster session II: 14:55-15:45

#### Power Pitch abstracts

PP-001	Dynamic imaging of deuterated glucose in the stomach, portal vein, and liver using 3D deuterium MRSI at 7T
PP-002	Linking brain and eye fluid dynamics: Multi-b-value diffusion derived interstitial fluid volume relates to tear fluid AQP5 levels
PP-003	Long-term stimulant treatment and development of brain and behaviour: a naturalistic long-term follow-up of boys and men with ADHD
PP-004	Bilateral breast gradient insert prototype for strong diffusion encoding at 3T
PP-005	Design and Evaluation of an Educational MRI Simulator: eduMRIsim
PP-006	Highly-accelerated CSF-STREAM: two-fold faster CSF-mobility and FA measurement in PVS, via locally low rank reconstruction

#### **Cardiovascular Imaging**

- **P-007** A protocol for free breathing 3D-CINE MRI with black blood contrast and fat suppression
- P-008 Five-dimensional cardiac MRI in one minute using the CMR-MOTUS framework on a 1.5 T MR-Linac
- P-009 The role of contrast timing on myocardial extracellular volume fraction measurements using cardiac MRI: insight from a large animal infarct model

#### Neuroimaging

- P-010 The importance of accounting for hormonal fluctuations in neurofluid imaging: BOLD-CSF coupling relates to estradiol levels
  P-011 Cerebral vascular pulsatility is altered by hypercapnia stimuli: a BOLD fMRI study
  P-012 Studying the fingerprints of Parkinson's disease development in R2\* and
- **P-012** Studying the fingerprints of Parkinson's disease development in R2\* and QSM brain maps
- P-013 Assessing myelin changes in lesional and non-lesional white matter in patients with MS using the T1w/FLAIR-ratio: a longitudinal study
- P-014 Dirty-appearing white matter at 3 and 7 Tesla MRI in older memory clinic patients

#### ODD numbers in poster session I, EVEN numbers in poster session II

#### Neuroimaging

P-015	Arachnoid Granulation Characterization in Dutch-type hereditary Cerebral Amyloid Angiopathy
P-016	Effects of short-term methylphenidate treatment on brain network connectivity in attention-deficit hyperactivity disorder
P-017	Investigating neuroinflammation and iron accumulation in frontotemporal lobar degeneration using 7T MRI
P-018	Taking cerebellar segmentations to the next level: 100µm resolution at 9.4T
P-019	Optimization of T1-w/T2-w ratio for myelin using different TE and exponents
P-020	Feasibility of in vivo metabolic profiling in the human brainstem periaqueductal gray matter by 1H-MRS at 7T
P-021	Neural activation upon visual stimulation and functional connectivity during rest assessed with Zero-echo time fMRI in rats
P-022	Deuterium MR Spectroscopy (DMS) identifies altered Glucose Metabolism in the Brain of an Alzheimer Mouse Model at 6 months of age
P-023	Retrospective relaxometry from conventional contrasts by physics- informed deep learning: A pilot on Tumor, MS, Stroke and Epilepsy patients
P-024	Towards reproducible perivascular space quantification: an open-source perivascular space segmentation benchmark
P-025	Perivascular CSF T2 Values compared to Sulcal and Lateral Ventricular CSF: a window into brain clearance pathways
Body	
P-026	Repeatability of 13C-MRS for absolute glycogen quantification in the human liver and skeletal muscle at 7T
P-027	1H23Na-TiCEPT - Wideband 1H and 23Na tissue composition based electrical property tomography
P-028	Phantom simulation of spectral ghosting caused by respiratory stomach motion in 3D MRSI
P-029	Assessing the image quality and diagnostic ability of DL-RESOLVE DWI in 3T breast MRI: Preliminary Results

#### ODD numbers in poster session I, EVEN numbers in poster session II

#### Image Reconstruction and Postprocessing

P-030	Time-resolved motion estimation from under-sampled MRI data as a spectral optimal control problem
P-031	Comparison of K-Space and Spatial Based Post Processing Methods for 31P MRSI Grid Realignment
P-032	Advancing Multishot EPI Reconstruction for Diffusion MRI: From Locally to Non-Locally Low-Rank Methods
P-033	Can Diffusion Models Estimate Quantitative Parameters from Routine Weighted MR Images?
P-034	Estimating Quantitative MRI Parameters from Diverse Acquisition Protocols using Neural Controlled Differential Equations
P-036	Uninformed retrospective subsampling overestimates reconstruction quality in TSE
P-035	Enhancing Anatomical MRI: A K-Space Solution to Artefact Reduction
P-037	Accelerated Deuterium Metabolic Imaging of Liver Metastases at 7T Using Low-Rank and Subspace Reconstruction with Retrospective Undersampling
P-039	Towards clinic-ready relaxometry with MR-STAT: multi-site repeatability, motion detection and integration in the clinical data workflow

