GUIDE TO THE ISMRM 25 Annual Meeting TECHNICAL & POSTER EXHIBITION

THE WORLD'S BEST IN MR SCIENCE, EDUCATION & INDUSTRY





Annual Meeting

& Exhibition • 22–27 April 2017 SMRT 26th Annual Meeting • 22–24 April 2017

HONOLULU, HI, USA

ISMRM 25TH ANNUAL MEETING SCHEDULES

	EXHIBITION HALL HOURS & SOCIAL EVENTS							MEETING REGISTRATION				
Date	Time	Event/Location				Date	Ti	me	Location			
Sunday, 23 April	18:30–20:00	Opening Reception, Technical E	xhibitior	n Hall		Friday, 21 April	14:00	-20:00				
Monday, 24 April	08:00–10:45; 12:15 <i>–</i> 17:00				Sa	aturday, 22 April	06:30	-18:00				
Tuesday, 25 April	08:00–10:45; 12:15–17:00	Technical & Poster Exhibition, Ex	xhibition	Hall		Sunday, 23 April	07:00–18:30		Lobby			
Wednesday, 26 April	08:00 –10:45; 12:15–17:00	Please Note: The Technical Exhibition Hall is all Plenary sessions.	closed o	during	N	1onday, 24 April	06:30–18:30		Hawai'i Conven- tion			
Thursday, 27 April	08:00–10:45; 11:45–16:30	,			Т	uesday, 25 April			Center			
	16:30-23:59	Exhibition Dismantle, Technical	Exhibiti	on Hall	Wec	Inesday, 26 April	06:30	-18:00				
	19:00 - 21:00	Closing Party: The Roof Top Gar	Tł	nursday, 27 April								
TRADITIONAL & I	ELECTRONIC P	OSTER VIEWING HOURS	SPEAKER READ	Y ROO	DM (Audiovisua	l Prev	iew)					
Date	Time	Event			Date	Time		Locati	on			
Sunday, 23 April	07:00-14:00	Poster Installation		Friday 21	April	14.00-20.00	0					
Monday, 24 April				Caturday 23	April	04.20 19.00	0 0					
Tuesday, 25 April	07:00–20:30			Saturday, 22	Арпі	00.30-10.00						
Wednesday, 26 April		Viewing		Sunday, 23	April 07:00–18:00		0	Room	319AB			
TI 1 07 A 1	07:00–16:30		Mon	day – Wednesday, 24–26	April	06:30–18:00	00					
Thursday, 27 April	16:30–18:00	Poster Dismantle		Thursday, 27	April	06:30–17:00	00					
	C	ORPORATE SYMPOSIA				MEET TH	E TEA	CHER				
Date	Time	Presenter		Location	"Me	eet the Teacher" I	breaks	will follo	ow			
Monday, 24 April	12:30–13:30	Siemens Healthineers (GOLD)		eacl	n session. These l	oreaks	provide	an			
Tuosday 25 April	12:30–13:30	GE Healthcare (GOLD)			disc	ussion.	nai qui	estions	anu			
Tuesday, 25 April	18:30–20:30	Bracco (BRONZE)		Room 311	Spe	akers remain avai	ilable f	or one-t	o-one			
Wednesday, 26 April	12:30–13:30	Philips Healthcare (GOLD)		- Planan Hall	inte 15 n	raction with atter ninutes immediat	idees t ely foll:	or at lea owing e	ist each			
Thursday, 27 April	12:00-13:00	Toshiba (SILVER)	sess	ion.	,	5						
		ISMRM RESEARCH & EDU	JCATIO	N FUND DONOR LOU	NGE							
Date	Time	Location										
Saturday, 22 April– Wednesday, 26 April	08:00–18:00	In appreciation of your donation enjoy the ISMRM Donor Loung	on of US ge. See a	\$200 or more to the ISMF an ISMRM Representative	RM Res e to ma	earch & Educatic ke a donation an	on Fund d to le	d, we inv arn loca	vite you to tion.			
			004	ETIQUETTE	_			_				

The ISMRM Annual Meeting Program Committee requests your cooperation in observing the following guidelines for etiquette in session rooms. Please respect your colleagues and follow the rules.

• Standing in meeting rooms during a session is prohibited due to Health, Fire and Safety Regulations. Please be respectful of these strict ordinances and be seated immediately upon entering a meeting room. No exceptions.

- Videotaping, audiotaping or photographing the presentations is strictly prohibited.
- Mobile phones and other devices that can generate sound must be turned off in the session rooms.
- Attendees using laptop computers, personal digital assistants or other electronic devices generating light must sit in the back half of the room to avoid disturbing fellow attendees.
- Admission to the Educational Programs, the Scientific Sessions and the Technical Exhibition is restricted to individuals wearing name badges. Please wear your name badge at all times.
- Children under 16 are not allowed in any meeting sessions, Exhibit Hall, Poster Hall or evening events. No exceptions.

WELCOME FROM THE ISMRM 25TH ANNUAL MEETING PROGRAM CHAIR



Scott Reeder, M.D., Ph.D. Chair, ISMRM 25th Annual Meeting Program Committee

Aloha! It is my sincere pleasure to welcome you to the International Society for Magnetic Resonance in Medicine 25th Annual Meeting. As the Chair of the Annual Meeting Program Committee, I'd like to highlight a few important changes to our Annual Meeting format.

Due to the shift to the new 6-day format, the Opening Ceremonies, including the Gold Medal Presentations and the Lauterbur Lecture, will be held late Sunday afternoon, 23 April; the Mansfield Lecture and Closing Ceremonies will be held on the afternoon of

Thursday, 27 April.

The new 6-day format has allowed us to increase the opportunities for members to share their research results with the international community. Although there are no longer scientific presentations on Friday morning, the overall number of scientific presentations has increased by 12%. In addition, the educational program has been enhanced with four weekday Sunrise Courses (Monday-Thursday) rather than just three. The popular Power Pitches are not only back, but we have added a second Power Pitch Theatre to the conference hall, doubling the number of Power Pitches

"ON BEHALF OF THE PROGRAM COMMITTEE, WELCOME TO THE ISMRM 25TH ANNUAL MEETING & EXHIBITION"

art clinical MRI and MRI safety. The breadth and depth of the Educational Program is unparalleled and provides the best in MR education anywhere in the world.

Our Named Lectures will be delivered by three of our most distinguished and talented members and are sure to be thought provoking and inspiring. The first Named Lecture will be delivered by Leon Axel, M.D., Ph.D., from New York University, who will deliver the Lauterbur Lecture on the afternoon of Sunday, 23 April, as part of the opening cere-

> mony. Penny Gowland, PhD, from the University of Nottingham, will wrap up the meeting with the Mansfield Lecture on Thursday afternoon as part of the Closing Ceremonies. The NIBIB New Horizons Lecture, which features a rising star from ISMRM's junior faculty membership, will be delivered by Nicole Seiberlich, Ph.D., from Case Western Reserve University, on the morning of Tuesday, 25 April.

> We also have several special sessions that include the next generation "Game Show," where our past president Jim Pipe, Ph.D., will introduce the next phase of the MR Value Initiative, with a special session on

Karla Miller (Vice Chair of the AMPC) and the AMPC have done an outstanding job putting together a superb Educational Program with cutting-edge material to be delivered by the most dynamic speakers in our society. I would like to extend my deepest gratitude and thanks to the AMPC for the incredible work that they have done organizing this meeting.

The Educational Program provides a comprehensive review of everything from basic MR physics, advanced engineering principles, translational scientific topics, and state of the Monday, 24 April, on "The Targeted High-Value MRI Exam." Be sure to attend what will certainly be an innovative and impactful session. Our 25th Annual Meeting will also feature the inaugural Junior Fellow Symposium organized by the 2016 ISMRM Junior Fellows. This session highlights the future of Machine Learning techniques in medical imaging.

Also new this year: Live web streaming! For the first time, the ISMRM will stream key lectures, live to the world.

On behalf of the AMPC I welcome you to Honolulu and hope you enjoy the best in world-class MR education, science and networking! Best Wishes and Mahalo!

Scott Reeder, M.D., Ph.D., Annual Meeting Program Chair ISMRM 25TH Annual Meeting & Exhibition Program Committee

WEEKEND & SUNRISE SESSIONS

BODY
 CANCER/MOLECULAR/MRS
 CARDIOVASCULAR
 CROSSCUTTING & EMERGING TECHNOLOGIES
 DIFFUSION/PERFUSION/fMRI
 GENERAL
 MUSCULOSKELETAL
 NEURO
 PHYSICS & ENGINEERING

Saturday,	Sunday,	07:00-07:50								
22 April 2017	23 April 2017	Session Day	Sunrise Session Name							
08:15–16:45	08:30–16:30	Monday,	Cardiovascular MR: "More is Better": LV Structure & Mechanics							
Physics for Physicists	RF Engineering: Coils	24 April 2017	Contrast Mechanisms in MSK Imaging							
			Magnetic Resonance Elastography: Overview & Technology							
08:30-16:45	08:30–16:45 Image Acquisition &		It Doesn't Have to Be that Way: Extreme Fields & Gradients							
Wik Systems Engineering	Reconstruction		fMRI: Best Practices & Cautionary Tales: Acquisition & Pathology							
08:15-12:15	08:15–11:45		Bleeding Edge of Brain Techniques: Fingerprinting and Hyperpolarized C13 MRI							
Task & Resting State fMRI	IVIM & Cerebrovascular Reserve		Individualized Brain MRI: Building a Neurosurgical Planning Toolbox							
Methods/Analysis			PI-RADS: Yes or No							
13:15–16:45	13:15–16:45		MR-Guided Focused Ultrasound in the Brain							
Permeability Imaging	Perfusion & fMRI	Tuesday,	Low Field MR: Systems & Applications							
	00.45.47.45	25 April 2017	Cardiovascular MR: "More is Better": Tissue Characterization							
08:15–11:45 Diffusion MRI: Principle	08:15–16:15 Body MRI: Optimize		UTE & ZTE Imaging Techniques & Applications							
& Applications	Your Clinical Practice		Magnetic Resonance Elastography: Brain & Breast							
13:15–17:45	08:15–12:05		It Doesn't Have to Be That Way: Non-Traditional Acquisition							
Connectivity: Structure & Function	Multiparametric Imaging in Cancer: How & Why		fMRI: Best Practices & Cautionary Tales: Analysis & Resting-State Indices Bleeding Edge of Brain Techniques: Beyond Conventional MRI							
	10.45.47.45									
08:15–12:05 Introduction into	MRI, MRS & Molecular Imaging		Assessing Response to Immunotherapy							
Magnetic Resonance Spectroscopy	to Diagnose Disease & Assess Treatment		Addressing Clinical Challenges in the Body with MRI							
13.15_17.15	08:15 – 16:05	Wednesday,	Cardiovascular MR: "More is Better": More Speed							
Novel & Mature MRI	Translational Musculoskeletal Imaging: From Qualitative to	26 April 2017	MR Imaging of Small Joints: Fingers & Toes							
Contrast Agents	Quantitative		Gadolinium in MSK Imaging							
08:15-11:45	08:15-12:15		It Doesn't Have to Be That Way: Information & Diagnosis							
Cardiovascular MRI: Vascular	Iraumatic Brain Imaging: Whom, How, When		Dynamic Functional Connectivity MRI: Approaches & Mechanisms							
			Individualized Brain MRI: Single Subject Analysis							
13:15–17:25 Cardiac MRI: Function,	13:15–16:40 Neurovascular MRI:		MRI Assessment in Monitoring Cancer Therapy							
Perfusion & Viability	From Micro to Macro		Clinical Applications of PET-MRI in Body Imaging							
08:15-12:05			Hyperpolarization & MR Applications							
Brain Cancer: from Diagnosis to Treatment	08:15–11:45 CEST Imaging	Thursday,	Cardiovascular MR: "More is Better": More Modalities							
		2017	MR Imaging of Small Joints: Arthritis & Diabetic Arthropathy							
13:15–17:15	13:15–16:45 Biostatatics for		Local vs. Global Tractography							
Brain Disorders	Imaging Studies		Magnetic Resonance Elastography: Abdominal & Cardiac							
			The Consequence of Inter-Compartmental Water Exchange in the DCE-MRI Time-Course							
08:15–12:15 Frontiers in Neuroscience:	0pening Session:		Individualized Brain MRI: Metabolic Imaging							
Preclinical MRI–X	Lauterbur Lecture		Imaging Tumor Response to Therapy							
13:15–17:15 Quantitativo Surgentibility			Cases with the Aces: Female Pelvis							
Mapping & Electrical Properties of Tissues			Quantitative Susceptibility Mapping							

EDUCATIONAL CATEGORIES COLOR KEY • ISMRM 25TH ANNUAL MEETING & EXHIBITION

WEEKDAY SESSIONS

BODY
 CANCER/MOLECULAR/MRS
 CARDIOVASCULAR
 CROSSCUTTING & EMERGING TECHNOLOGIES
 DIFFUSION/PERFUSION/fMRI
 GENERAL
 MUSCULOSKELETAL
 NEURO
 PHYSICS & ENGINEERING
 CE&S: Combined Educational & Scientific Session
 EC: Educational Course

Monday, 24 April 2017	Tuesday, 25 April 2017	Wednesday, 26 April 2017	Thursday, 27 April 2017			
08:15–10:15						
CE&S:	EC: Being Vendor Agnostic	CE&S: Demystifying Dielectrics & Understanding Reciprocity	CE&S: Combining Structural & Functional Brain Connectivity			
Combining fMRI with Advanced Neurotechniques	EC: MR Physics & Techniques for Clinicians	EC: (no CME credit) Prototype to Product: Pathways to Commercialization	EC: Clinical & Technical Perspectives on Trends in MR			
EC:	CE&S:	EC: MR Physics & Techniques for Clinicians	EC: MR Physics & Techniques for Clinicians			
Assessing Implant Safety: In the Clinic Now & As the Field Strength Rises	4D Flow MRI: Moving to Clinical Practice	Hands-On Workshop 1: (no CME credit) GE • Philips	Hands-On Workshop Repeat: no CME credit) GE (1) • Philips (2)			
10:45–12:15			10:45–11:15			
Plenary Session: Gadolinium Deposition	Plenary Session: NIBIB New Horizons Lecture Plenary Session: Dynamic Real Time Imaging	Plenary Session: Theranostic MRI in Precision Medicine Special Session: Scientific Highlights of the 25 th Annual Meeting	Plenary Session: Brain at Work: Understanding Neural Circuits through Advancing Neuroimaging			
13:45–15:45			13:00–15:00			
CE&S: Studying the Value of MRI	EC: Susceptibility Imaging as a New Window on Disease, Iron & Hypoxia	EC: Body MRS: How & Why? EC: Junior Fellows Symposium: Machine Learning in Imaging	EC: Advanced Techniques in Pediatric Neuroimaging			
EC: Advanced Imaging of Pain	CE&S: Spinning Off Axis	CE&S: CEST from Equations to Cells to Humans	CE&S: Body DWI			
16:15–18:15			15:30–17:30			
CE&S: Metabolomics & Metabolic Fluxes	EC: Liver MR Imaging: Quantitative Approaches to Liver Disease	EC: Heart Failure & Arrhythmia	EC: Imaging in Joint Health & Disease			
EC: MR Physics & Techniques for Clinicians	EC: Sports Related Injuries	CE&S: Evaluation of Tissue Properties in Cancer: Heterogeneity & Structure	EC: Game Show: Wait Wait Don't Tell Me!: MRI Artifacts!			
EC: Multiple Sclerosis: State of the Field in 2017			CE&S: Diffusion of the Changing Brain			
	CE&S: Learning Image Reconstruction: Will Neural Networks Change Eventthing?	Hands-On Workshop 2: (no CME credit)	Hands-On Workshop Repeat: (no CME credit) GE (2) • Philips (1)			
EC: Pelvic MR Imaging	Treat at the two is change Everything?	GE • Fillips	17:45–18:45			
			YIA Presentations			
			Closing Session: Mansfield Lecture			

Registration Hours 06:30–18:00

Educational Course	Educational Course	Educational Course	Educational Course	Educational Course	Educational Course	Educational Course	Educational Course
Diffusion MRI: Principles & Applications	Introduction to fMRI: Task & Resting State fMRI Methods/Analysis	MR Systems Engineering	Physics for Physicists	Introduction into Magnetic Resonance Spectroscopy	Frontiers in Neuroscience: Preclinical MRI-X	Cardiovascular MRI: Vascular	Brain Cancer: from Diagnosis to Treatment
08:15–11:45	08:15–12:15	08:30-12:00	08:15–12:15	08:15-12:05	08:15-12:15	08:15–11:45	08:15–12:05
Room 311	Room 312	Room 313A	Room 313BC	Room 314	Room 315	Room 316A	Room 316BC
			LUNCH BREA	K 12:15–13:15			
Educational Course	Educational Course	Educational Course Continues	Educational Course Continues	Educational Course	Educational Course	Educational Course	Educational Course
Connectivity: Structure & Function	The Basics of Perfusion & Permeability Imaging	(MR Systems Engineering)	(Physics for Physicists)	Novel & Mature MRI Contrast Agents	Quantitative Sus- ceptibility Mapping & Electrical Proper- ties of Tissues	Cardiac MRI: Function, Perfusion & Viability	Imaging Biomarkers of Brain Disorders
13:15–17:45	13:15–16:45	13:15–16:45	13:15–16:45	13:15–17:15	13:15–17:15	13:15–17:25	13:15–17:15
Room 311	Room 312	Room 313A	Room 313BC	Room 314	Room 315	Room 316A	Room 316BC

SUNDAY, 23 APRIL 2017

ISMRM 25TH ANNUAL MEETING ● PROGRAM-AT-A-GLANCE

Registration Hours 07:00–18:30

Educational Course	Educational Course	Educational Course	Educational Course	Educational Course	Educational Course	Educational Course	Educational Course
IVIM & Cerebrovascular Reserve	Traumatic Brain Imaging: Whom, How, When	RF Engineering: Coils	Image Acquisition & Reconstruction	Multiparametric Imaging in Cancer: How & Why	Body MRI: Optimize Your Clinical Practice	Translational Musculoskeletal Imaging: From Qualitative to Quantitative	CEST Imaging
08:15–11:45	08:15–12:15	08:30-12:00	08:30-12:00	08:15–12:05	08:15–12:15	08:15–12:15	08:15–11:45
Room 311	Room 312	Room 313A	Room 313BC	Room 314	Room 315	Room 316A	Room 316BC
			LUNCH BREA	K 12:15–13:15			
Educational Course	Educational Course	Educational Course Continues	Educational Course Continues	Educational Course	Educational Course Continues	Educational Course Continues	Educational Course
Recent Advances in Diffusion, Perfusion & fMRI	Neurovascular MRI: From Micro to Macro	(RF Engineering: Coils)	(Image Acquisition & Reconstruction)	MRI, MRS & Molecular Imaging to Diagnose Disease & Assess Treatment	(Body MRI: Optimize Your Clinical Practice)	(Translational Musculoskeletal Imaging: From Qualitative to Quantitative)	Biostatistics for Imaging Studies
13:15–16:45	13:15–16:40	14:00–16:30	13:15–16:45	13:15–16:15	13:15–16:15	13:15–16:05	13:15–16:45
Room 311	Room 312	Room 313A	Room 313BC	Room 314	Room 315	Room 316A	Room 316BC
		OPEN	ING SESSION • F	lenary Hall, 17:00	-18:15		
17:00	Welcome & Society	Awards • Garry E. Go	old, M.D., ISMRM 2016	-2017 President			
17:30	Lauterbur Lecture: N	IRI as a Window into C	Cardiac Function • Leo	n Axel, M.D., Ph.D.			
18:15	Adjournment						
18:30–20:00	Opening Reception	on • Exhibition Ha	ill				



ISMRM Opening Reception Sunday, 23 April 2017 • 18:30–20:00

Technical Exhibition (Level 1, Exhibition Hall) Hawai'i Convention Center

SMRT 26TH ANNUAL MEETING PROGRAM

PLEASE SEE NEXT PAGE FOR ISMRM MEETING COURSES ACCREDITED FOR RADIOGRAPHERS/TECHNOLOGISTS (included in an SMRT 3-day registration!)

