



Tentative Program IWMPI 2012, Lübeck, March 15-16

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Thursday, March 15		
Registration, Reception from 09:00		
Opening 10:30		
Magnetic Particle Imaging 10:45 - 12:15		
014 M. Erbe	University of Lübeck	Influence of magnetic field quality optimization on image quality achieved for efficient radon-based reconstruction in field free line imaging in MPI
024 P. Vogel	University of Würzburg	Slicing Frequency Mixed Traveling Wave for 3D Magnetic Particle Imaging
034 K. Graefe	University of Lübeck	Magnetic-Particle-Imaging for sentinel lymph node biopsy in breast cancer
042 J. Konkle	University of California	Experimental 3D X-Space Magnetic Particle Imaging Using Projection Reconstruction
044 P. Goodwill	University of California	Third Generation X-space MPI Mouse and Rat Scanner
T407 J. Rahmer	Philips Technologie GmbH	Continuous Focus Field Variation for Extending the Imaging Range in 3D MPI
Lunch Break 12:15 - 13:15		
Magnetic Nanoparticles 13:15 - 15:30		
Key1 K. Krishnan	University of Washington	Optimizing Tracers for Magnetic Particle imaging
002 S. Dutz	Institute of Photonic Technologies	Fractionated Magnetic Multicore Nanoparticles for Magnetic Particle Imaging
005 J. Niehaus	Center for Applied Nanotechnology	Precision synthesis of iron oxide nanoparticles and their use as contrast agents
006 A. Lak	TU Braunschweig	Synthesis of iron oxide nanoparticles suitable for Magnetic Particle Imaging
009 D. Felder	Institute for Physics and Chemistry of	Dendronized iron oxides as smart nano-objects for multimodal imaging
028 H. Rahn	TU Dresden	Semi-quantification of tomographic data of biological tissue samples after magnetically supported cancer treatments
038 R. Ferguson	University of Washington	Imaging with optimized magnetite MPI Tracers
052 G. Schütz	Bayer Pharma AG	Potential of Magnetic Particle Imaging in the Competitive Environment of Cardiac Diagnostics



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Poster Session 15:30 - 16:15		
007 N. Gehrke	nanoPET Pharma GmbH	New perspectives for MPI: a toolbox for tracer research
008 K. Andreas	Charité-Universitätsmedizin Berlin	Citrate-coated magnetite nanoparticles are highly efficient agents for magnetic labeling of human mesenchymal stem cells
010 T. Honma	Meiji University	Experimental evaluation of correlation-based image reconstruction method for magnetic particle imaging
011 T. Yoshida	Kyushu University	Nonlinear behavior of magnetic fluid in Brownian relaxation : numerical simulation and derivation of empirical model
018 Th. Wawrzik	TU Braunschweig	Perspectives of Magnetic Particle Spectroscopy for magnetic nanoparticle characterization
023 K. Lüdtke-Buzug	University of Lübeck	Superparamagnetic Iron Oxide Nano-particles: Evaluation of Stability of SPIOs with in Different Milieu for Magnetic Particle Imaging
026 N. Raabe	University Medical Center Hamburg-Eppendorf	Relaxivity changes of USPIO in biofluids – effects of protein binding on r_2 and r_2^* at 3T MRI
027 S. Kaufmann	Lübeck University of Applied Sciences	A control unit for a Magnetic Particle Spectrometer
029 T. Sattel	University of Lübeck	Optimization of Circular Current Distributions for Magnetic Field Generation in MPI: A Comparison of the Selection Field Coil and the Drive Field Coil Geometry
030 R. Körber	Physikalisch-Technische Bundesanstalt	Low field NMR as a tool for neuronal current detection: a feasibility study in a phantom
033 H. Ittrich	University Medical Center Hamburg-Eppendorf	In-vivo real time MR imaging of lipid metabolism in brown adipose tissue with triglyceride-rich lipoprotein-USPIO nanosomes
036 S. Lyer	University Hospital Erlangen	Diagnostic Imaging in Cancer Therapy with Magnetic Nanoparticles
037 A. Khandhar	LodeSpin Labs LLC	In vivo Biodistribution and Pharmacokinetics of Optimized Magnetic Particle Imaging Tracers
043 B. Zheng	University of California	Engineering Methods to Increase SNR in Magnetic Particle Imaging
045 P. Goodwill	University of California	Projection X-space MPI Mouse Scanner
048 D. Schneider	University of Lübeck	Biomaterials for regenerative medicine: Cytotoxicity of superparamagnetic iron oxide nanoparticles in stem cells
049 M. Weber	University of Lübeck	Mouse bed optimized for MPI
053 U. Pison	Charité-Universitätsmedizin Berlin	Tracer for Magnetic Particle Imaging
054 M. Visscher	University of Twente	A magnetometer cooled with liquid nitrogen for the characterization and quantification of magnetic nanoparticles in biological samples at room temperature