#### Hardware Development

P-038	Explorative performance evaluation of receive arrays with respect to the ultimate intrinsic SNR for 14 T head imaging
P-040	Next-generation MRI receive-coil arrays for the MR-linac fo- A prototype r clinical protocol development
P-041	A 2-Channel Wireless Receive Surface Coil at 1.5T
P-042	Assessment of RF induced tissue heating at 3T through MR Thermometry with comparison to subject-specific simulations
P-043	Silent 3D MRSI at Ultrasonic gradient speeds using a dual-axis head insert gradient at 7T

ODD numbers in poster session I, EVEN numbers in poster session II

#### **Ultra-High Field**

P-044	Universal B0 shimming for whole-brain MRI at 7T
P-045	Feasibility of pTx 1H MRI and single transmit 31P MRSI of the prostate at 7T
P-046	Validation method of antenna design for 14T MRI using temperature measurements'
P-047	Diffusion MRI of organoids at 28.2T with 3T/m gradient strength
Low Field	
P-048	Evaluating repeatability of in vivo imaging in multiple locations using a portable Halbach-based 46 mT scanner
P-049	Low acoustic noise scanning at 0.6T
P-050	Free-Breathing Functional Lung Imaging at 0.6T compared to 1.5T
P-051	Up to four times accelerated musculoskeletal MRI at 0.4T using the CIRIM network
P-052	A fluid-sensitive MRI protocol for the small joints of the hand using a portable 46 mT scanner

#### **Simulations and Modeling**

P-053 Sylvester Normalizing Flows for Bayesian Inference in MRS

#### **Interventional MRI**

P-054 Physics-Driven Needle Tracking for MR-Guided Percutaneous Interventions
 P-055 An Extended Reality Interface for Interventional MRI
 P-056 Physics-Driven Passive Marker Tracking for MR-Guided Endovascular Interventions

#### **MRI Acquisition**

P-057 Deep Learning-Based Quantitative MRI Resolution Enhancement via Clinically Accessible Weighted Images Without High-Resolution Training Data

ODD numbers in poster session I, EVEN numbers in poster session II

#### **MRI Acquisition**

P-058	Measuring Echo Shift induced by Magnetic Field Gradients in an	
	Asymmetric Spin Echo Sequence with Echo Planar Imaging Readout	
P-059	Between-site variability of APTw-CEST MRI at 3T	

#### **Neuro - Diffusion**

- P-060 Longitudinal analysis of multi-center harmonized diffusion MRI data in genetic FTD
- P-061 Comparison of a data-driven rank-1 representation and the SHORE basis for efficient undersampling of diffusion MRI
- P-062 Fixel-based tractometry unravels the structural-functional coupling of vision in children with unilateral cerebral palsy
- **P-063** Exploring the possibility of predicting the structural connectome from tractography
- **P-064** White matter differences related to motor performance in younger and older adults.
- P-065 Changes in the DTI-ALPS index among patients with breast cancer and its association with self-reported outcomes
- P-066 Proof of Concept: A 3D Space for Patient-Specific Functional Connectivity Analysis: Integrating Tractography and Direct Electrical Stimulation.

#### Neuro - Perfusion

- P-067 Detection of Blood-to-CSF Water Transport Using Non-Invasive Long-TE pseudo-Continuous Arterial Spin Labeling in Healthy Mice
- P-068 Evaluating Segmentation Techniques for Circle of Willis in 4D Flow MRI: A Comparative Study
- P-069 Measuring the full spectrum of CSF dynamics within the human brain using DENSE MRI: insights from a simulation study
- P-071 Exploring the underlying mechanisms of chronic cerebral blood flow deficits in COVID-19



ANNUAL MEETING 2025

# PHILIPS SIEMENS Healthineers



# NVISION





GE HealthCare