Time	Saturday, 22 April 2017, 08:00-	17:30 (6.25 Category A CE pending approval)	Time	Sunday, 23 April 2017, 08:00-	-17:30 (6.00 Category A CE pending approval)				
06:30	Registration (ISMRM Registration Are	ea)	07:00	Registration (ISMRM Registration Ar	ea)				
08:00	Welcome & Announcements James Stuppino, B.S., R.T. (R)(MR), SMR Shawna Farquharson, M.Sc. (R), SMRT F	T President 2016–2017 Program Chair 2017	08:00	Welcome & Announcements Titti Owman, (R)(CT)(MR), FSMRT, SM Shawna Farquharson, M.Sc. (R), SMR ⁻	IRT President 2017–2018 T Program Chair 2017				
Moder	Forum 1: Plenary ators: Vera Kimbrell, BS, R.T. (R)(MR), FSN	Session IRT & Shawna Farquharson, M.Sc. (R)	N	Forum 6: MR Noderators: Anne Sawyer, BS, RT, (R)(MR	!I Safety), FSMRT & Karla Epperson, (R)(MR)				
08:10	KEYNOTE: MRI: From the Past to the Fingerprinting – Mark Griswold, Ph.D.	Present World of MRI	08:05	MRI Issues for Implants and Devices – Frank G. Shellock, Ph.D., FACR, FAC	CC, FISMRM				
08:55	PLENARY: MRI and the Quest for Spe	eed – Kawin Setsompop, Ph.D.	08:35	Implant Heating – Michael Steckner, Ph.D., M.B.A.					
09:40	Break		09:05	An Update on FDA Reported Adverse Events and Safety Concerns for					
Moder	Forum 2: Car ators: Wendy Strugnell, B.App.Sc., (MIT), FSN	diac IRT & Martin Sherriff, B.Appl.Sc., R.T. (MR)	09:35	Medical Implants in the MRI Environment – Sunder S. Rajan, Ph.D. MRI Safety Forum: Panel Discussion – Sunder S. Rajan, Ph.D.; Frank G.					
10:00	Cardiac MRI in the Assessment of Pe Cardiac Disease: Current Challenges	diatric and Neonatal Congenital and Potential Solutions	09:50	Shellock, Ph.D., FACR, FACC, FISMRM; Michael Steckner, Ph.D., M.B.A. Diamond Sponsor – Philips Healthcare – Marius van Meel, B.Sc. (MR)(R)(N)(T)					
	Musered Delayed Enhancement In		10:00	Break					
10:35	– Cindy Comeau, B.S., R.T. (N)(MR), FS	aging Challenges MRT	Mode	Forum 7: T2* Imaging erators: Filip De Ridder, R.N. (T), FSMRT & I	g & Applications Barry Southers, M.Ed., R.T. (R)(MR), FSMRT				
11:10	2D vs. 4D Flow: Definition of Techniq – James Carr. M.D.	ues and Clinical Applications	10:20	Clinical Applications of SWI - Kare	n Tong, M.D.				
11.40	SMRT Annual Business Meeting (no CE	credit	10:55	Quantitative Susceptibility Mapping	– Diego Hernando, Ph.D.				
11:55	Lunch		11:30	The Role of MRI in Diagnosing and M – Klaus Schmierer, M.D., Ph.D.	Nonitoring of Multiple Sclerosis				
	Forum 3: Proffered	d Papers	12:00	Non-Educational Awards (no CE credit)					
ſ	Voderators: Su Liew, M.MR. lech. & Sher	yl Foster, MHIthSc., (MRS)(MRI)	12:15	5 Lunch					
12:55	President's Award: Short T2 Nerve Imag Suppression in the Brachial Plexus at 3T – E	ing using Vascular and Background Tissue ien Kennedy, B.App.Sc., Mst (MRI)		Forum 8: Proffered Pa	pers (no CE credit)				
13:15	1 st Place Clinical Focus Award: Develop Preparation of Children Undergoing Magne	oing a Protocol for Virtual Reality tic Resonance Imaging	Mode	rators: Martin Sherriff, B.Appl.Sc., R.T. (N 2 nd Place Clinical Focus Award: A Prac	AR) & Jeremy Morrison, NDMDI, MHSc				
	- Glenn Cahoon, M.App.Sc. (no CE credit)	do Stoody Stato (PSS) in 2D East cain Echo	13:05	MR Imaging – Michelle Aye Myat Myat Htun, B.P.Sc					
13:25	(FSE) Optimization for Image Resolution and – Ben Kennedy, B.App.Sc., Mst (MRI) (no CE	d Physiological Challenges and at 3T credit)	13:15	3:15 2 nd Place Research Focus Award: Effect of Multiband Acquisition on Temporal Signal to Noise Ratio (tSNR) at 3T – Lori Talagala, R.T. (R)(MR)					
	Forum 4: PARALLEL S	SESSIONS 1	13:25	3 rd Place Clinical Focus Award: Simult – Tanya Lynn Wah Kan, M.R.T. (MR)(R)	aneous Bilateral MR Guided Breast Biopsies				
	MRI Management Session Moderator: Rhonda Walcarius, B.Sc., MRT (R)	MRI Theory: From the Fundamentals to Advanced Imaging Applications Moderators: Julie Strandt-Peay,	 3rd Place Research Focus Award: Comparison of Magnetic Resonance Spectroscopy Techniques at 3 Tesla and 7 Tesla for Detection of 2-hydroxyglutarate (2HG) in IDH Mutant Gliomas – Lisa Desiderio, A.A.R.T. (R)(MR) 						
	(MR)	BSM, R. I. (R)(MR), FSMR I & Katrin Koziel, R.T.		Forum 9: PARALLE	L SESSIONS 2				
13:45	The Transformation of Health Care: Value Driven Radiology? – Vivian Lee, M.D., Ph.D., M.B.A.	Refresher of MR Image Formation Principles – Donald McRobbie, Ph.D.		PET MRI Moderators: Kendra Huber, (R)(M) (CT)(MR) & Debra Singel, A.S., R.T. (R)(MR)	MSK Imaging Moderators: Kirsty Campbell, NDMDI, PG Dip (MRI) & Chris Kokkinos, B.App.Sc., Pg.Cert. (MRI)				
14:20	Change Management: Do You Use the Carrot or the Stick? – Jeff Jahn, BAS, RT, (R) (MR)	Introduction to Hardware – Martin J. Graves, Ph.D.	13:55	Approaches to Attenuation Correction in PET MRI – John Totman, Ph.D.	MRI Imaging in the Presence of Metal – Alissa J. Burge, M.D.				
14:55	Great Leadership: Theories Behind Best Practice – Amanda Golsch, M.B.A., R.T. (R) (MR)	Introduction to Parallel Imaging and Simultaneous Multi-Slice Acquisition – Kawin Setsompop, Ph.D.	14:30	Current and Future Applications of PET/MRI: A Neuroradiological Perspective – Robert J. Witte, M.D.	Quality vs. Speed in MSK Imaging - Tips and Tricks for Sequences New and Old – Megan Cromer, Ph.D., B.App.Sc. (Hons)				
15:25	Break			Clinical Radiochemistry for	Advanced Quantitative MSK				
Moder	Forum 5: Ne ators: Barry Southers, M.Ed., R.T. (R)(MR), FS	euro SMRT & Helle Simonsen, (MRT), FSMRT	15:05	Advancing PET-MRI – Frederick Chin, Ph.D.	Imaging Techniques – Emily McWalter, Ph.D.				
15:40	fMRI: From Acquisition to Analysis -	Stefan Sunaert, M.D., Ph.D.	15:35	Break					
16:15	Diamond Sponsor: GE Healthcare –	Steve Lawson, (R)(MR)	N.A.	Forum 10: MRI Applica					
16:25	DWI: From Acquisition to Analysis –	Alan Connelly, Ph.D.	15-50	15:50 Advances in Imaging the Developing Brain – Patricia Filen Grant M.D.					
17:00	Clinical Utility of DWI & fMRI - Albe	erto Bizzi, M.D.	16.00	Imaging of Neurodegraphics					
17:30	Announcements & Adjourn		17:00	Euturo Directions of MPL	Masalay Ph D				
19:00	SMRT Welcome Reception: Sky Waik	iki	17:00	Future Directions of IVIKI – IVIChael Moseley, Ph.D.					
			17:30	Ciosing Remarks & Adjourn					

SMRT 26TH ANNUAL MEETING PROGRAM : MONDAY 24 APRIL 2017

ISMRM MEETING COURSES ACCREDITED FOR RADIOGRAPHERS/TECHNOLOGISTS

All of the following sessions are included in an SMRT 3-day Meeting Registration!

	Ivionday, 24 April 2017 (P	ending 7.25 Category A CE)	1	r
TIME	TALK	SPEAKER	CREDIT	ROOM #
07:00-07:50	ISMRM Sunrise Session: Individualized Brain MRI: Building a Neu	urosurgical Planning Toolbox		313BC
	Fiber Tractography for Practical Neurosurgical Application	Shawna Farquharson, M.Sc. (R)	0.25	
	• Functional MRI for Practical Neurosurgical Application	Vivek Prabhakaran, M.D., Ph.D.	0.25	
08:15–10:15	ISMRM-SMRT Joint Forum: Assessing Implant Safety: In the Clin (This course is also included with the 2-Day SMRT Meeting Regis	ic Now, and as the Field Strength Rises stration)		311
	Introduction to MRI Safety	Vera Kimbrell, BS, R.T. (R)(MR), FSMRT	0.5	
	• How Implant Safety is Evaluated	Frank G. Shellock, Ph.D., FACR, FACC, FISMRM	0.5	
	• Implant Safety at Ultra High Field	Stuart Clare, Ph.D.	0.5	
	Building an MRI Safety Program	Bernd Ittermann, Ph.D.	0.5	
11:15–12:15	ISMRM Plenary: Gadolinium Deposition (Note: 10:45–11:15 ISM	RM Society Awards)		Plenary Hall
	Gadolinium Safety & Deposition: Past, Present & Future	Michael F. Tweedle, Ph.D.	0.25	
	Gd Safety & Deposition: Impact on Practice, European Perspective	Harriet C. Thöny, M.D.	0.25	
	• How Does Gd Enter the Brain, When BBB is Intact?	Shinji Naganawa, M.D.	0.25	
13:45–15:45	Advanced Imaging of Pain			316A
	Advanced Multimodal Spine Imaging	Lawrence Tanenbaum, M.D.	0.5	
	• MR Imaging of Brachial Plexus	Kimberly K. Amrami, M.D.	0.5	
	Current Concepts on MR Neurography	Gustav Andreisek, M.D.	0.5	
	• MR US Fusion Guided Intervention for Pain Syndromes	Christopher J. Burke, M.B.B.C.H.	0.5	
16:15–18:15	Multiple Sclerosis: State of the Field in 2017			315
	Pathology of Multiple Sclerosis	Bruce D. Trapp, Ph.D.	0.5	
	Role of MR in MS Diagnosis and Management	Yukio Miki, M.D., Ph.D.	0.5	
	Role of MR in MS Clinical Trials	Anthony Traboulsee, M.D.	0.5	
	Advanced MR Techniques for Characterization of MS Pathol- ogy in Brain and Spine	Claudia A. Gandini Wheeler-Kingshott, Ph.D.	0.5	
16:15–18:15	Pelvic MR Imaging			316A
	Gynecologic MRI: Prognostication, Treatment Planning, and Treatment Response	Kaori Togashi, M.D., Ph.D.	0.5	
	Prostate MRI Image Interpretation	Jurgen Fütterer, M.D., Ph.D.	0.5	
	Rectal Cancer-Shifting Paradigms - Predicting Complete Pathologic Response and Facilitating Non-Operative Manage- ment	Marc Gollub, M.D.	0.5	
	• MR Urography	Bobby Kalb, M.D.	0.5	

Monday, 24 April 2017 (Pending 7.25 Category A CE)

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ISMRM 25TH ANNUAL MEETING & EXHIBITION ● PROGRAM-AT-A-GLANCE

Registration Hours 06:30–18:30 • Exhibition Hall 08:00–10:45; 12:15–17:00 (Hall closed during Plenary session) • Traditional Poster Hall 07:00–20:30

			Ν	MONDAY SUNI		ATIC	ONAL SESSIC	NS • 07:00-07:	:50				
Education Session Cardiovascular "More is Bett LV Structure Mechanics	al Educa Ses r MR: Bleeding er": Brain Tec & Fingerp s Hyperp (13	ational sion g Edge of chniques: rinting & olarized	Educational Session Contrast Mechanisms in MSK Imaging	Educational Session Educational Session Magnetic Individualized Br Resonance MRI: Building a Elastography: Neurosurgical Overview & Planning Toolbor Technology Planning Toolbor		ational ssion alized Brain uilding a osurgical g Toolbox	Educational Session MR-Guided Focused Ultrasound in the Brain	Educ Se It Doe to Be Extrem Gra	Educational Session It Doesn't Have to Be That Way: Extreme Fields & Gradients		ational ssion t Practices: sition & ology	Educational Session PI-RADS: Yes or No	
Room 310	D Roor	n 311	Room 312	Room 313	A F	loom	313BC	Room 314	Roo	Room 315		n 316A	Room 320
					BRE	AK 0	7:50-08:15		1.00				
				MONDA		NG S	ESSIONS •	08:15–10:15					
Traditional Po Acquisition,	oster Session (no Reconstruction	o CME credit) & Analysis	Electronic Poste Cardio	r Sessions (no C vascular; Body	CME credit)	S Psy	Study Group /chiatric MR S	Session (no CME c pectroscopy & Im	redit) naging	S Hype	tudy Group erpolarizatio	Session (no C n Methods 8	CME credit) Equipment
E	xhibition Hall		Exh	ibition Hall			Ro	om 317AB				323ABC	
Power Pitch Session (no CME credit) Interventional; Safety; Engineering	Power Pitch Session (no CME credit) 7T Neuroimaging	Scientific Session Young Investigator Awards	Scientific Session Myocardial 's Tissue Relaxometry	Scientific Session White Matter & Connectivity in TBI	Scienti Sessic Tractogra & Fiba Modeli	fic on aphy er ng	Scientific Session Relaxatior Methods	Scientific Session System Imperfections Measurement & Correction	Educat Sessi Mostly M	ional on 1uscle F	Scientific Session Female Pelvis, Fetal Placental Imaging	Combined Education & Scientif Session Combinin fMRI with Advanced Neurotech niques	d Educational Session ISMRM-SMRT Joint Forum: Assessing Implant Safety: In the Clinic Now, & as the Field Strength Rises
Power Pitch	Power Pitch	Room 310	Room 312	Room 313A	Room 31	3BC	Room 314	Room 315	Room 3	316A	Room 320	Room 316	3C Room 311
I neatre A	Theatre B				BREA	AK 10	0:15–10:45						
				PI FNAR			Plenary Hall.	10:45-12:15					
10:45 Society Awards													
Gadolinium Deposition • Organizers: Peter Caravan, Ph.D. & Winfried Willinek, M.D.													
11:15	11:15 Gadolinium Safety & Deposition: Past, Present, & Future • Michael F. Tweedle, Ph.D.												
11:35	Gd Safety & De	eposition: Imp	act on Practice, Eu	uropean Perspe	ctive • Ha	rriet (C. Thöny, M.E)					
11:55	How Does Gd	Enter the Brai	n, When BBB is Int	tact? • Shinji N	laganawa, l	M.D.							
12:15	Adjournment						K 12.15 12.	15					
			12:30-13:30 • G	old Corporate S	Symposium	• S	iemens Healt	nineers (no CMF cre	edit) • Pler	narv Hall			
	•	•		MONDAY	AFTERNO	ON	SESSIONS •	13:45-15:45					
Traditional Po Young Investig	oster Session (na gator's Awards Pr	o CME credit) resentations	Electronic Poste	r Sessions (no C usion; Body	CME credit)	S	Study Group	Session (no CME c ardiac MR	redit)	Join	t Study Gro MR Sat	up Session (r fety; High Fie	no CME credit) Id
E	xhibition Hall		Exh	ibition Hall			Ro	om 317AB				323ABC	
Power Pitch Session (no CME credit) Body MRI Quantitative	Power Pitch Session (no CME credit) Highlights of Multiparamet- ric Acquisition & Reconstruc- tion	Scientific Session Cerebrovas cular Diseas Intracranial Extracrania	Scientific Session - Acquisition e: & Analysis of & High Spatio- Temporal fMRI	Scientific Session Hyperpolar- ized 13C Magnetic Resonance Imaging & Spectroscopy	Scienti Sessic Diffusid Acquisiti Reconst tion	fic on on & ruc-	Scientific Session Neuro Morphomet & Quantitati Analysis	Scientific Session CEST: New Solutions & Ve Old Problems	Scient Sessi Nev Perspect	tific on v N trives DCE	Scientific Session MS: Cutting Edge Methods	Combined Education & Scientif Session Studying th Value of M	d Educational Session Advanced Imaging of Pain
Power Pitch Theatre A	Power Pitch Theatre B	Room 310	Room 311	Room 312	Room 3	13A	Room 313E	C Room 314	Room 3	16BC	Room 320	Room 31	5 Room 316A
		·	1		BRE	<u>\K 1</u> 5	5:45–16:15						
				MONDA		IG SE	SSIONS • 1	6:15–18:15					
Traditional Po	oster Session (no MSK	o CME credit)	Electronic Poste Molecular Imagir	r Sessions (no C ng;Contrast Me	CME credit) chanisms	S	S tudy Group Hyperpol	Session (no CME c arized Media MR	redit)	S	tudy Group MR	Session (no C Engineering	CME credit)
E	Exhibition Hall		Exh	ibition Hall			Ro	om 317AB				323ABC	
Power Pitch Session (no CME credit) Cutting Edge fMRI	Power Pitch Session (no CME credit) Quantitation, Prediction & Machine Learning in the Brain	Scientific Session Stroke & Vessel Wall Imaging	Scientific Session Microstructure	Scientific Session Velocity & Flow Imaging: Clinical Research	Scienti Sessic Motio Correcti All Bra	fic on on: in	Scientific Session Preclinical Tumor Microenviro ment Imagin	Scientific Session Pancreatobili- ary n- ng	Combi Educati & Scier Sessi Metabol & Meta Fluxe	ned E ional ntific on omics bolic es	ducational Session Multiple Sclerosis: State of the ield in 2017	Education Session Pelvic MR Imaging	al Educational Session MR Physics & Techniques for Clinicians
Power Pitch Theatre A	Power Pitch Theatre B	Room 310	Room 311	Room 312	Room 3	13A	Room 313E	C Room 320	Room	314	Room 315	Room 316	A Room 316BC