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Poster Session 15:30 - 16:15		
056 S. Veintemillas-Verdaguer	Instituto de Ciencia de Materiales de Madrid (CSIC)	Uniform magnetite nanoparticles larger than 20 nm synthesized by an aqueous route
057 N. Buske	Magnetic Fluids / Capsulation Pharma AG	Magnetic Fluids with Ultra Small Iron Oxide Core/Shell-Particles for Clinical Applications
P400 J. Jockram	Philips Medical Systems DMC GmbH	CONCEPT FOR A MODULAR CLASS-D AMPLIFIER FOR MPI DRIVE FIELD COILS
T403 H. Wojtczyk	University of Lübeck	Visualization of instruments in interventional Magnetic Particle Imaging (iMPI): A simulation study on SPIO labelings
T405 M. Gruettner	University of Lübeck	Enlarging the Field of View in Magnetic Particle Imaging - A Comparison
T408 M. Graeser	University of Lübeck	Determination of System Functions for Magnetic Particle Imaging
T409 J. Bergmann	University of Federal Armed Forces, Helmuth Schmidt University	A Hybrid Filter Topology For A Reduction Of High Frequency Harmonics
T412 H. Kratz	Charité - Universitätsmedizin Berlin	Tracerentwicklung für Magnetic Particle Imaging
Magnetic Particle Separation 16:15 -16:45		
001 J. Schemberg	Institute for Bioprocessing and Analytical Measurement Techniques	Microfluidic system as tool for magnetic separation of human cells with diagnostic relevance
T411 N. Löwa	Physikalisch-Technische Bundesanstalt	Potential of improving MPI performance by magnetic separation
Magneto-Relaxometry 16:45 - 18:00		
020 U. Steinhoff	Physikalisch-Technische Bundesanstalt	A concept for spatially resolved quantification of magnetic nanoparticles using inhomogeneous excitation fields in the linear susceptibility range
025 N. Raabe	University Medical Center Hamburg-Eppendorf	In vivo MR quantification of USPIO concentrations in tissues – comparison of T2* measurements of 59Fe-labeled SPIO at 3T MRI
031 S. Hartwig	Physikalisch-Technische Bundesanstalt	Low Field Nuclear Magnetic Relaxation of Water and Brain tissue
035 H. Ittrich	University Medical Center Hamburg-Eppendorf	Monitoring of endothelial binding and endocytosis of lipophilic USPIO nanosomes in brown adipose tissue in real time using MRI
039 F. Wiekhorst	Physikalisch-Technische Bundesanstalt	Magnetorelaxometry for in-vivo quantification of magnetic nanoparticle distribution after magnetic drug targeting in a rabbit carcinoma model
Leisure Time		
Evening Event from 19:00		
key3	B. Gleich	Philips Technologie GmbH
		The Next Generation of MPI



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Friday, March 16		
Magnetic Particle Theory 08:30 - 09:15		
017 I. Teliban	Christian-Albrechts-University	Reconstruction of magnetization curve using magnetic spectroscopy
047 St. Trimper	Martin-Luther-University	Multiferroic behavior of BTO-nanoparticles
T402 I. Schmale	Philips Technologie GmbH	Point Spread Function Analysis of Magnetic Particles
Modelling and Simulation Theory 09:15 - 10:15		
004 T. Yoshida	Kyushu University	Characterization of Resovist nanoparticles
015 W. Zylka	University of Applied Sciences Gelsenki	Magnetic Particle Imaging using Ferromagnetic Magnetization
019 Th. Wawrzik	TU Braunschweig	MPI: Exploring particle mobility
T406 A. Halkola	University of Lübeck	System calibration unit for magnetic particle imaging: Focus field based system function
Break 10:15 - 10:45		
Spectroscopy 10:45 - 11:30		
003 F. Ludwig	TU Braunschweig	Characterization of magnetic nanoparticles for magnetic particle imaging by magnetorelaxometry, ac susceptibility, magnetic particle spectroscopy and static magnetization measurements
032 D. Truhn	RWTH Aachen University	Initial MPS response of adsorptively-coated fluorescent iron oxide nanoparticle
T401 D. Eberbeck	Physikalisch-Technische Bundesanstalt	Evaluation of different magnetic particle systems with respect to its MPI performance
Imaging Technology and Safety Aspects 11:30 - 12:15		
046 E. Saritas	University of California	Safety Limits for Human-Size Magnetic Particle Imaging Systems
050 J. Bohnert	Karlsruhe Institute of Technology	Transmembrane Voltages Caused by Magnetic Fields - Numerical Study of Schematic Cell Models
T410 G. Bringout	University of Lübeck	Safety Aspects for a Pre-clinical Magnetic Particle Imaging Scanner
Lunch Break 12:15 -13:15		



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Magnetic Particle Imaging Theory 13:15 - 14:30		
key2 S. Conolly	University of California	X-Space MPI: Theory, Hardware, Reconstruction Algorithms and Resolution Limits
040 L. Croft	University of California	Relaxation in x-space Magnetic Particle Imaging
041 K. Lu	University of California	Linearity and Shift-Invariance of Magnetic Particle Imaging
T400 T. Knopp	University of Lübeck	Efficient Positioning of the Field-Free Point in Magnetic Particle Imaging
Break 14:30 - 15:00		
Medical Applications 15:00 - 17:00		
012 M. Magnani	University of Urbino	Red blood cells as magnetic carriers for MPI applications
013 J. Pouw	University of Twente	Ex vivo Magnetic Sentinel Lymph Node detection in colorectal cancer with a SPIO tracer
016 D. Finas	University Medical Center Schleswig-Holstein (UKSH)	Distribution of Superparamagnetic Nanoparticles in Lymphatic tissue for Sentinel Lymph Node Detection in Breast Cancer by Magnetic Particle Imaging
021 I. Slabu	RWTH Aachen University	Behavior of superparamagnetic iron oxides in magnetic targeting models
022 R. Priest	University Medical Center Schleswig-Holstein (UKSH)	Superparamagnetic dextran coated iron oxide nanoparticles (SPIO) as potential markers for tumor cell detection
051 A. Frey	Research Center Borstel	Engineering contrast agents for gastrointestinal magnetic particle imaging: the biological perspective
055 J. B. Weaver	Dartmouth College	Efficient Encoding Methods for Small Numbers of Pixels to Achieve High Sensitivity for Screening
T404 J. Haegele	University Medical Center Schleswig-Holstein (UKSH)	Visualization of instruments for cardiovascular intervention using MPI
Conclusion, Wrapping Up 17:00		