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Registration Hours 06:30–18:00 • Exhibition Hall 08:00–10:45; 12:15–17:00 (Hall closed during Plenary session) • Traditional Poster Hall 07:00–20:30

			т	UESDAY SUNR		ATION	IAL SESSIOI	NS • 07:00-07:5	50				
Educationa Session	Al Educa Ses	itional sion	Educational Session	Educationa Session	al E	Educati Sessi	ional ion	Educational Session	Edu S	ucationa ession	I Educa Ses	ational sion Best	Educational Session
"More is Bette	er": Brain Teo	chniques:	Techniques &	Resonance	> L(Syste	ms	Response to	to Be	That W	ay: Practices	: Acquisi-	Challenges in the
Tissue Characterizat	ion Conventi	ond ional MRI	Applications	Elastograph Brain & Brea	iy: /	Applica	ations	mmunotherapy	Non-	Tradition quisition	nal tion & I State	Resting- ndices	Body with MRI
Room 310) Roon	n 311	Room 312	Room 313.	A R	oom 3	13BC	Room 314	Ro	om 315	Room	316A	Room 320
					BRE/	AK 07:	50–08:15						
				TUESDA	Y MORNIN	NG SES	SIONS • 0	8:15–10:15					
Traditional Po	fMRI	o CME credit)	Electronic Poste Acquisition, Red	r Session (no Cl construction & /	ME credit) Analysis	Stı	udy Group S	ession (no CME cr iffusion	edit)		Study Group MF	Session (no Cof Cancer	CME credit)
E	xhibition Hall		Exh	ibition Hall			Roc	m 317AB				323ABC	1
Power Pitch Session (no CME credit)	Power Pitch Session (no CME credit)	Scientific Session Liver	Scientific Session The Matrix:	Scientific Session Novel Pulse	Scienti Sessio From Ag	i fic on ging l	Scientific Session Late-Breakin	Scientific Session g Functional &	Scier Ses	n tific sion S:	Combined Educational & Scientific Session	Educatio Session Being Ver	nal Educational Session MR Physics &
Best of Cardiovascu- lar MR: He- modynamics & Atheroscle- rosis	Brain Physiology: Flow, Oxygen, Metabolism	Quantitatio	n Collagen Function & Microstructure	Sequences	Brain to Alzheimer's Disease		Machine Learning		Spina	l Cord	4D Flow MRI: Moving to Clinical Practice	Agnost	ic Iechniques for Clinicians
Power Pitch Theatre A	Power Pitch Theatre B	Room 310) Room 311	Room 312	Room 3	13A	Room 313B	C Room 316A	Roon	n 320	Room 315	Room 3	14 Room 316BC
					BRE/	AK 10:	15–10:45						
	PLENARY SESSION • Plenary Hall, 10:45–12:15												
10:45	NIBIB New Hor	rizons Lecture	: Strength in Numb	pers: Unleashing	g the Powe	r of Qu	antitative M	RI • Nicole Seibe	erlich, Ph	.D.			
11.15	Peel Time MPI	Taabnalaay	Dynamic Real Ti	me Imaging • ·	Organizers	: Micha	ael S. Hanser	n, Ph.D. & Joshua	D. Trzasł	ko, Ph.D			
11:35	Diagnostic Rea	I-Time MRI •	 Steed Krishna S. Navak. 	Ph.D.									
11:55	Interventional I	mage Guidar	nce • Reza Razavi,	M.D.									
12:15	Adjournment												
			10 00 10 00 -	<u> </u>		BREAK	12:15-13:4	5	- DI				
			12:30-13:30					13.45_15.45	• Flenal	ry Hall			
Traditional Po	oster Session (no	o CME credit)	Electronic Poste	er Session (no Cl	ME credit)	Stu	udy Group S	ession (no CME cre	edit)	Jo	oint Study Gro	up Session	(no CME credit)
	Diffusion			Neuro			MR E	astography			MR in	Drug Resea	arch
E	xhibition Hall	C :	Exh	ibition Hall	<u> </u>	r.	Roc	m 317AB			C 1	323ABC	
Session	Session	Session	Session	Session	Scienti	n	Session	Session	Ses	sion	Session	Educatio	nal Session
(no CME credit)	(no CME credit)	fMRI:	Microstructure	MR Safety	Non-Pro	oton	Multimodal	Psychiatric	Simulta	aneous	Myocar-	& Scient Sessio	n Susceptibil-
Livei	tion	& Physiolog	y Diffusion)		IVIRI & IV	/////	metric		Iviuiti	-Slice	Perfusion	Spinning	off as a New
	Highlights					1	Neuroimagir	g				Axis	Window on Disease, Iron & Hypoxia
Power Pitch Theatre A	Power Pitch Theatre B	Room 310) Room 311	Room 312	Room 3	13A I	Room 313B	C Room 314	Room	316BC	Room 320	Room 3	15 Room 316A
					BRE/	AK 15:4	45–16:15						
				TUESDA	Y EVENIN	IG SES	SIONS • 1	5:15–18:15					
Traditional Po Con	oster Session (no trast Mechanism	o CME credit) ns	Electronic Poste Engineering; Ad	r Sessions (no C d Hoc; Cancer I	ME credit) maging	Stu	udy Group S Peo	ession (no CME cre liatric MR	edit)		Study Group MR S	Session (no	CME credit) Dy
E	xhibition Hall		Exh	ibition Hall	-		Roc	m 317AB				323ABC	
Power Pitch	Power Pitch	Scientific	Scientific	Scientific	Scienti	fic	Scientific	Scientific	Scier	ntific	Combined	Educatio	nal Educational
(no CME credit)	(no CME credit)	Artifacts &	Pushing the	Preclinical	Diffusio	on:	Parkinson's &	& Perfusion &	C	.V	& Scientific	Liver M	R Sports
Best of	New	Correction	s Envelope of	Models of	Multi-Sit	te &	ALS	Diffusion in	Innova	ations:	Learning	Imaging	g: Related
cular MR:	Metabolic		Acquisition	Disease	vaiidati	ion		Cancer	INew M & Im	etnods hage	Image Recon-	Approac	nes Injuries
Myocardial	Imaging								Proce	essing	struction: Will	to Live	r
Tissue Char- acterization	Approaches										works Change Everything?	Diseas	e
Power Pitch Theatre A	Power Pitch Theatre B	Room 310) Room 312	Room 313A	Room 31	3BC	Room 314	Room 316BC	Roon	n 320	Room 311	Room 3	15 Room 316A
			18.30-20.30	Bronze Cor	oorate Svm	nosiur	m • Bracco	(no CME credit) • F	Room 31	3BC			1

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ISMRM 25TH ANNUAL MEETING ● PROGRAM-AT-A-GLANCE

Registration Hours 06:30–18:00 • Exhibition Hall 08:00–10:45; 12:15–17:00 (Hall closed during Plenary session) • Traditional Poster Hall 07:00–20:30

			WE	DNESDAY SUN	IRISE <u>EDU</u>	JCATI <u>ONAL SE</u>	ssions •	07 <u>:00–07</u>	:50				
Educationa Session	al Educa	ational sion	Educational Session	Educationa Session	al I	Educational Session	Educa	ntional sion	Edu	ucationa ession	l Educa	ational sion	Educational Session
Cardiovascular	MR: Hyperpo	larization	MR Imaging of	Gadolinium in	MSK Indi	vidualized Brain	MRI Asse	ssment in	lt Do	esn't Ha	ve Dynamic	Functional (Clinical Applica-
More Spee	d	plications	Fingers & Toes	inaging		Analysis	The	rapy	Info	mation agnosis	&		Body Imaging
Room 310) Roor	n 311	Room 312	Room 313/	4 R	oom 313BC	Roon	n 314	Ro	om 315	Room	316A	Room 320
					BRE	AK 07:50-08:15							
				WEDNESD	ay Morn	ING SESSIONS	• 08:15-	-10:15	(:)				
Traditional Po	o ster Session (n Body	o CME credit)	Electronic Poste	e r Session (no Cl Neuro	ME credit)	Current Issues	in Brain Fu	unction Str	ucture	E	Study Group lectro-Magnetic	Session (no Cl c Tissue Prope	/E credit) erties (SWI)
E	xhibition Hall		Exh	ibition Hall		-	Room 317/	AB			:	323ABC	
Power Pitch Session	Power Pitch Session	Scientific Session	Scientific Session	Scientific Session	Scienti Sessio	fic Scienti	Scientific Scientific S Session Session			Scientific Con Session Edu		Educationa Session	Educational Session
(no CME credit)	(no CME credit)	Arterial Spi	n Artificial	High-	Brain Tu	mor Gray Ma	tter Cl	linical &	MR-G	uided	& Scientific Session	(no CME credi	t) MR Physics &
Marching on Musculoskel-	Cancer Imaging in the	Labeling: Making it	Intelligence & Deep	Resolution Brain	Imagir	ng Dittusio Studie	on Iran s Mo	nslational plecular/	Interve	entions	Demystifying	to Product:	for Clinicians
etal	Body	More Robu	t Learning	Anatomy			M	etabolic			Dielectrics &	Pathways to	
		& Informativ	re				In				ing	ization	-
Power Pitch	Power Pitch	D	De em 211	D 212	D 2	12A D	200 0	21 (A			Reciprocity	D 215	Da am 21/DC
Theatre A	Theatre B	Room 310		Room 312	Room 312 Room 313A		JBC ROC	Markaha	Roon		Room 314 Room 3		Room 316BC
Пап	BREAK 10:15–10:45												
				PLENARY	SESSION	I • Plenary Ha	l, 10:45–1	2:15					
	1	Т	heranostic MRI in I	Precision Medici	ne • Org	anizers: Kristine	Glunde, Ph	n.D. & Nata	alie J. Se	rkova, P	h.D.		
10:45	Theranostic Ag	ents & MRI Te	echniques • Cons	tantinos G Hadj	ipanayis, N	1.D., Ph.D.							
11:05	Theranostic MI	R in Oncolog	y • Zaver M. Bhuj tion & Arthritic •	walla, Ph.D. Thoralf Niendor	f Ph D								
11:45	Special Session	: Scientific Hi	ahlights of the 25th	Annual Meeting	a • Mode	erators: Ileana Ha	ancu. Ph.D.	& Valeria I	Panebia	nco. M.E).		
12:15	Adjournment		<u>g</u>		5								
					LUNCH I	BREAK 12:15-1	3:45						
			12:30-13:30 •	Gold Corporate	Symposiu	m • Philips He	althcare (no	CME credit,) • Pler	ary Hall			
				WEDNESDA		IOON SESSION	15 • 13:4	5-15:45					
Traditional Po	oster Session (n Neuro	o CME credit)	Electronic Poste Body;	r Sessions (no C Cardiovascular	ME credit)	Study Grou	p Session Perfusior	(no CME cre า	edit)		Study Group Muscu	Session (no Cl Iloskeletal MR	ЛЕ credit)
E	xhibition Hall		Exh	ibition Hall			Room 317/	AB				323ABC	
Power Pitch	Power Pitch	Scientific	Scientific	Scientific	Scienti	fic Scienti	fic So	cientific	Scie	ntific	Combined	Educationa	Educational
(no CME credit)	(no CME credit)	Quantifica	- Vascular	Pediatric Brain	Rena	I Thoracic	MRI: Di	iffusion:	Boi	nes:	& Scientific	Body MRS:	Junior Fellows
RF Arrays &	Post-	tion of	Imaging:	Development	Imagir	ig: Function	al &	Time-	Ultrast	ructure	Session CEST from	How & Why	Symposium:
Systems	Processing & Motion	Microstructu	Wall &		Function	on Imaging	gic Dep Lof & R	endence elaxation	In He Dise	alth & ease	Equations		Learning in
			Function			the Ch	est		_		to Cells to Humans		Imaging
Power Pitch	Power Pitch	Room 311	Room 312	Room 313A	Room 3	314 Room 3	I6A Roo	m 316BC	Roon	n 320	Room 310	Room 315	Room 313BC
Ineacte A	Theatre D				BRE	AK 15:45–16:15							
								10.1E					
				WEDNESL	DAY EVEN	ING SESSIONS	• 16:15–	10:15					
Traditional Po Interventional	oster Session (n MRI; Engineerin	o CME credit) g;MR Safety	Electronic Poste Acquisition	r Sessions (no C n; Musculoskele	DAY EVEN ME credit) tal	ING SESSIONS Study Grou Detection & Con	• 16:15– p Session ection of Ma	(no CME cre otion in MRI	edit) & MRS		Study Group	Session (no Cl nite Matter	/E credit)
Traditional Po Interventional	oster Session (n MRI; Engineerin xhibition Hall	o CME credit) g;MR Safety	Electronic Poste Acquisitio Exh	r Sessions (no C n; Musculoskele ibition Hall	ME credit) tal	ING SESSIONS Study Grou Detection & Con	16:15– p Session ection of Ma Room 317/	(no CME cre otion in MRI	edit) & MRS		Study Group	Session (no Cl hite Matter 323ABC	ЛЕ credit)
Traditional Po Interventional Power Pitch	oster Session (n MRI; Engineerin Exhibition Hall Power Pitch	o CME credit) g;MR Safety Scientific	Electronic Poste Acquisition Exh Scientific	r Sessions (no C n; Musculoskele ibition Hall Scientific	ME credit) tal	ING SESSIONS Study Grou Detection & Con I fic Scienti	16:15– p Session ection of Ma Room 317/ fic So	(no CME cre otion in MRI AB	edit) & MRS Scie	ntific	Study Group	Session (no Cl hite Matter 323ABC Combined	/E credit)
Traditional Po Interventional E Power Pitch Session (no CME credit)	oster Session (n MRI; Engineerin Exhibition Hall Power Pitch Session (no CME credit)	o CME credit) g;MR Safety Scientific Session Neuroimadir	Electronic Poste Acquisition Exh Scientific Session Liver New	r Sessions (no C n; Musculoskele ibition Hall Scientific Session Spinal Cord	ME credit) tal Scienti Sessic Structu	ING SESSIONS Study Grou Detection & Con I fic Scienti on Sessic ure Fingerprii	16:15– p Session ection of Ma Room 317/ fic So n So	(no CME cre potion in MRI AB cientific cession Breast	edit) & MRS Scie Ses fN	n tific sion	Study Group Wh Educational Session B0 Systems &	Session (no Cl hite Matter 323ABC Combined Educationa & Scientific	AE credit) Educational Session Heart Failure
Traditional Po Interventional Power Pitch Session (no CME credit) Diffusion:	oster Session (n MRI; Engineerin Exhibition Hall Power Pitch Session (no CME credit) MRS/MRSI	c CME credit) g;MR Safety Scientific Session Neuroimagir of High-Ris	Electronic Poste Acquisition Exh Scientific Session Liver New Techniques	r Sessions (no C n; Musculoskele ibition Hall Scientific Session Spinal Cord Injury &	ME credit) tal Scienti Sessic Structu & Funct	ING SESSIONS Study Grou Detection & Con I fic fic fic Fingerpri ent Sessic Pringerpri % Param	16:15- p Session ection of Ma Room 317/ fic Sc n S nting I eter Ir	(no CME cree otion in MRI AB cientific cession Breast naging	edit) & MRS Scie Ses fN Conne	ntific sion IRI ectivity	Study Group Wł Educational Session B0 Systems & Shimming	Session (no Cl nite Matter 323ABC Combined Educationa & Scientific Session Evaluation o	ME credit) Educational Session Heart Failure & Arrythmia
Traditional Po Interventional Power Pitch Session (no CME credit) Diffusion: Outside the Brain	oster Session (n MRI; Engineerin Exhibition Hall Power Pitch Session (no CME credit) MRS/MRSI Applications	o CME credit) g;MR Safety Scientific Session Neuroimagii of High-Ris Pediatric Bonulation	Electronic Poste Acquisition Exh Scientific Session Liver New K Techniques	r Sessions (no C n; Musculoskele ibition Hall Scientific Session Spinal Cord Injury & Myelopathy	ME credit) tal Scienti Sessic Structu & Funct Imaging the He	ING SESSIONS Study Grou Detection & Con I fic Scienti fin Sessic rre Fingerpri ion & Param g of Quantific at	16:15- p Session ection of Ma coom 317, fic n So n iting leter dr ation	(no CME cre otion in MRI AB científic iession Breast naging	edit) & MRS Scie Ses fN Conne	n tific sion IRI ectivity	Study Group Wł Educational Session B0 Systems & Shimming	Session (no Cl nite Matter 323ABC Combined Educationa & Scientific Session Evaluation c Tissue Prope	/E credit) E Educational Session Heart Failure & Arrythmia r-
Traditional Po Interventional Power Pitch Session (no CME credit) Diffusion: Outside the Brain	oster Session (n MRI; Engineerin Exhibition Hall Power Pitch Session (no CME credit) MRS/MRSI Applications	o CME credit) g;MR Safety Scientific Session Neuroimagin of High-Ris Pediatric Population	Electronic Poste Acquisition Exh Scientific Session Liver New K Techniques	r Sessions (no C n; Musculoskele ibition Hall Scientific Session Spinal Cord Injury & Myelopathy	ME credit) tal Scienti Sessic Structu & Funct Imaging the He	ING SESSIONS Study Grou Detection & Con I fic Scienti Sessic re Fingerpri ion & Param g of Quantific art	16:15- p Session ection of Ma Room 317, fic Sc n S hting I eter Ir ation	(no CME cre otion in MRI AB cientific iession Breast naging	edit) & MRS Scie Ses fN Conne	n tific sion IRI ectivity	Study Group Wł Educational Session B0 Systems & Shimming	Session (no Cl nite Matter 323ABC Combined Educationa & Scientific Session Evaluation c Tissue Prope ties in Cance	ME credit)
Traditional Po Interventional Power Pitch Session (no CME credit) Diffusion: Outside the Brain	oster Session (n MRI; Engineerin Exhibition Hall Power Pitch Session (no CME credit) MRS/MRSI Applications	o CME credit) g;MR Safety Scientific Session Neuroimagir of High-Ris Pediatric Population	Electronic Poste Acquisition Exh Scientific Session Liver New Techniques	r Sessions (no C n; Musculoskele ibition Hall Scientific Session Spinal Cord Injury & Myelopathy	AY EVEN ME credit) tal Scienti Sessic Structu & Functu Imaging the He	ING SESSIONS Study Grou Detection & Con I fic	16:15- p Session ection of Ma Room 317/ fic n S n ing l eter Ir ation	(no CME cre otion in MRI AB cientific ession Breast naging	edit) & MRS Scie Ses fN Conne	n tific sion IRI ectivity	Study Group Wł Educational Session B0 Systems & Shimming	Session (no Cl iite Matter 323ABC Combined Educationa & Scientific Session Evaluation c Tissue Prope ties in Cance Heterogenei & Structure	ME credit) Educational Session Heart Failure & Arrythmia fr- r.
Traditional Power Pitch The session (no CME credit) Diffusion: Outside the Brain	oster Session (n MRI; Engineerin Exhibition Hall Power Pitch Session (no CME credit) MRS/MRSI Applications Power Pitch Theatre B	o CME credit) g;MR Safety Scientific Session Neuroimagii of High-Ris Pediatric Population Room 310	Electronic Poste Acquisition Exh Scientific Session Liver New Techniques	r Sessions (no C n; Musculoskele ibition Hall Scientific Session Spinal Cord Injury & Myelopathy Room 312	MY EVEN ME credit) tal Scienti Sessio Structu & Functu Imaging the He Room 3	ING SESSIONS Study Grou Detection & Con I fic on Sessic Fingerpri ion & Param Quantific art 13A Room 31	16:15- p Session ection of Ma Room 3177 fic Sc n S nting I eter Ir ation 3BC Ro	(no CME creation in MRI continuing MRI contific contific contific continuing continuing continuing continuing	edit) & MRS Scie Ses fN Conne Room	ntific sion IRI ectivity 316BC	Study Group Wł Educational Session B0 Systems & Shimming Room 320	Session (no Cl nite Matter 323ABC Combined Educationa & Scientifit Session Evaluation c Tissue Prope ties in Cance Heterogenei & Structure Room 315	ME credit)
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ISMRM 25TH ANNUAL MEETING ● PROGRAM-AT-A-GLANCE

Registration Hours 06:30–18:00 • Exhibition Hall 08:00–10:45; 11:45–16:30 (Hall closed during Plenary session) • Traditional Poster Hall 07:00–16:30

				тн	URSDAY SUN		CATIO	ONAL SESS	SIONS	• 07:00-07:	50					
Educationa	al Educ	ational	Education	al	Education	nal	Educa	ational	E	ducational	Ed	ucational		Educa	tional	Educational
Session	Se	ssion	Session		Session		Ses	sion		Session		Session		Ses	sion	Session
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Room 310	Roo	m 311	Room 31	2	Room 313	BA F	loom	313BC	F	Room 314	Ro	oom 315		Room	316A	Room 320
						BRE	AK 07	7:50–08:15								
					THURSD	AY MORNI	NG S	SESSIONS	• 08:	15–10:15						
Traditional Po	o ster Session (Cardiovascular	no CME credit) Electronic	Poster	fMRI	CME credit)	S	Study Grou X-N	p Ses Nuclei	sion (no CME cre Imaging	edit)	:	Study G	roup ! Interv	Session (no CM ventional MR	1E credit)
E	xhibition Hall			Exhib	bition Hall			F	loom	317AB				3	323ABC	1
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Breakthrough	Contrast	Cance	r Correct	ion:	Molecular	Cartes	Cartesian		ng &	Methods &	& Met	abolism	Combir	ing	Technical	Techniques
Applications	New Horizons	;	INO DIA		imaging				Jgy	Applications			Structur	al &	on Trends in	
in Cancer													Functio	nai 1	MR	
Imaging													Connect	ivity		
Power Pitch Theatre A	Power Pitch Theatre B	Room 3	10 Room	311	Room 313A	Room 31	3BC	Room 3	14	Room 316A	Rooi	m 320	Room 3	312	Room 315	Room 316BC
Hands-O	n Workshop:	GE Healthc	are 1 (repeat)	(no CN	ME credit) Ro o	om 322AB		Han	ds-On	n Workshop: P	hilips F	lealthcare	2 (repe	at) (n	o CME credit)	Room 324
	BREAK 10:15-10:45 PI ENARY SESSION . Plenary Hall 10:45-11:45															
	PLENARY SESSION • Plenary Hall, 10:45–11:45															
10:45	Visions of the	BRAIN Initia	tive • Walter.	J. Koros	shetz. M.D.	ing Neuror	nagii	ig • Olgai	lizers.	. Hanzhang Lu,	і п. <i>,</i> і	<u>u vvu, i</u>	n.D. & C	Jiegol	r Aunany, r n.L	
11:05	11:05 Imaging at the Level of Neural Circuits • Anna Wang Roe, Ph.D.															
11:25	Human Brain	Mapping: Cl	nallenges & Op	portun	ities • Heidi	Johansen-E	Berg,	D.Phil., M.S	C.							
11:45	Adjournment										-					
			12.00_13	.00 • 9	Silver Corpora	LUNCH I		K 11:45–1	3:00 Iedica	(no CME credit)	• Plan	arv Hall				
			12.00-10	.00 - 0	THURSDA	Y AFTERN	DON	SESSIONS	• 13	3:00–15:00	- 1101	ary rian				
Traditional Po	ster Session (no CME credit	Electronic	Poster	Sessions (no	CME credit)		Study Grou	n Ses	sion (no CME cre	adit)		Study G	roup	Session (no CA	1E credit)
Molecular	Imaging; Spec	troscopy;	Interv	entiona	al MRI; MR Sa	fety;		MR Flow 8	k Moti	ion Quantitatic	n		Mole	cular 8	& Cellular Ima	ging
C	ancer Imaging			Spec	ctroscopy											
E Power Pitch	xhibition Hall	Scientif	ic Scient	Exhik	Sciontific	Sciont	fic	Feiontii	loom	317AB Sciontific	Seie	ntific	Scienti	3 fic	323ABC	Educational
Session	Session	Sessio	n Sessi	on	Session	Sessio	n	Sessio	n	Session	Ses	sion	Sessio	n	Educational	Session
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Diffusion	Neuroimaging	Respon	se & Techno			Knee	5	Neuromo	du-	metric	Ultra	sound	Vediasti	∝ num	Body DWI	Pediatric
	Techniques			5,				lation								Neuroimaging
Power Pitch	Power Pitch	Room 3	10 Room	311	Room 312	Room 3	13A	Room 31	3BC	Room 314	Rooi	n 315	Room 3	320	Room 316B0	C Room 316A
Ineacte A	Theatre D					BRE	AK 15	」 5:00–15:30			1					
THURSDAY E		SIONS: 15:3	0–17:30 • (N	lote: Ex	xhibition Hall	closes at 1	6:30	for Traditi	onal P	Poster dismant	ling. Aı	ny posters	remain	ing af	ter 18:00 will	be discarded.)
Tradition Take down	al Poster Disn	nantle Perio ow, before th	d: 16:30–18:0 nev are discard	0 ed!	Reproducib	Study (e Research:	iroup 15:30	Session (n)	o CME Quantil	<i>credit)</i> tative MR: 16:30)–17:30	:	Study G	roup !	Session (no CN PET-MRI	1E credit)
	Exhik	ition Hall	.,				Re	oom 317Al	3					3	323ABC	
Scientific	Scient	ific	Scientific	Sci	ientific	Scientifi	с	Scien	tific	Scientif	ic	Combi	ned	Ed	ucational	Educational
Session Frontiers in	Susceptib	on ility & Hia	Session hly Parallel RF	Novel	ession Abdominal	fMRI Clinic	ı al &	Sessi	on Sl	Velocity &	n Flow	Educatio Scient	nal & ific	Imag	ing in Joint	Session Game Show:
Reconstructio	n QSN	l:	Systems	Appli	ications &	Neuroscie	nce	Acquisit	ion &	Imaging	g:	Sessie	on of the	Healt	h & Disease	Wait Wait
	Applicati Technic	ons & Jues		Deve	lopments	Applicatio	ons	Reconstr	uctior	n Novelty & S	peed	Changing	Brain			Don't Tell Me!: MRI Artifacts!
Room 310	Room	311	Room 312	Roo	m 313A	Room 313	BC	Room 3	16BC	Room 3	20	Room	315	Ro	oom 314	Room 316A
Hands-O	n Workshop:	GE Healthc	are 2 (repeat)	(no CN	ME credit) Rod	om 322AB		Han	ds-On	n Workshop: P	hilips H	lealthcare	1 (repe	at) (n	o CME credit)	Room 324
					C <u>LOSIN</u>	G SE <u>SSION</u>	I • F	Plenar <u>y Hal</u>	l, 1 <u>7:4</u>	45–18:4 <u>5</u>						
17:45	Young Investi	gator Award	s Presentation	• Dani	iel K. Sodickso	on, M.D., Pł	.D., 2	2017-2018	SMRM	1 President						
18:00	Mansfield Lec	ture: MRI of	the Body in Ac	tion •	Penny Anne	Gowland, P	h.D.									
18:45	Adjournment															
19:00	Clasing Party	Poofton	Gardon - Ha	wai'i Ca	onvention Co	otor										

	Y	OUNG	INVESTIGATOR AWARDS FINALISTS P	RESENTA			
Finalist	Award Catgory	Poster	Торіс	Date	Presentation	Time	Room
Thomas Benkert	I.I. Rabi	31	Free-breathing Volumetric Fat/Water Separation by Combining Radial Sampling, Compressed Sensing,	Monday, 24 April	Oral Presentation	08:15	Room 310
			and Parallel Imaging	2017	Poster Presentation	13:45	Exhibition Hall
Rohan D. A. Alvares	I.I. Rabi	32	Direct Quantitative 13C-Filtered 1H Magnetic Resonance Imaging of Pegylated Biomacromolecules	Monday, 24 April	Oral Presentation	08:35	Room 310
			In Vivo	2017	Poster Presentation	14:05	Exhibition Hall
Frank R. Preiswerk	I.I. Rabi	33	Hybrid MRI-ultrasound Acquisitions, and Scannerless Real-time Imaging	Monday, 24 April	Oral Presentation	08:55	Room 310
				2017	Poster Presentation	14:25	Exhibition Hall
Daniel A. Auger	W. S. Moore	34	Imaging Left-Ventricular Mechanical Activation in Heart Failure Patients using Cine DENSE	Monday, 24 April	Oral Presentation	09:15	Room 310
			MRI: Validation and Implications for Cardiac Resynchronization Therapy	2017	Poster Presentation	15:45	Exhibition Hall
Feliks Kogan	W. S. Moore	35	PET/MR Imaging of Metabolic Bone Activity in Osteoarthritis	Monday, 24 April	Oral Presentation	09:35	Room 310
				2017	Poster Presentation	15:05	Exhibition Hall
Selda Yildiz	W. S. Moore	36	Quantifying the Influence of Respiration and Cardiac Pulsations on the Cerebrospinal Fluid Dynamics Using	Monday, 24 April	Oral Presentation	10:55	Room 310
			Real-Time Phase-Contrast MRI	2017	Poster Presentation	15:25	Exhibition Hall



MARK YOUR CALENDARS FOR OUR NEXT **ANNUAL MEETING & EXHIBITION**

JOINT ANNUAL MEETING **ISMRM-ESMRMB 2018** 16-21 June 2018

SMRT 27th Annual Meeting 16–18 June 2018



ISMRM-ESMRMB ABSTRACT DEADLINE: 08 NOVEMBER 2017

SMRT ABSTRACT DEADLINE: 15 NOVEMBER 2017

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The International Society for Magnetic Resonance in Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. The International Society for Magnetic Resonance in Medicine designates this live activity for a maximum of 46.00 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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Please consult www.ismrm.org for up-to-date information on accreditation.

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AUSTRALIA & NEW ZEALAND

46.0 CPD points can be claimed with The Royal Australian and New Zealand College of Radiologists (RANZCR) for attendance at the ISMRM 25th Annual Meeting and Exhibition.

MONDAY-THURSDAY COURSES

Weekday sessions up to 32.00 *AMA PRA Category 1 Credits*™ (study group meetings, lunchtime programs, symposia, hands-on workshops, poster sessions [including power pitches] are not certified for credit).

ISMRM CERTIFICATES

Participants who complete their forms online will immediately be able to print certificates showing the number of credits earned. Please visit the registration desk on site for non-CME certificates of participation.

MEETING EVALUATION (Online Only)

While in the convention center, use one of the free computer evaluation stations. Outside the convention center, you can access the ISMRM website at any time with your own computer.

OUTSTANDING TEACHER AWARDS

To recognize outstanding educational contributions to the ISMRM Annual Meeting, the Annual Meeting Program Committee will acknowledge the highest rated speakers in weekend and Monday– Friday educational courses. Recipients of these awards will be determined by the evaluation scores. Recipients will be recognized in MR Pulse and on the ISMRM website, in addition to receiving certificates of appreciation. Let us know about the outstanding teachers in our educational courses. Please fill out your evaluation forms completely.

SMRT ACCREDITATION

North America:

Pending 6.25 Category A Continuing Education Hours and CPD for Saturday, 22 April 2017 pending 6.0 Category A Continuing Education Hours and CPD for Sunday, 23 April 2017. 12.25 Total Category A CE credits for SMRT Annual Meeting. Monday ISMRM courses accredited for radiographers and technologists 7.25 Category A CE.

Australia:

Australia Institute of Radiology (AIR), CPD Activity is approved for the SMRT Annual Meeting and selected ISMRM Annual Meeting sessions.

New Zealand:

New Zealand Institute of Medical Radiation (NZIMRT), CPD Activity is approved for the SMRT Annual Meeting and selected ISMRM Annual Meeting sessions.

United Kingdom:

College of Radiographers (UK) has approved the SMRT Annual Meeting for CPD Credits and selected ISMRM Annual Meeting sessions.

ISMRM CREDITS AVAILABLE	
Saturday Courses	Credits
Brain Cancer: from Diagnosis to Treatment	3.25
Cardiac MRI: Function, Perfusion & Viability	3
Cardiovascular MRI: Vascular	3
Connectivity: Structure & Function	4
Diffusion MRI: Principles & Applications	3
Frontiers in Neuroscience: Preclinical MRI-X	3.5
Imaging Biomarkers of Brain Disorders	3.5
Introduction into Magnetic Resonance Spectroscopy	3.25
Introduction to fMRI: Task & Resting State fMRI Methods/Analysis	3.5
MR Systems Engineering - Morning	3
MR Systems Engineering - Afternoon	3
Novel & Mature MRI Contrast Agents	3.5
Physics for Physicists - Morning	3.5
Physics for Physicists - Afternoon	3
Quantitative Susceptibility Mapping & Electrical Properties of Tissues	3.5
The Basics of Perfusion & Permeability Imaging	3
Sunday Courses	Credits
Biostatistics for Imaging Studies	3
Body MRI: Optimize Your Clinical Practice - Approach to Setting Up A Body MRI Practice	1.5
Body MRI: Optimize Your Clinical Practice - Focal Liver Lesions	1
Body MRI: Optimize Your Clinical Practice - GI	1
Body MRI: Optimize Your Clinical Practice - Pelvis	1.5
CEST Imaging	3
Image Acquisition & Reconstruction - Morning	3
Image Acquisition & Reconstruction - Afternoon	3
IVIM & Cerebrovascular Reserve	3
Lauterbur Lecture: MRI as a Window into Cardiac Function - Opening Session	0.75
Multiparametric Imaging in Cancer - How & Why	3.25
MRI, MRS & Molecular Imaging to Diagnose Disease & Assess Treatment	2.5
Neurovascular MRI: From Micro to Macro	3
Recent Advances in Diffusion Perfusion & fMRI	
	3
RF Engineering: Coils - Morning	3
RF Engineering: Coils - Afternoon RF Engineering: Coils - Afternoon	3 3 2
RF Engineering: Coils - Morning RF Engineering: Coils - Afternoon Translational Musculoskeletal Imaging: From Qualitative to Quantitative - Morning	3 3 2 3.5
RF Engineering: Coils - Morning RF Engineering: Coils - Afternoon Translational Musculoskeletal Imaging: From Qualitative to Quantitative - Morning Translational Musculoskeletal Imaging: From Qualitative to Quantitative - Afternoon	3 3 2 3.5 2.25

POWER PITCH POSTERS

Review Topic	Time	Theater	Session	Program Numbers
		N	IONDAY, 24 APRIL 2017	
Interventional	08:15–10:15	А	Interventional/Safety/Engineering	1–15
Neuro		В	7T Neuroimaging	16–30
Body MRI Quantitative	13:45–15:45	А	Body MRI Quantitative	112–126
Acquisition, Reconstruction & Analysis		В	Highlights of Multiparametric Acquisition & Reconstruction	127–141
fMRI	16:15–18:15	А	Cutting Edge fMRI	237–251
Neuro		В	Quantitation, Prediction & Machine Learning in the Brain	252–266
		т	UESDAY, 25 APRIL 2017	
Cardiovascular	08:15–10:15	А	Best of Cardiovascular MR: Hemodynamics & Atherosclerosis	332–346
Neuro		В	Brain Physiology: Flow, Oxygen, Metabolism	347–361
Body	13:45–15:45	А	Liver	426–440
Acquisition, Reconstruction & Analysis		В	Reconstruction Highlights	441–455
Cardiovascular	16:15–18:15	А	Best of Cardiovascular MR: Myocardial Tissue Characterization	540–554
Molecular Imaging		В	New Molecular & Metabolic Imaging Approaches	555–569
		WE	DNESDAY, 26 APRIL 2017	
MSK	08:15–10:15	А	Marching on Musculoskeletal	645–659
Body		В	Cancer Imaging in the Body	660–674
Engineering	13:45–15:45	А	RF Arrays & Systems	755–770
Acquisition, Reconstruction & Analysis		В	Post–Processing & Motion	771–785
Diffusion	16:15–18:15	А	Diffusion: Outside the Brain	862–876
Spectroscopy		В	MRS/MRSI Applications	877–891
	THURSDAY, 27 APRIL 2017			
Cancer Imaging	08:15–10:15	А	Breakthrough Methods & Applications in Cancer Imaging	977–991
Contrast Mechanisms		В	Contrast Mechanisms: New Horizons	992–1006
Diffusion	13:00–15:00	А	Cutting Edge Diffusion	1082–1096
Neuro		В	Emerging Neuroimaging Techniques	1097–1111





TRADITIONAL POSTERS • EXHIBITION HALL

Review Topic	Time	Session	Program Numbers
	l	MONDAY, 24 APRIL 2017	
Acquisition, Reconstruction & Analysis	08:15–10:15	Motion Correction	1272–1296
		More Motion	1297–1316
		RF Pulse Design	1317–1331
		Multimodal & Multiparametric	1332–1366
		Elastography	1367–1386
		Artifacts	1387–1406
		Sparse & Low–Rank Reconstruction	1407–1429
		Post–Processing & Analysis	1430–1476
		Pulse Sequences	1477–1511
		Reconstruction	1512–1531
MSK	16:15–18:15	Cartilage, Meniscus, Tendon, Ligaments	1532–1562
		Muscle & Bone	1563–1596
		Miscellaneous MSK	1597–1622
		TUESDAY, 25 APRIL 2017	
fMRI	08:15–10:15	fMRI Acquisition & Analysis	1623–1656
		fMRI: Mechanisms & Physiology	1657–1680
		fMRI: Neuroscience Applications	1681–1729
Diffusion	13:45–15:45	Diffusion: Biophysical Modeling & Microstructure	1730–1776
		Diffusion: Processing, Analysis, & Visualization	1777–1814
		Other	1815–1876
Contrast Mechanisms	16:15–18:15	Arterial Spin Labeling Applications	1877–1898
		DSC & DCE	1899–1923
		Relaxation: Mechanisms & Applications	1824–1943
		Electric Property Imaging & Susceptibility Imaging	1944–1968
		All Things CEST/MT	1969–1989
	W	EDNESDAY, 26 APRIL 2017	
Body	08:15–10:15	Hepatopancreaticobiliary	1990–2030
		Body Imaging Novel Techniques & Indications	2031–2063
		Body: Cancer	2064–2103
		Breast Cancer	2104–2135
		Lung	2136–2164



Please note: The Exhibition Hall closes at 16:30 on Thursday, 27 April for Traditional Poster dismantling. *Any posters remaining after 18:00 will be discarded.*

TRADITIONAL POSTERS (CONTINUED) • EXHIBITION HALL

Review Topic	Time	Session	Program Numbers
W	EDNESDAY 26 A	APRIL 2017 (CONTINUTED FROM PREVIOUS PAGE)	1
Neuro	13:45–15:45	Neuro: Animal studies	2165–2197
		Brain Tumor Imaging	2198–2229
		Psychiatric Neuroimaging	2230–2258
		Visual System	2259–2278
		Fetal & Pediatric Neuroimaging	2279–2309
		Neurologic Disease: From A to Z	2310–2337
		Aging Brain & Dementia	2338–2378
		TBI & SCI	2379–2399
		Neuro: Techniques	2400–2421
		Neuro: Processing & Analysis	2422–2441
		Neurovascular	2442–2468
		Neurodegenerative Movement Disorders	2469–2504
		Head, Neck, Spinal Cord	2505–2524
		Multiple Sclerosis	2525–2562
		Neuro: Applications	2563–2584
Interventional MRI	16:15–18:15	Interventional	2585–2618
MRI Safety		MR Safety	2619–2653
Engineering		RF Coils & Systems	2654–2674
		Gradient, Shim & Magnet Technology	2675–2697
		Hybrid & Novel Technology	2698–2718
		THURSDAY, 27 APRIL 2017	
Cardiovascular	08:15–10:15	Myocardial Tissue Characterization	2719–2767
		Atherosclerosis Imaging	2768–2791
		MR Angiography	2792–2823
		Flow & Velocity	2824–2861
		Function	2862–2887
Cancer Imaging	13:00–15:00	Cancer Diffusion, Perfusion & Other	2888–2910
		Cancer Treatment Response & Preclinical	2911–2930
Spectroscopy		Non-proton MRI & MRS	2931–2965
		MRS Applications	2966–2989
		MRS Processing & Quantitation	2990–3008
		MRS Acquisition Techniques	3009–3024
		NMR & EPR Applications	3025–3029
Molecular Imaging		Technical Developments in Hyperpolarized 13C MRI/MRS	3030–3046
		Molecular Imaging & Novel Contrast Agents	3047–3063
		Targeted Molecular & Cellular Imaging	3064–3078
		Application of Hyperpolarized 13C MRI/MRS	3079–3094

ELECTRONIC MULTIMEDIA POSTERS • EXHIBITION HALL

Review Topic	Time	Session	Poster Numbers
		MONDAY, 24 APRIL 2017	
Cardiovascular	08:15–09:15	Probing the Myocardial Tissue Composition	3095–3116
		Vascular Imaging: Lumen, Vessel Wall & Function	3117–3140
		Cardiac Function	3141–3163
Body		Body: Diffusion	3164–3187
		Liver	3188–3211
Cardiovascular	09:15–10:15	Velocity & Flow	3212–3235
		Myocardial Ischemia Imaging	3236–3258
		New Methods	3259–3282
Body		Genitourinary	3283–3306
		Thoracic MRI–2	3307–3330
Diffusion	13:45–14:45	Diffusion: Acquisition	3331–3354
		Diffusion: Analysis	3355–3378
		Diffusion: Microstructure	3379–3402
		Diffusion: Body	3403–3426
Body		Metabolism, Diabetes, Fat Imaging	3427–3450
Diffusion	14:45–15:45	Diffusion: Validation	3451–3473
		Diffusion: Tractography & Fiber Modeling	3474–3497
		Diffusion: Acquisition & Reconstruction	3498–3518
		Diffusion: Processing, Analysis & Visualization	3519–3542
Body		Hepatopancreaticobiliary	3543–3566
Molecular Imaging	16:15–17:15	Agent Developments & Technical Advances in Molecular MR Imaging	3567–3590
		Applications of Molecular Imaging & Hyperpolarized MRI	3591–3614
Contrast Mechanisms		Arterial Spin Labeling: Methodology	3615–3638
		Electric Property Imaging & Clinical QSM	3639–3662
		QSM Technical Developments	3663–3686
Molecular Imaging	17:15–18:15	Novel Probe & Pulse Sequence Design for Hyperpolarized 13C	3687–3710
Contrast Mechanisms		Relaxation: Methods & Others	3711–3734
		CEST/MT/NOE: Animal Models & Human Translation	3735–3758
		CEST: Acquisition, Quantification & Characterization	3759–3782
		Contrast Mechanisms: Miscellaneous	3783–3806



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ELECTRONIC MULTIMEDIA POSTERS (CONTINUED) • EXHIBITION HALL

Review Topic	Time	Session	Poster Numbers
		TUESDAY, 25 APRIL 2017	_
Acquisition, Reconstruction & Analysis	08:15–09:15	Non–Proprietary Software/Hardware/Analysis	3807–3830
		Multi-Band Pulses & Simultaneous Multi-Slice	3831–3854
		Sparse & Low–Rank Reconstruction	3855–3878
		Multimodal & Multiparametric	3879–3901
		System Characterization & Corrections	3902–3925
	09:15–10:15	Motion Correction	3926–3949
		Pulse Sequences	3950–3973
		Artificial Intelligence & Machine Learning	3974–3997
		Non–Cartesian	3998–4021
		Contrast Mechanisms – from A to ZTE	4022–4045
Neuro	13:45–14:45	MS: Longitudinal Studies	4046–4069
		Neuro: Animal Studies – Probing Disease	4070–4093
		Fetal & Pediatric Neuroimaging	4094–4217
		Alzheimer's Disease	4118–4141
		Neurodegeneration	4142–4165
	14:45–15:45	Brain Tumor: Diffusion, Perfusion, fMRI & Vascular Imaging	4166–4189
		Neuro Educational	4190–4207
		Psychiatric Neuroimaging	4208–4231
		Brain Tumor: Molecular imaging, Machine learning & Emerging Techniques	4232–4255
		Normal & Aging Brain	4256–4279
Engineering	16:15–17:15	RF Simulation & Design Strategies	4280–4302
		RF Coils & Systems	4303–4326
		Gradient, Shim & Magnet Technology	4327–4350
Cancer Imaging		Cancer Treatment Response	4351–4374
		Perfusion, Permeability & Diffusion in Cancer	4375–4398
Engineering	17:15–18:15	UHF Imaging & Spectroscopy	4399–4422
		Hybrid & Novel Technology	4423–4445
Ad Hoc		Studying Value of MRI	4446-4464
Cancer Imaging		Preclinical Imaging in Cancer	4465–4488
		General Cancer Including Preclinical	4489–4512

ELECTRONIC MULTIMEDIA POSTERS (CONTINUED) • EXHIBITION HALL

Review Topic	Time	Session	Poster Numbers
	١	NEDNESDAY, 26 APRIL 2017	
Neuro	08:15–09:15	TBI: Mechanisms & Therapies	4513–4536
		Novel Neuroimaging Techniques	4537–4560
		Cerebrovascular Disease	4561–4584
		Functional MRI: Miscellaneous	4585–4608
		Cerebrovascular Disease	4609–4632
	09:15–10:15	Metabolic Neuroimaging	4633–4656
		Head, Neck, Spine	4657–4680
		Brain Anatomy: Techniques & Applications	4681–4704
		Neurovascular Methods	4705–4727
		Advanced Neuroimaging Methods	4728–4751
Cardiovascular	13:45–14:45	Image Processing	4752–4775
Body		Prostate Cancer	4776–4799
		Female Pelvis, Fetal & Placenta	4800–4823
		Body: Emerging Techniques	4824–4847
		Body: Animal Studies	4848–4871
Cardiovascular	14:45–15:45	Preclinical CV Imaging	4872–4893
Body		Thoracic MRI	4894–4917
		Breast Imaging	4918–4941
		Body: Cancer	4942–4965
		Gastrointestinal MRI	4966–4989
Musculoskeletal	16:15–17:15	Muscle	4990–5012
		Emerging Technologies & Other Tissues	5013–5036
		Topics in Acquisition	5037–5060
Acquisition, Reconstruction & Analysis		Reconstruction and Post-Processing	5061–5084
		Cartilage	5085–5108
Musculoskeletal	17:15–18:15	Bone & Muscle	5109–5132
		Spine, Tumors & Miscellaneous	5133–5155
Acquisition, Reconstruction & Analysis		Parallel Imaging	5156–5179
		Fat+Water Imaging	5180–5202
		The Many Faces of High Strength	5203–5226



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ELECTRONIC MULTIMEDIA POSTERS (CONTINUED) • EXHIBITION HALL

Review Topic	Time	Session	Poster Numbers
		THURSDAY, 27 APRIL 2017	
fMRI	08:15–09:15	Acquisition & Artifacts	5227-5250
		fMRI: Contrast Mechanisms	5251–5274
		fMRI: Basic Neuroscience Applications – Connectivity Based	5275–5298
		fMRI: Physiology	5299–5321
	09:15–10:15	fMRI Analysis	5322–5345
		fMRI: Basic Neuroscience Applications – Non-Connectivity Based	5346–5369
		fMRI: Connectivity Methods	5370–5392
		fMRI: Multimodal	5393–5416
Interventional MRI	13:00–14:00	Thermal/HIFU	5417–5440
MRI Safety		MR Safety	5441–5464
Spectroscopy		MRS Processing	5465–5488
		Acquisition Methods	5489–5512
		MRSI Methods	5513–5536
Interventional MRI	14:00–15:00	Interventional Non-Thermal	5537–5560
MRI Safety		MR Contrast & EM Safety	5561–5584
Spectroscopy		NMR & ESR & Education	5585–5608
		Non-proton MRI & MRS	5609–5632
		MRS Applications	5633–5656

ISMRM STUDY GROUP SCHEDULE

Cardiac MR: Monday, 24 April – 13:45–15:45 Room 317AB	Hyperpolarized Media MR: Monday, 24 April – 16:15–18:15 Room 317AB	MR Spectroscopy: Tuesday, 25 April – 16:15–18:15 Room 323ABC	Quantitative MR: Thursday, 27 April – 16:30–17:30 Room 317AB	
Current Issues in Brain Function: Wednesday, 26 April – 08:15–10:15 Room 317AB	Interventional MR: Thursday, 27 April – 08:15–10:15 Room 323ABC	Molecular & Cellular Imaging: Thursday, 27 April – 13:00–15:00 Room 323ABC	Reproducible Research: Thursday, 27 April – 15:30–16:30 Room 317AB	
Detection & Correction of Motion in MRI & MRS: Wednesday, 26 April – 16:15–18:15 Room 317AB	MR Elastography (MRE): Tuesday, 25 April – 13:45–15:45 Room 317AB	Musculoskeletal MR: Wednesday, 26 April – 13:45–15:45 Room 323ABC	White Matter: Wednesday, 26 April – 16:15-18:15 Room 323ABC	
Diffusion: Tuesday, 25 April – 08:15–10:15 Room 317AB	MR Engineering: Monday, 24 April – 16:15–18:15 Room 323ABC	Pediatric MR: Tuesday, 25 April – 16:15–18:15 Room 317AB	X–Nuclei Imaging: Thursday, 27 April – 08:15-10:15 Room 317AB	
Electro-Magnetic Tissue Properties (SWI): Wednesday, 26 April – 08:15–10:15 Room 323ABC	MR Flow & Motion Quantitation: Thursday, 27 April – 13:00–15:00 Room 317AB	Perfusion: Wednesday, 26 April – 13:45-15:45 Room 317AB	ISMRM Study Groups are established to foster interaction among members with a common	
High Field Systems & Applications & MR Safety Joint Session: Monday, 24 April – 13:45–15:45 Room 323ABC	MR in Drug Research: Tuesday, 25 April – 13:45–15:45 Room 323ABC	PET/MRI: Thursday, 27 April – 15:30-17:30 Room 323ABC	interest in topical and active areas of MR. If you are interested in joining any of the ISMRM Study Groups,	
Hyperpolarization Methods & Equipment: Monday, 24 April – 08:15–10:15 Room 323ABC	MR of Cancer: Tuesday, 25 April – 08:15–10:15 Room 323ABC	Psychiatric MR Spectroscopy & Imaging: Monday, 24 April – 08:15-10:15 Room 317AB	please contact the ISMRM membership department: membership@ismrm.org.	

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PL 109-417), which was signed into law on

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www.cai2r.net

Center for Advanced Imaging Innovation and Research (CAI2R) is an NIH-funded National Biomedical Technology Resource Center operated by the radiology department at NYU School of Medicine. The center develops full range of acquisition and reconstruction tools in close collaboration with medical doctors and imaging industry partners in order to translate novel technologies to the clinic and disseminate them worldwide, moving the field closer to a new paradigm of rapid, continuous, comprehensive imaging.

Stop by our booth to check out MR and PET resources that can boost your research, talk to us about unsolved challenges and unmet needs in imaging, and explore possible collaborations with our diverse team.

If you're already collaborating with CAI2R or using image acquisition or reconstruction tools developed by the center, drop by and give us feedback or start a conversation.

воотн 706

Calimetrix

505 South Rosa Road • Madison, WI 53719 USA Phone: +1 608 960 9674 • Email: info@calimetrix.com www.calimetrix.com

At Calimetrix, we are dedicated to the development of advanced quantitative MRI phantoms that meet the needs of the MR clinical and research community. Building on over 25 years of research experience, our mission is to build phantoms that facilitate clinical trials, quality assurance, calibration of MR systems, and the development and testing of new quantitative imaging biomarkers. Based in Madison, Wisconsin, Calimetrix was launched in 2016 by physicians and researchers from the University of Wisconsin-Madison. To learn more please visit us at www.calimetrix.com and follow us on LinkedIn.





Next generation MRI and PET are now combined in one compact, easy to use instrument. Featuring the latest breakthrough in PET detector technology and translational field strength MRI, the PET/MR 3T simplifies your workflow and supports a wide range of applications.

Discover more at: www.bruker.com/PET-MR

Innovation with Integrity

EXHIBITOR INFORMATION & BOOTH NUMBER

Cambridge Research Systems, Ltd.

80 Riverside Estate • Rochester • Kent, ME24BH, UK

Phone: +44 1634 720 707 • Fax: +44 1634 720 719 • Email: sales@crsltd.com

www.crsltd.com

Cambridge Research Systems are demonstrating fully integrated solutions for fMRI including audio and visual stimulation, motor response feedback and eye-tracking. Along with our world-beating BOLDscreen products, we are previewing LiveTrack Presto; our new high-speed eye-tracking processor at ISMRM 2017.

BOLDscreen monitors permit the presentation of precision visual stimuli with the resolution, dynamic range and colour-fidelity simply impossible with other solutions. And, combined with our range of stands and trolleys, the BOLDscreen range allows customers to choose solutions which suit their scanner, their workflows and their budgets.

Suitable for precision measurements of saccadic gain, duration, and peak velocity, the new Live Track Presto eye-tracking processor incorporates techniques developed for target identification in military applications to ensure a robust tracking solution with minimal and rapid set-up in the magnet room. Hosted on a low-power single-board computer platform running LINUX, LiveTrack Presto offers exceptional performance at reasonable cost.

Cambridge Research Systems' fMRI solutions are compatible with all GE, Philips and Siemens scanners, including UHF 7T types.

are bundled with GE and Invivo/Philips'

lines of fMRI accessories.

воотн 223

Cedrus Corporation

1121 S. Meyler Street • San Pedro, CA 90731-3534 USA Phone: +1 310 548 9595 • Fax: +1 310 548 9537 • Email: abboud@cedrus.com

> www.cedrus.com with SuperLab, E-Prime, and every

Cedrus manufactures safe, 100% plastic and fiber optic response pads that work

Ceresensa

software package. Our quality products

700 Collip Circle • Western Research Park • London, ON N6G 4X8 Canada

Phone: +1 519 858 5057 • Email: info@ceresensa.com

www.ceresensa.com

Ceresensa is an independent and privately-owned company located in London, Canada. The company is technologydriven and its scientists have been providing MRI radio frequency (RF) resonators to hospitals, research institutes and OEMs for many years. Ceresensa provides a host of research contracts and RF solutions costumed to the researcher's requirements. Ceresensa collaborates with the finest medical imaging research institutes in Canada and the U.S., which enables its scientists and engineers to develop several innovative RF resonators and swiftly commercialize them into products. In December 2014, and with the emergence of the advanced PET/ MRI technology, Ceresensa pioneered the industry and introduced to the medical imaging community and the market the first transparent PET/MRI high-density multi-channel RF resonators for various ROI such as brain and cardiac. Such RF resonators provide high quality MR

images in the shortest time, while yielding minimum attenuation of gamma and least error for PET quantification. Ceresensa's team is proud to be at the forefront of PET/MRI RF technologies and is committed to providing the community with such products, confidently and accurately, performing clinical diagnostics with PET/ MRI. Meanwhile, the team is humbled to be part of the future of diagnostic imaging while improving patient experience in medicine.

воотн 712

Circle Cardiovascular Imaging, Inc.

815 8th Avenue SW, Suite 250 • Calgary, AB T2P 3P2 Canada

Phone: +1 403 338 1870 • Fax: +1 403 338 1895 • Email: info@circlecvi.com

www.circlecvi.com

Circle Cardiovascular Imaging Inc. develops and markets cardiac post-processing software that allows for the evaluation and analysis of MR and CT images. Available for clinical and research use, the standalone software provides full DICOM and PACS connectivity. Circle operates worldwide and its products (cvi42, cmr42, ct42, and report42) have been approved for the Canadian, American, Australian, Korean

and European markets. Circle's goal is to contribute to quality in cardiovascular imaging and research.

воотн 704

Communication Power Corporation

80 Davids Drive, Suite 3 • Hauppauge, NY 11788 USA

Phone: +1 631 434 7306 x247 • Fax: +1 631 434 7026 • Email: rickm@cpcamps.com

www.cpcamps.com

Communication Power Corporation (CPC) has provided world class high power solid state amplifiers to the industrial, scientific, medical and military markets since 1994. CPC incorporates the latest advances in solid state RF power device and digital control technologies in our line of RF amplifiers covering the 0.1MHz to 2100 MHz frequency range at power levels from 30 W to greater than 25 kW, both pulsed and CW. Our amplifiers will meet the most demanding requirements for amplitude and phase linearity / stability whether the application is broadband, such as multinuclear Magnetic Resonance Imaging and Nuclear Magnetic Resonance spectroscopy or narrowband for superconducting RF linacs.

EXHIBITOR INFORMATION & BOOTH NUMBERS

Compumedics Neuroscan

5015 West WT Harris Blvd., Suite E • Charlotte, NC 28269 USA Phone: +1 704 749 3200 • Fax: +1 704 749 3299 • Email: techsup@neuroscan.com www.compumedicsneuroscan.com/

Compumedics Neuroscan is dedicated to expanding the knowledge and understanding of the human brain and nervous system through advanced technology.

Neuroscan is the world's leading provider of technologies for high-density EEG recordings, electro-magnetic source localization, multi-modal neuroimaging and enhancements to functional MRI. Compumedics provides complete systems for evaluating neurocognitive brain function and clinical diagnostics for sleep, brain and ultrasonic blood-flow monitoring applications. The combined product range from Neuroscan and Compumedics is one of the largest in the industry.

Systems can be configured to provide basic acquisition of electroencephalographic (EEG) and magnetoencephalographic measures of human and animal brain activity. More advanced systems include signal processing tools required for statistical analysis of evented related potentials, sleep evaluations and neurological diagnostics.

Neuroscan's powerful CURRY software

platform integrates the most advanced and complete neuroimaging co-registration and source estimation tools for clinical neuroscience. CURRY's multimodal neuroimaging combines functional data such as EEG and MEG with structural data from MRI and CT to optimize source reconstruction.

Neuroscan also operates Neuromedical Supplies, a leading manufacturer and distributor of a wide range of accessory and disposable items used in both clinical neurology and research settings.

Cortech Solutions, Inc.

1409 Audubon Blvd., Suite B1 • Wilmington, NC 28403 USA

Phone: +1 910 362 1143 • Fax: +1 910-378-3443 • sales@cortechsolutions.com

www.cortechsolutions.com

Our capabilities include the most advanced MRI-safe EEG / ERP system, high-resolution video displays, eye-tracking, audio stimulation / communication and functional near-infrared spectroscopy (fNIRS). We are also the developer of the EMSE Suite software for ElectroMagnetic Source Estimation and integration of EEG / MEG signals with structural and functional MRI as well as other imaging modalities. About Cortech Solutions: We specialize in innovative solutions for brain research, identifying best-in-class solutions, working with the manufacturers to ensure compatibility and offering the total package with a single source for technical support. We represent Biosemi, Cambridge Research Systems, Artinis, MEGA, Polhemus and many other worldclass research instrument manufacturers around the world.

CST America

492 Old Connecticut Path, Suite 500 • Framingham, MA 01701 USA

able support staff.

Phone: +1 508 665 4400 • Phone: +1 508 665 4444 • Fax: +1 508 665 4401 • Email: info@us.cst.com

www.cst.com

CST-Computer Simulation Technology

CST offers the market's widest range of 3D electromagnetic field simulation tools through a global network of sales and support staff and representatives. CST develops CST STUDIO SUITE, a package of high-performance software for the simulation of electromagnetic fields in all frequency bands, and also sells and supports complementary thirdparty products. Its success is based on a combination of leading edge technology, a user-friendly interface and knowledge-

Biomedical Devices and EM Field Exposure

The interaction of high-power EM fields, widely used in communications and in magnetic resonance imaging (MRI) systems, with the body can pose serious risks to both the patient and the operator. Waves can penetrate the body and deposit significant amounts of energy in the tissues, and the resulting heating can cause serious damage to cells.

CST MICROWAVE STUDIO® includes a range of post-processing methods for estimating the specific absorption rate (SAR), a standard measurement of energy deposition in the body, and with the integrated design environment offered by CST STUDIO SUITE® these field distributions can then be imported into a thermal calculation, which can take into account heat loss from the body and the bio-heat effects caused by cell metabolism and blood flow.

EXHIBITOR INFORMATION & BOOTH NUMBER

воотн 125

Cubresa, Inc.

801 Berry Street • Winnipeg, MB R3H 0S7 Canada Phone: +1 204 272 2409 • Fax: +1 855 294 3779 • Email: info@cubresa.com www.cubresa.com

www.cubresa.com

Cubresa designs, manufactures, and markets preclinical molecular imaging solutions, empowering researchers at leading hospitals, universities and pharmaceutical companies to better understand complex diseases and develop personalized therapies. Applications for our products include preclinical drug development and disease research in oncology, neurological, and cardiovascular areas.

Cubresa's NuPET™ is an in-bore, preclinical PET scanner for simultaneous PET/MR imaging. The ultra-compact MR-compatible scanner can be inserted into high-field MRI systems, and features silicon photomultiplier detector technology, for no-compromise PET and MRI image quality. With new instrumentation providing synchronized anatomical, functional and metabolic information, preclinical researchers can evaluate multiple time-sensitive physiological and pathophysiological processes in vivo – with a single scan.

воотн 326

Current Designs, Inc.

3950 Haverford Avenue • Philadelphia, PA 19104 USA

Phone: +1 215 387 5456 • Fax: +1 215 386 4857 • Email: office@curdes.com

www.curdes.com

Current Designs' fORP offers the best solution for computer response in the MR/ MEG room. At over 2000 sites since 1996, our fiber optic response systems provide many options for complex tasks including a joystick, trackball, gripforce, driving system, as well as matching nonMR USB response devices.

The versatile system includes unlimited computer outputs and advanced optoelectronics. Best of all, there is no metal and nothing magnetic in the MR/MEG room, so no worries that the fORP will add noise to the images or raise safety concerns.

Stop by our booth to see our newest products and discuss your need for custom response devices.



SMRM

EXHIBITOR

Doty Scientific, Inc.

700 Clemson Road • Columbia, SC 29229 USA +1 803 738 6832 • +1 803 788 6497 • sales@dotynmr.com • laura@dotynmr.com

www.dotynmr.com

Doty Scientific specializes in RF coils for small animal and pre-clinical imaging. Superior sensitivity and B1 homogeneity are foremost in the design of Doty's volume coils and surface coils, as well as microscopy probes - which include gradients and RF.

Volume coils with Doty's patented simpletune Litz and Litzcage RF coils are easy to use, yet provide extraordinary homogeneity and unmatched S/N. Litz small animal imaging platforms come in standard coil sizes, allow maximum flexibility for animal handling, and can be single or dual frequency. Litz imaging modules may have dimensions customized to your specifications, and can also be single or dual frequency - including 1H/19F.

Hundreds of numerically optimized surface coils - for up to twice the S/N

- are available for many applications. Recently introduced next generation high performance dual-frequency coils use concentric loops – a better way to make dual frequency coils.

Vertical bore microscopy probes with 5 to 12 mm diameter samples can be tuned up to 900 MHz. With 350 G/cm pulsed gradient strength and Litz RF coils, the S/N is unmatched.

EXHIBITOR INFORMATION & BOOTH NUMBERS

воотн 102

Electrical Geodesics, Inc. (EGI)

500 E. 4th St. Suite 200 • Eugene, OR 97401 USA Phone: +1 541 687 7962 • Fax: +1 541 687 7963 • Email: info@egi.com

www.egi.com

EGI's dense array EEG Systems are ideal for multimodal imaging with MRI, MEG, TES, TMS, and NIRS. Dense array systems have a choice of 32, 64, 128, or 256 channels, providing EEG data with whole-head coverage and the highest spatial resolution available. EGI's complete Geodesic EEG Systems include the Geodesic Sensor Net for fast electrode application and optimal comfort, amplifiers for up to 256 channels, and Net Station software for acquisition, review, and analysis, as well as tools for MR artifact handling.

EGI also provides neuromodulation systems, including dense array tDCS/ tACS/tPCS and TMS, as well as electrical source imaging software, optical sensor localization systems, stimulus presentation software, and polygraphic input boxes. MetaFile Format facilitates interoperation with third party analysis and signal processing routines.

Stop by the EGI booth for a list publications with EEG-MRI and EEG-MEG and to see a demo! www.egi.com.

EpiSonica Corporation

7F., No.89, Dongmei Road • East Dist., Hsinchu City 300, Taiwan (R.O.C.)

Phone: +1 886 3 571 2354 • Email: info@episonica.com

www.episonica.com

EpiSonica Corporation, a privately held company, designs, develops, manufactures and sells innovative medical devices with a mission to improve Women's Health through medical imaging and imageguided therapy products for patients in need. In its GMP factory, it continues to push the boundary of medical technology and sets the pace for others in superior guality, innovation and vision.

One of its products, the ArcBlate-100M, upgradable to existing MRIs, with patent protected advanced technologies, is the industry's first supine MRI guided High Intensity Focused Ultrasound Tumor Ablation System featuring a fully automated ARC with a Hybrid Transducer Focusing System. Its Hybrid Positioning combines robotic automation with phase array electronic steering to achieve an efficient workflow unlike any other MRgHIFU solution.

One of its many applications is directed towards the treatment of symptomatic Uterine Fibroids and Adenomyosis, two of the most common benign tumors occurring in women, whose treatment provide a significant symptom relief and improvement in quality of life. EpiSonica has developed the revolutionary ArcBlate for a much safer, faster, and easy-to-operate treatment of uterine fibroids and other soft tumors.

At EpiSonica we believe that form should follow design. The user experience is paramount to our design process. By working with nature and using it to accomplish our purpose, we are able to design products that provide the best solutions in a simple and precise manner.

воотн 122

Ergospect GmbH

Oppolzerstrasse 6 • Innsbruck 6020 Austria Phone: +43 699 1602 0200 • Email: info@ergospect.com

www.ergospect.com

Ergospect is an innovative enterprise, specialized in the development and production of MR-conditional "Diagnostic Pedals" for dynamic examinations of the cardiovascular and the musculoskeletal system, including muscles, tendons and joints of the lower extremities in the MRI-bore. All diagnostic pedals are compatible with the MR-Systems of the leading manufacturers, even in magnetic fields up to 7 Tesla.

Ergospect devices use the most advanced technology to simulate daily stress situa-

tions or training conditions and therefore allow the assessement of physiological and pathological processes not detectable during static MR-examinations to pinpoint medical problems such as microand macrovascular diseases, metabolic and muscle wasting disorders, questions related to muscle and energy metabolism and musculoskeletal system indications faster and with greater accuracy.

Ergospect endeavors to continually develop its product range. In the moment this effort is reflected in the construction of load-bearing devices for knee and neuroaxis. The devices consist of a basic platform, different modules and a control unit. This modular concept allows to assemble the components depending on the specific clinical question.

The products are used in the fields of Angiography, Cardiology, Neurology, Vascular Surgery, Orthopaedics and Sports Medicine, pharmaceutical compatibility examinations can also be performed. воотн 426

Exprodo Software, Ltd.

125A Broadway • Didcot, Oxfordshire 11 8AL UK Phone: +44 1235 813458 • Email: info@exprodo.com

www.exprodo.com

Exprodo Software produces Calpendo, an intelligent Core Facility Management and Booking System designed to manage scheduling and projects for shared equipment within your facility. Originally designed for a busy MR laboratory at the University of Oxford, Calpendo is now utilized in universities and research facilities across Europe, North America, Africa and Asia.

Calpendo is recognised as a best-in class online scheduling calendar with

configurable rules to control who can book what, where and when. It has a fullyfeatured reporting system for producing usage, billing and auditing reports and, as an integrated system, allows for multifaceted activity bookings. Additionally, Calpendo has full automated and targeted email capabilities for activity or booking notifications, confirmations and cancellations.

Calpendo takes the hassle out of booking and scheduling resources. From under-

graduate student to administrator or research director, the bespoke user accessibility minimizes mistakes and stress and maximizes efficient use of your resources. Calpendo will save you time and money in such a way that you will never want to change your Core Facility Management and Booking System.

To learn more about Calpendo as well as other Exprodo Software products, please visit us at our stand or visit www. exprodo.com.

воотн 716

ExtendMR LLC

808 Valencia Drive • Milpitas CA 95035 USA

Phone: +1 408 832 0568 • Email: Ernest.Wong@extendmr.com

In additional to the well-known Millipede

coils, ExtendMR recently advanced

Millipede technology by developing the

Helmet coil optimized for rodent brain

www.ExtendMR.com custom-made RF coils for most pre-clinical

systems.

Founded in 2014, ExtendMR is located at the heart of Silicon Valley in California, USA. We are committed to servicing Millipede coils and other pre-clinical RF coils for existing Agilent/Varian RF coils users. We also design and build

imaging. Multiple customers have already reported excellent imaging performance and the cost to own a Helmet coil can be as little as \$5,000. Please visit our booth #716 to learn more details.

воотн 219

Flywheel

807 Broadway Street NE, Suite 350 • Minneapolis, MN 55413 USA Phone: +1 612 223 7359 • Email: info@flywheel.io

www.flywheel.io

Flywheel is the MR researcher's platform for data and algorithm management. Flywheel's intuitive system automatically captures data, makes the data accessible, shareable, and reproducible for the MR and other scientific research communities.

The easy-to-implement platform simplifies the capture, organization, and analysis of MR data while enabling scalable, effective data sharing between scientific research groups worldwide. Features of the platform include automatic data capture from scanners, hierarchical data categorization, permission-driven data access, fast search and filtering, and the ability to attach files and workflow notes to acquired data.

We have partnered with world-leading MR research institutions that are utilizing Flywheel with multiple imaging modalities, and we have enabled many scientists in various disciplines to collaborate with ease. By bringing data to a centralized, easy-access system, the Flywheel platform is empowering scientists to concentrate on science, not IT.

For more information on Flywheel's solutions, please visit us at: www.flywheel.io.

GE Healthcare 9900 Innovation Drive • Wauwatosa, WI 53226 USA

www.gehealthcare.com

ISMRM GOL

CORPORATE MEMBER



GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter - great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients. For more information visit our website www.gehealthcare.com.

WE'RE NOT WRITING THE FUTURE WE'RE CHANGING HISTORY

VISIT GE HEALTHCARE AT BOOTH 315

TOMORROW'S MR...TODAY.

EXHIBITOR INFORMATION & BOOTH NUMBER

GMW Associates

955 Industrial Road • San Carlos, CA 94070 USA Phone: +1 650 802 8292 • Fax: +1 650 802 8298 • Email: sales@gmw.com

www.gmw.com

Metrolab Three Component Fluxgate and Hall Teslameters with USB Interface with Probes covering the field range from 10nT to 20T for mapping fringe and magnet fields for safety and equipment placement requirements. Metrolab NMR Teslameters and Probe Arrays for B0 magnet mapping and shimming. Bartington Three-Component Fluxgate Magnetic Field Sensors with frequency response from dc to 3kHz for high resolution mapping or active cancellation of fringe magnetic fields. Bartington, 3-axis Helmholtz Coils for probe calibration fields to +/-1mT and frequencies from DC to 5kHz. Danisense very low noise Current Transducers for variable field magnet control, measurement of magnet charging currents and gradient amplifier test. GMW Resistive and HTS-110 Superconducting Electromagnets and Coils for biological, materials and device research, development and testing. HTS-110 Superconducting Current Leads for MRI, NMR, and beamline magnets as well as driven (non-persistent) superconducting magnets.

Gold Standard Phantoms

Alexandra House, 17-19 Queen Square • London WC1N 3AZ UK Phone: +44 2076791134 • Email: info@goldstandardphantoms.com

www.goldstandardphantoms.com

At Gold Standard Phantoms, our mission is to provide a one-stop-shop solution enabling radiology to become a true quantitative technique. We are working in collaboration with the main stakeholders in the field to provide an integrated solution to the problem of maintenance of quality and standards in Quantitative Medical Imaging.

Quantitative Medical Imaging has remained elusive, despite an incredible effort over the last 30 years by many players, most of them ISMRM members! Yet, so far, it has not been fully accepted, and intrinsically quantitative methods such as Arterial Spin Labelling are still not used in daily clinical practice due to the lack of internationally accepted standards, governance structure and knowledge. As such, our first product, QASPER (Quantitative Arterial Spin labelling Perfusion Reference), will provide the final enabling step to make quantitative ASL a clinical reality.

In 2016, we developed our product to the point of being commercialized. A wideranging beta-test study will be established soon to demonstrate the reproducibility of the product when used in several research groups around the world, leveraging on the fantastic successes of our prototype, presented on Wednesday April 26 at the ASL oral session in the morning.

Our vision is to be the premier provider of calibration services for clinical quantitative medical imaging worldwide. Visit us at booth 227 to discover more about what our team at Gold Standard Phantoms are doing to achieve this.

воотн 422

Guerbet

821 Alexander Road, Suite 204 • Princeton, NJ 08540 USA Phone: +1 812 333 0059 • Fax: +1 609 919 0495

www.guerbet.com

With 90 years' experience, Guerbet is a pioneer in the contrast agent field and the global specialist of the medical imaging market. It offers a comprehensive range of X-Ray, Magnetic Resonance Imaging (MRI) and Interventional Radiology and Theranostics (IRT) products, along with

a range of injectors and related medical devices to improve the diagnosis and treatment of patients. The acquisition of Mallinckrodt's "contrast media and delivery systems" (CMDS) activity has doubled its size with an expanded offering. In 2014, the combined pro forma sales of Guerbet and the CMDS activity represented approximately €800 million, with around 2,500 employees. Guerbet (GBT) is listed on NYSE Euronext Paris (Segment B – Mid Caps).

EXHIBITOR INFORMATION & BOOTH NUMBERS

HeartVista, Inc.

4984 El Camino Real, Suite102 • Los Altos, CA 94022 USA Phone: +1 415 309 1336 • Email: mnystrom@heartvista.com

www.heartvista.com

HeartVista is dedicated to improving the capabilities of MRI. HeartVista's core technology provides an advanced MR operating system that is an accessory to most 1.5T and 3T GE MRI scanners. The operating system controls all aspects of the scan, including unique, custom pulse sequences, cutting-edge reconstruction, and interactive real-time scan control and visualization

HeartVista's RTHawk Research helps research institutions extend the capabilities of their existing MRI systems. This flexible and extensible platform is comprised of an intuitive GUI-based application builder and simulator, delivering a unique level of control and simplicity for creating pulse sequences, reconstruction methods, and user interface controls.

Resulting applications may support realtime feedback or control, and can be integrated with interventional devices or external hardware. The HeartVista cardiac software package is a product intended to provide a comprehensive cardiovascular MR solution. It implements sophisticated

imaging applications, a streamlined user interface, and integrated real-time analysis to support the evaluation of cardiovascular anatomy, function, and flow in a clinically feasible time with high spatial and temporal resolution. Advanced and realtime image acquisition and reconstruction techniques are especially designed to support the evaluation of challenging patients, such as those with arrhythmia or who cannot effectively hold their breath.

High Precision Devices, Inc.

1668 Valtec Lane, Suite C • Boulder, CO 80301 USA

Phone: +1 303 447 2558 • Fax: +1 303 447 2558 • Email: info@hpd-online.com

www.hpd-online.com

High Precision Devices (HPD) will be exhibiting its line of quantitative NIST traceable MRI phantoms for standardizing multisite and longitudinal studies focused on developing and evaluating new protocols to image biomarkers of disease. The Isotropic Diffusion Phantom, developed under a joint effort between NIST/RSNA-QIBA/NCI, provides a standard for evaluating the apparent

diffusion coefficient in the brain, liver and prostate. The System Phantom, based on the joint effort of ISMRM and NIST, is the first NIST-traceable phantom evaluating geometric distortion, T1, T2, and proton density. The Breast Phantom is designed to fit into breast coils and incorporates ADC and T1 breast tissue mimics, including an adipose tissue mimic spectrally matched to human adipose tissue. These

phantoms are an exceptional tool for evaluating new MRI techniques, as well as providing standardized daily QC for sites implementing imaging biomarkers to stage disease progression. With over 20 years of experience in developing and manufacturing precision instrumentation, HPD can also meet your custom phantom and research instrumentation needs so you can focus on your research.





Hitachi Healthcare Americas

1959 Summit Commerce Park • Twinsburg, OH 44087 USA

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www.hitachimed.com

Headquartered in Twinsburg, Ohio, Hitachi Healthcare Americas Diagnostic Imaging Division delivers best in class medical imaging technologies for healthcare providers. Hitachi's MRI, CT and Ultrasound technologies provide speed, comfort and quality for both physicians and patients alike and play an important role in the diagnosis and treatment of disease while driving social innovation into healthcare. Hitachi's Oval MR boasts the industry's widest bore while the Oasis MR enjoys the highest open magnet field strength, both generating images of uncompromised quality. Our technologies enable unrivalled flexibility in positioning and streamlined workflows for technologists and physicians while

allowing patients to be more comfortable resulting in a more cooperative patient and better imaging results. With an optimized and patient centric approach healthcare providers can deliver strong value into their communities and Hitachi is there to support them.

Visit www.hitachimed.com/products/mri/.

EXHIBITOR INFORMATION & BOOTH NUMBER

воотн 718

International Electric Company (IECO)

Sahaajankatu 48 • Helsinki FI-00880 Finland

Phone: +358 09 759 4470 • Fax: +358 09 759 447 57 • Email: info@ieco.fi

www.ieco.fi

International Electric Co. (IECO), established in 1974, designs and manufactures precision power electronics, MRI gradient amplifiers, bipolar/unipolar magnet power supplies, and precision temperature controllers for MRI and other applications.

IECO introduced its first gradient amplifier in 1994. This revolutionary PWM amplifier enabled excellent image quality in open MRI systems. Simultaneously IECO also launched the first D-class magnet power supply delivering new efficiency levels with 0,1ppm accuracy. IECO's expertise has also been utilized in the development of the industry's first High Temperature Superconductive (HTS) MRI magnets.

IECO gradient amplifiers and bipolar magnet power supplies have modular design so they can be flexibly matched to a wide range of coils. Compact amplifier units can be connected in series or in parallel in Master/Slave operation to gain output voltages up to 1100V and output currents over 2000A. Amplifiers are utilized in resistive, superconductive and permanent magnet MRI systems, both in human and in research scanning systems.

IECO bipolar power supplies are the best choice when high precision and speed are of importance. They can be implemented in single or multichannel configurations and are ideal for e.g. pulsed magnet applications or ion beam guidance etc.

IECO has ISO 9001 and ISO 13485 certified quality system and is headquartered in Helsinki, Finland.

воотн 101

International Society for Magnetic Resonance in Medicine (ISMRM)

One Concord Center • 2300 Clayton Road, Suite 620 • Concord, CA 94520 USA

Phone: +1 510 841 1899 • Fax: +1 510 841 2340 • Email: info@ismrm.org

www.ismrm.org

The International Society for Magnetic Resonance in Medicine is a nonprofit professional association dedicated to promoting communication, research, development and application of magnetic resonance techniques in medicine and biology. The Society presents annual meetings and sponsors other major educational and scientific workshops. We are accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

воотн 314

KinetiCor, Inc.

4348 Waialae Avenue, Suite 571 • Honolulu, HI 96816 USA Phone: +1 808 366 0333 • Email: Will,Alameida@kineticor.com

www.kineticor.com

KinetiCor is a medical imaging company dedicated to bringing razor sharp clarity to MR imaging. Our patented prospective motion correction optical imaging technology delivers unparalleled performance to fully optimize the power of MR imaging. One of the biggest challenges in MR imaging today is blur caused by patient motion. Often, patients needing a scan the most are the ones who cannot keep still, due to trauma, a medical condition or non-compliance due to their youthful age. Many require sedation, or just cannot be scanned. KinetiCor's motion correction adjusts for patient motion prospectively in real-time, enabling an

MR scanner to adjust its image acquisition plane with the patent movement, ensuring that every MR scan is razor sharp. KinetiCor's prospective motion correction is available for research purposes to MR research centers worldwide.



SPEED | COMFORT | QUALITY

INSPIRED BY YOUR PATIENTS

Our systems are designed to meet the needs of your patients, technologists and physicians by providing speed, comfort and quality attributes to optimize the patient experience while providing superb clinical imaging.

- Streamlined workflows enabled by ultra-wide patient tables and easy to position coil technology
- Patient centric designs with the widest wide bore available and unique unlimited lateral opening deliver unprecedented patient comfort
- High image quality with advanced clinical capabilities, including RADAR motion compensation, for even the most challenging patients

HITACHI Inspire the Next

To learn more about Hitachi MR, CT, and Ultrasound, log on to www.hitachihealthcare.com



EXHIBITOR INFORMATION & BOOTH NUMBER

KOPP Development, Inc.

785 NE Dixie Hwy. • Jensen Beach, FL 34957 USA

Phone: +1 772 225 6932 • Fax: +1 772 225 6291 • Email: info@koppdevelopment.com

www.koppdevelopment.com

Kopp Development Inc., the world's leading manufacturer of ferromagnetic detectors for MRI Safety, is presenting an enhanced package for the entryway systems FerrAlert™ HALO II PLUS and Ferromagnetic Incident Log Manager, F.I.L.M. The PLUS system dramatically reduces alarm fatigue by not alarming on the MRI door and ferromagnetic objects exiting the MRI room. The F.I.L.M. device was designed to help facilitate compliance with the new safety standards and to assist with Root Cause Analysis.

FerrAlert[™] detectors are recognized to be the most accurate ferromagnetic detectors for MRI, due to their unique, patented technology to detect and precisely locate the offending ferrous objects.

All FerrAlert[™] detection systems come with installation by certified engineers who also provide in-depth user training. In addition, CE credits are available per special request.

Mediso, Ltd.

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www.mediso.com

Mediso have been engaged since 1990 with the development of multi-modality, in-vivo nuclear and molecular imaging systems. Comprehensive in-house hardware and software solutions are offered, both for clinical patient care and high-level life science research into a wide range of animal models. As the global market leader of pre-clinical imaging, Mediso launched the world's first integrated PET/MRI and SPECT/MRI cameras as members of the nanoScan® Family platform, consisting of small animal SPECT, PET, CT and MRI modalities. Products are sold worldwide directly and through a network of distributors, with over 1250 imaging systems operating in more than 90 countries around the globe. In collaboration with RS2D, a dedicated MRI developer company, new 3T and 7T cryogen-free magnets have been integrated into the nanoScan® product line, resulting in numerous PET/ MRI 3T and standalone MRI 3T installations. Furthermore since the beginning of 2015, Mediso have been cooperating with the University of Tübingen in developing a whole-body preclinical PET insert, based on silicon photomultiplier sensor technology. This PET system can be inserted into a high field preclinical MRI scanner to enable simultaneous PET/MR imaging.

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Mint Labs

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Mint Labs provides a cloud-based neuroimaging platform with advanced data management and data analysis tools in addition to state-of-the-art 3D touchless visualization capabilities to better understand the human brain and the diseases of the central nervous system.

We help researchers and doctors to aggregate all data and seamlessly analyze millions of imaging records with automatic de-identification and standardization, all in one place.

The platform can support various aspects of the neuroimaging R&D workflow and collaboration by bringing data and algorithms together in a PHI privacy compliant environment; ensuring reproducible results and accelerating the discovery and development of new therapies for neurological diseases. The cloud platform provides commonly used analysis tools, but also a development environment where users can push and integrate their own tools.

Our vision is to provide a standardized and reproducible neuroimaging workflow for both methods researchers as well as clinicians developing new treatments for brain diseases.

EXHIBITOR INFORMATION & BOOTH NUMBERS

Modus Medical Devices, Inc.

1570 North Routledge Park • London, ON N6H 5L6 Canada Phone: +1 519 438 2409 • Fax: +1 519 643 0127 • Email: info@modusQA.com www.modusQA.com

Founded in 2000, Modus Medical Devices Inc. develops and manufactures costeffective and innovative quality assurance tools for advanced radiotherapy and medical imaging. Today, there are over 4,500 QUASAR™ phantoms being used in more than 2,700 leading treatment centres worldwide.

Modus QA is proud to have been first to market in a number of significant areas, including: MRI-simulation, daily on-board imaging, cone beam optical CT scanning for 3D dosimetry and nondosimetric

QA. Modus QA also developed the first commercial programmable respiratory motion phantom and platform.

Modus QA has grown steadily based on a strong foundation of science, research, development and collaboration with medical physicists around the world. Today, Modus QA employees remain committed to assisting medical physicists in fulfilling their responsibilities more efficiently and accurately, which ultimately results in improved patient care.

Driven by scientific roots and continued

strong ties to the scientific community, Modus QA strives to remain at the forefront of the complex and ever-evolving advanced radiation therapy field. From radiotherapy and imaging QA phantoms to automated QA software, 3D dosimetry and optical CT scanners, Modus QA products help medical physicists achieve confidence that tests are accurate and repeatable, ensuring that every patient is receiving the best possible treatment.



MR Solutions, Ltd.

Ashboune House • The Guildway Old Portsmouth Road • Artington Guildford • Surrey GU3 1LR UK Phone: +44 1483 532 146 • Fax: +44 1483 594084 • Email: information@mrsolutions.com

MR SOLUTIONS is the worldwide leader in superconducting cryogen-free, preclinical MRI systems with multiple proven installations of its 7T, 4.7T, 3T and PET/ MRI. Recently, MR SOLUTIONS has pushed its' technology even higher and introduced a new 9.4T cryogen-free MR imaging system.

Two product lines are available: Powerscan and Flexiscan. Flexiscan requires no specialist knowledge and can be operated by running predefined settings. Powerscan is focused on high

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end MR applications and is available with adjustable magnetic field strengths ranging from 0.1T to 9.4T. The system allows physicists to alter the hardware, software and pulse sequences.

For multi-modality imaging, MR SOLUTIONS has developed PET and SPECT modules that are very light, compact and detachable. This unique and innovative design allows the users to interchange these modules either on the MRI or on the CT for your research applications: PET/MR, PET/CT, SPECT/ MR, SPECT/CT, or simply to operate them as a stand-alone device.

MR SOLUTIONS performs refurbishment, upgrade and service of magnets from different suppliers.

MR Solutions holds the prestigious Queen's awards for enterprise, Innovation 2016 and is the winner in the global R&D 100 awards. MR SOLUTIONS has over 30 years of imaging technology development and manufactures all its product in house.

MR:comp GmbH/ MRI-Tec

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www.mrcomp.com

www.MRI-Tec.com is your provider for all products and services for the MRI environment. Benefit from our strength the competence of our strong partners.

MRI-Tec is distributing worldwide MR Safe and MR Conditional products like equipment, tools and accessories. Offering MR: comp's seminars in USA and Europe for several occupational groups concerning

MR Safety and Compatibility as well as www.mrcomp.com consulting services for R&D and MRI safety testing for implants and other medical devices according to standardized test methods of ASTM, IEC, ISO. Get also MagResource in the EU, the most complete and up-to-date database of

MRI implant safety information in the world, www.MagResource.eu. www. MagResource.com provides a searchable online database of printable MRI safety information for medical implants.

Our database lists over 7500 implants & features daily updates. MagResource database has the most comprehensive and up-to-date MRI Implant Safety information in the world. MagResource is designed by an MRI tech for MRI techs.

EXHIBITOR INFORMATION & BOOTH NUMBER

воотн 130

MRC Systems GmbH

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www.mrc-systems.de

MRC Systems GmbH from Heidelberg, Germany offers MRI compatible video cameras for inbore applications like eye tracking, motion tracking or patient monitoring.

The camera solutions are successfully used by researchers and radiologists all over the world since more than 10 years in their daily routine and research work. The cameras can be used inside the bore of MRI scanners or anywhere in the MR cabinet without any artifacts or interference. They have been tested in different environments ranging from 0.23 to 9.4 T. The cameras can be used during imaging as well as functional MRI. Typical applications are monitoring of subjects or devices, eye-tracking, motion tracking, MRI diagnostics in pediatrics and room monitoring. The different camera models are complemented by infrared and visible light sources as well as by different types of camera holders. MRC also shows their digital in-bore highspeed and high-resolution cameras. All systems can be easily integrated into specific applications. The installation is without any difficulty.

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MRI.TOOLS GmbH

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www.mritools.de

MRI.TOOLS GmbH is a competent partner that develops and delivers solutions for clinical and preclinical imaging sciences applications. The key mission of MRI. TOOLS GmbH is to help you achieve your clinical and research goals. MRI. TOOLS's primary focus is the development, sale, and maintenance of innovative hardware and novel technology for MRI. Our product portfolio encompasses enabling radiofrequency (RF) coils tailored for a broad spectrum of specific applications ranging from head to toe. We also offer devices for precise cardiac gating of imaging, as well as accessories and ancillary hardware that make your research more productive. MRI.TOOLS is also very proud to offer services such as electromagnetic field simulations, testing and validation of medical devices for clinical research. We derive satisfaction from hearing how our equipment improves your research and clinical work.

From our portfolio:

 RF coils for clinical and preclinical MRI– we provide solutions for your applications stretching through all field strengths for human and animal imaging. We design RF coils which suit your needs and specifications.

 EasyACT – triggering/gating device for medical imaging - this will enhance your workflow for triggering and gating of MRI.

• MRI Accessories – useful tools as well as customer tuned accessories to speed up your research.

воотн 714

Nata Technologies

114-250 Schoolhouse Street • Coquitlam, BC V3K 6V7 Canada Phone: +1 604 999 9907 • Email: sales@natatech.com

www.natatech.com

Nata Technologies (Vancouver, Canada) is an engineering, development, and production company providing cost effective research tools for functional MRI (fMRI) and MEG applications.

Our products have superior performance as they are developed by scientist and engineers with wealth of expertise in the field of life science and technology.

Our products include fiber optic response pads / button boxes (single and double hand), fiber optic joysticks, fiber optic mice, and trackballs. The company also provides custom R&D solutions such as 3D fiber optic joysticks (3-axis), fiber optic keyboards and pianos, vibrators, and others. All of our products are fully compatible with any MRI scanners with any tesla rating. The products are non-magnetic and do not emit any RF radiation, as they are manufactured out of non-metallic materials such as plastics, glass and ceramics.

EXHIBITOR INFORMATION & BOOTH NUMBERS

воотн 710

NeoCoil/NeoSoft, LLC

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www.neocoil.com • www.neosoftllc.com

Since 2004, NeoCoil and NeoSoft have collaborated with industry experts worldwide to develop innovations to "sharpen your image". We listen to our customers and create products to meet the needs of an ever-evolving industry. Product development, engineering, testing, and manufacturing are all located in a stateof-the-art facility in Pewaukee, Wisconsin. NeoCoil has led the industry with many first to market products including 16 element flex coils, an MR- conditional Android tablet, and our wireless MRI hearing protection/entertainment system. In addition to flex coils, NeoCoil offers Shoulder, Carotid, and Torso arrays. www. neocoil.com. NeoSoft's suiteHEART® software is a fast, comprehensive, and intuitive analysis tool for structured reporting of cardiac MRI examinations including 3D/4D, Function, Flow, Tissue Characterization, Time Course Analysis, Patent Foramen Ovale (PFO), and T2* Analysis modules. Learn from cardiac MRI industry leaders via mini fellowship training, onsite training, or remote support. www.neosoftllc.com.

воотн 116

Neoptix Canada LP

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www.neoptix.com

Industrial applications.

Neoptix Canada LP is an agile company a market leader that designs and manufactures fiber optic temperature sensors for researches laboratories, medical uses and

NORAS MRI products GmbH has more

than 30 years of experience in developing

devices for MRI scanners. Manufacturing

products for MR guided imaging, NORAS

is well known for its 4Ch breast coil and

breast immobilization / biopsy devices,

8Ch head coil (and head holder) for intra-

Being completely dielectric, fiber optic sensors are immune against High magnetic field, electromagnetic fields and where conventional sensors such as Pt100, thermistors and thermocouples, cannot be used.

воотн 123

NORAS MRI Products GmbH

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www.noras.de

operative neurosurgery as well as several other dedicated RF coils, like our 8Ch CPC multipurpose coil or 16Ch Variety flex coil for various extremity examinations. Also we recently entered the field of MR guided prostate imaging, biopsy and therapy by providing our 16Ch Uni-Belt coil, our positioning device Uni-Lift and different intervention devices. Our products are compatible with Siemens, GE and Philips systems. All products are made in Germany. NORAS FDA registration#: 3004929307

воотн 316

NordicNeuroLab

234 W. Florida Street, Suite 205 • Milwaukee, WI 53204 USA Phone: +1 262 337 1448 • Fax: +1 262 244 3225 • Email: Terry@nordicneurolab.com

www.nordicneurolab.com

With more than 15 years of experience, NordicNeuroLab provides products and solutions that define the field of functional MR imaging. From state-ofthe-art post-processing and visualization software for BOLD, Diffusion/DTI and Perfusion imaging to fMRI hardware for audio and visual stimulation, eye tracking, and patient response collection, NordicNeuroLab products are used around the world by researchers and clinicians alike. We understand the growing need for reliable and innovative tools in this emerging field. As a result, we closely collaborate with research and clinical teams from both academic and medical centers, MRI system manufacturers and third party vendors. Ultimately, we are dedicated to bringing the most advanced neuroimaging tools to market while making functional MRI programs easy to implement. NordicNeuroLab takes pride in providing excellent service and support for our customers. Whether you are working with our team directly or through local partners and distributors we are prepared to support you any way we can. We offer extensive warranty and service agreements, software maintenance solutions and professional installations and training.

EXHIBITOR INFORMATION & BOOTH NUMBER

BOOTH 508 ISMRM ASSOCIATE CORPORATE MEMBER



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www.novamedical.com



Nova Medical, Inc. (Wilmington, MA, USA), a leader in high field RF coil engineering, provides high performance coils for both medium and high field MR systems. Our standard products include multi-channel whole brain arrays for 3T and 7T, volume transmit solutions for 7T, and parallel imaging arrays for field strengths from 3T to 7T. Please come by and see our eight channel transmit, thirty-two channel receive system for brain imaging at 7T as well as our recently CE Marked thirty-two channel head coils for both 3T and 7T.

воотн 222

NUKEM Isotopes Imaging GmbH

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Phone: +49 (0) 6023 91 1611 • Fax +49 (0) 6023 91 1614 • Email: juergen.laucht@nukemisotopes.de

www.nukem-isotopes.com

NUKEM Isotopes Imaging GmbH offers and markets Oxygen-18 for use in PET as well as Oxygen-17, Xenon-129 and Nitrogen-15 products for use in MRI

 Oxygen-18 in the form of water is used to create tailored organochemical compounds labelled with the radio isotope 18F (for example, 2-fluoro-2deoxy glucose [18FDG]). These are used for Positron Emission Tomography (PET), the latest cancer diagnostic technique

- Oxygen-17 in the form of gas is a paradigm shifting contrast medium for

NMR imaging and provides a breakthrough of Magnetic Resonance Imaging using standard clinical MRI scanners.

 Oxygen-17 is available in the form of water with different enrichments up to 90 at.%.

- Xenon-129 is in the form of gas is one of the most promising non-invasive and non-radioactive gases for MRI-Imaging of the lung. Xe-129 is available as pure gas and gas mixture []1% (or 3%) Xe-129, 10%, N_{2r} 89% (or 87%) He. Nitrogen-15 in the form of gas could have a potential as lung imaging agent especially in high field MRI scanners due to its similar behavior to air. It is available in the form of gas, Ammonium salts and Nitrates.

Our products are manufactured under conditions in compliance with cGMP requirements of 21 Code of Federal Regulations: Parts 210 and 211.

ODU-USA

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www.odu-usa.com

The ODU Group is one of the world's leading suppliers of connector systems, employing 1,650 people around the world. In addition to its company headquarters in Mühldorf am Inn (Germany), ODU also has an international production and distribution network throughout Europe, North America and Asia. ODU combines all relevant areas of expertise and key technologies including design and development, machine tool and special machine construction, injection, stamping, turning, surface technology, assembly and cable assembly. The ODU Group sells its products globally through its eight subsidiaries in Denmark, England, France, Italy, Sweden, the US, China and Japan, as well as through numerous international sales partners. ODU connectors ensure a reliable transmission of power, signals, data and media for a variety of demanding applications including medical technology, military and security, eMobility, energy, industrial electronics, and measurement and testing.



Eight Channel Transmit with Thirty-Two Channel Receive Head Coil



on Siemens 7T Magnetom with PTX Step 2 3D MPRAGE with full PTX based B1 correction on right image

Obtain the benefits of high SNR and contrast from 7T with the uniform excitation found at lower field strengths

This product is an Investigational Device. Federal Law restricts to Investigational Use.



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воотн 507

Olea Medical

93 Avenue Des Sorbiers • La Cotat 13600 France Phone: +33 442 712 420 • Fax: +33 442 712 427 • Email: contact@olea-medical.com

www.olea-medical.com

Olea Medical[®], a provider of advanced MR and CT imaging post-processing, designs and markets a suite of innovative medical imaging applications, Olea Sphere[®], significantly improving diagnostic process and follow-up assessment.

The company has established a strong credibility, through the domestication of cutting-edge technology, and partnerships with leading institutions worldwide.

With proprietary Bayesian algorithms and optimization methods applied to medical imaging, today Olea Medical[®] is the recognized leader in standardized, vendor-neutral, advanced MR quantitative and qualitative image post-processing.

Covering both morphologic and functional imaging, Olea Medical® post-processing solutions bring complex mathematics into clinical practice for easy access to accurate and robust biomarkers allowing enhanced diagnostic confidence and response-to-treatment assessment.

Olea Medical's applications are compliant with the DICOM standard and Windows or Linux operating systems. Olea Sphere® runs on any standard off-the-shelf workstation or it can be used through thin deployment. It maintains the traceability of patient data, through an automatic logout mode, a total connectivity and compatibility with LDAP and Microsoft Active Directory, Olea Medical's applications are compliant with the DICOM standard and Windows or Linux operating systems. Olea Sphere® runs on any standard off-the-shelf workstation or it can be used through thin deployment. It maintains the traceability of patient data, through an automatic logout mode, a total connectivity and compatibility with LDAP and Microsoft Active Directory.

воотн 428

Optoacoustics, Ltd.

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www.optoacoustics.com

Optoacoustics is the leader in Active Noise Cancelling audio solutions for fMRI, interventional and clinical MRI and MEG.

Optoacoustics MR-safe optical fiber microphones and headphones provide crisp, clear two-way communications.

Our FOMRI-III+ Noise Cancelling Microphone is today's standard for recording high quality speech in fMRI, providing hands-off, completely automatic speech recording and synchronization for any TTL or stimulus.

Our ultra-slim OptoACTIVE-II Active

Noise Cancelling Headphones actively and passively reduce over 95% of EPI gradient noise and deliver high fidelity audio. They're designed for today's 32and 64-channel head coils, enabling MR research that could not be done before.

Our IMROC IR Wireless Communication System for interventional MRI suites enables up to eight concurrent dialogs during a scan – between staff members, technologists and the patient. It is the most advanced MR adaptive noise reducing solution available. Optoacoustics' founders invented the original fiber optical microphone and also pioneered its commercial manufacture, protected by over 20 international patents.

We're proud of our outstanding reputation as a long-time supplier of robust, innovative and inherently safe solutions to academic and research institutions, hospitals and health agencies. With hundreds of satisfied customers, Optoacoustics continues to expand its unique offerings in the medical equipment sector.

воотн 224

The Phantom Laboratory

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www.phantomlab.com

The Phantom Laboratory, founded in 1989, manufactures dependable, highprecision phantoms and innovative custom solutions for medical imaging and radiation therapy.

Our newest offering is the Magphan® RT, designed to evaluate the performance of MRI scanners used in radiotherapy planning and guidance and MR guided surgery. Combined with the Magphan RT analysis service hosted by Image Owl Total QA®, the system measures geometric distortion, uniformity, slice thickness, resolution, SNR, and laser alignment. The Total QA system includes an API that allows users to extend the system with custom analyses or interfaces, and the Magphan RT analysis can be seamlessly integrated into a full Total QA system for managing all of a facility's RT QA data.

The Phantom Laboratory offers the Magphan Quantitative Image Phantom, used in the ADNI study since 2006, for precise and accurate measurement of MRI image distortion, and Magphan SMR phantoms for quality assurance of diagnostic MRI scanners.

We also manufacture phantoms for CT, SPECT, Digital Breast Tomosynthesis, radiosurgery, and custom phantoms for OEM applications.

Our pride of workmanship and our comprehensive quality system ensure that our products meet the highest standards of quality and precision. The Phantom Laboratory is FDA registered and ISO 13485:2003 certified.

ISMRM GOLD CORPORATE MEMBER



 Enabling better health and better care at lower cost Philips is a leading health technology company focused on improving people's lives across the health continuum – from healthy living and prevention, to diagnosis, treatment and home care. Applying advanced technologies, and deep clinical and consumer insights, Philips delivers integrated solutions that improve people's health and enable better outcomes. Partnering with its customers, Philips seeks to transform how

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> healthcare is delivered and experienced. The company is a leader in diagnostic imaging, image-guided therapy, patient monitoring and health informatics, as well as in consumer health and home care.

воотн 431

Polarean, Inc.

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www.polarean.com

Polarean supplies products to enable hyperpolarized gas MRI research. Hyperpolarized gas MRI offers a fundamentally new, non-invasive means of imaging lung structure and function, which could be used for early diagnosis, more detailed characterization of regional function, and monitoring of progression and therapeutic response. Hyperpolarized inert gases are used in conjunction with multi-nuclear MRI to enable 3-dimensional breath-hold imaging of pulmonary

A passion for health and technology

Quite literally everything centers on the

customer, our passion for technology,

and on constantly improving our business

processes. This 'DNA' has been crucial to

our company since we began operating in

1993 and it's the foundation of our success

as well as that of our clients. Working for – and usually in close partnership with – you,

we develop and produce electronic and

mechatronic products and systems with

an exceptional price-performance ratio.

physiology and function. With its high speed and resolution, absence of ionizing radiation, and use of inhaled gases that are not metabolized, Polarean's hyperpolarized MRI technology is inherently non-invasive and suited for repeat use. Polarean's product line includes polarizers to produce both xenon and helium gas, cartridge upgrades, as well as associated polarization measurement, calibration, training and service. Polarean's products are currently used by research institutions worldwide, and are sold for research and investigational applications only.

Contact Polarean to learn how you can expand your pulmonary research and add new capabilities to your magnetic resonance program. Existing and new users are encouraged to inquire about service plans, training programs, equipment upgrade options and regulatory support services available through Polarean.

воотн 732

Prodrive Technologies

Science Park Eindhoven 5501 • Son 5692EM The Netherlands

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We can do this because we have smart ways of optimizing, integrating and robotizing, and because we produce everything we need in-house. These are just some of the reasons why we've been able to build a competitive edge over all other providers of technical solutions, anywhere in the world.

Power conversion is at the root of Prodrive Technologies. For over 20 years, we develop and manufacture power solutions for, among others, the medical market. We provide off-the-shelf power and precision components, power modules and integrated power cabinets as well as customer specific solutions tailored to your needs.

The NG-series product line for MRI purposes is rapidly expanding with high performance gradient amplifiers for high and ultra-high field MRI systems. We will demonstrate our NgToolSuite diagnostic tool, and our plans to enter 7T next to 1.5T & 3T.

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Enhance your diagnostic confidence for brain imaging

Philips Black Blood imaging

Neuro indications can often be a challenge due to a lack of imaging and visualization techniques. Now, Black Blood imaging can help you better differentiate the vessel lumen from the intra-lumen blood signal. This enhances your diagnostic confidence by performing 3D brain imaging with a reduction of the intra-lumen brain blood signal¹ over the complete imaging volume. Black Blood imaging gives you the confidence you need to provide diagnosis for your neurology patients.

innovation 🕂 you

1. Compared to our 3D T1w scan without MSDE pre-pulse.



Discover innovative MR neuro applications at **www.philips.com/neuro-mr**



The increasing number of exams, complexity, and cost-pressure are placing challenges on MRI. 3T MRI needs to better handle patient variability, deliver robust results for all patient types, and become more cost-effective.

MAGNETOM Vida, the first MR scanner with BioMatrix Technology, is equipped to master the challenges facing MRI today. 3T MRI with BioMatrix meets these needs with fewer rescans, predictable patient scheduling and consistent, high-quality personalized exams.

* 510(k) pending. The product is still under development and not commercially available yet. Its future availability cannot be ensured.

- Embrace full 3T performance with unparalleled magnet and gradient power
- Embrace true 3T productivity with GO technologies

SIEMENS ...

• Embrace new 3T clinical capabilities with Inline Compressed Sensing



The 1st BioMatrix system воотн 124

Psychology Software Tools (PST)

311 23rd Street Ext. Suite 200 • Pittsburgh, PA 15215 USA

Phone: +1 412 449 0078 • Fax: +1 412 449 0079 • Email: sales@pstnet.com

www.pstnet.com

Psychology Software Tools (PST) the developers of E-Prime[®] - the world leading stimulus presentation software with millisecond precision timing to ensure the accuracy of your data. E-Prime provides a truly easy-to-use environment for computerized experiment design, data collection, and analysis. E-Prime 3.0 is now available!

PST's USB-based response and stimulus device, Chronos®, allows the accurate

collection and verification of tactile, auditory, visual, and analog responses along with the precise source of audio and generic analog output timing. Chronos features millisecond accuracy and consistent sound output latencies across machines.

PST is also a leading manufacturer of hardware products used in fMRI research, including the Celeritas[®] Fiber Optic Response System, Hyperion[®] MRI Digital Projection System, Persaio[®] MRI Noise Cancellation Microphone System, and an MRI Simulator with MoTrak[®] - a head motion tracking system.

PST's customer base is comprised of more than 5,000 labs in over 60 countries.

PST maintains ISO 9001:2008 and ISO 13485:2003 certifications

See www.pstnet.com for details.

воотн 118

PulseTeq, Ltd.

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www.pulseteq.com

PulseTeq offers a wide range of RF coils for clinical research and pre-clinical applications along with phantoms, test methods and support for your research programs. In particular PulseTeq offers multinuclear coils for hyperpolarized carbon, xenon and helium. Also we offer both 1H and multinuclear coils for PET-MRI. Coils for clinical research include custom multi-element 1H receive coils and a range of coil designs for multinuclear applications. The latter include coils for a range of nuclei: 31P, 13C, 23Na, 19F, 3He and 129Xe. These coils can be offered for a range of applications including the brain, calf, thigh, liver, and heart. Designs include multi-element coils and dual frequency coils, the latter including quadrature coil designs optimized for spectral decoupling. Coils for pre-clinical applications cover both birdcage coils and surface coils for hydrogen imaging along with a range of multinuclear coils, both single and dual frequency configurations. PulseTeq offers a complete service, not just our RF coils but also phantoms, calibration methods, QA methods, installation options and advice on getting the best from your product.

воотн 215

Pure Devices GmbH

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www.pure-devices.com

Pure Devices GmbH is a manufacturer of state-of-the-art portable and bench-top MRI scanners for education and research. Furthermore Pure Devices provides external gradient and RF amplifiers especially for applications in bench-top MRI.

The young company consists of a qualified team of engineers, electro-technicians and physicians. Team spirit, solidarity, the satisfaction of defining new goals together and breaking new ground are not just practiced in the workplace. Our successful hardware products are proof for our advanced designs at the forefront of technology.

Since 2011, the headquarters is located in Würzburg in the heart of Europe. From here the research and development, project planning, construction, set up, testing and finally sale takes place. All our products are designed and made in Germany.

Our company is known for our benchtop MRI scanners "portable Lab" for educational use and "research Lab" for the scientific laboratory setting.

RAPID Biomedical GmbH

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www.rapidbiomed.de

RAPID Biomedical is proud of being the first company to have brought customized RF coils into the market that are individually designed to the need of the scientific MR community. Through the high level RF expertise and attentive alliances with the MR system manufacturers today we offer full compatibility for all of our coil solutions whether standard or customized.

In almost 20 years of company history RAPID Biomedical has delivered over 1200 different coil designs into more than 30 countries all over the world. We have thorough experience in designing and manufacturing coils from low field (from 0.2 T) to UHF human and animal scanners up to 21 T NMR systems. The range of non-proton solutions delivered by RAPID Biomedical includes 11 different nuclei (and counting). All coils are manufactured in Rimpar, Germany.

The current R&D work concentrates on PET/MR compatible coils, coil packages for hyperpolarized nuclei, human 7T coils, dual tuned coils and multi array coils for parallel MRI both for human as well as for animal studies.

Our sister company RAPID MR International, LLC (www.rapidmri.com), situated in Columbus, Ohio, is contact partner for customers from the United States, Canada and South America.

We cordially invite you to visit our booth on the exhibition floor. Take your chance in our traditional quiz and see RAPID coil solutions and scientific results first hand.



Resonance Technology, Inc.

18121 Parthenia Street Unit A • Northridge, CA 91325 USA Phone: +1 818 882 1997 • Fax: +1 818 882 5524 • Email: Olivia@mrivideo.com

www.mrivideo.com

Resonance Technology, Inc. has been the recognized leader in cutting-edge MRI compatible audio-video systems. The company was founded in 1988 by Mokhtar Ziarati, an Electrical Engineer specializing in CT and MRI, with the goal of eliminating the claustrophobia and discomfort patients often experience during MRI procedures. In addition to our full line of MRI compatible patient comfort devices, Resonance Technology, Inc. offers our second generation of the first and only truly stereoscopic, SXGA Virtual Reality Display for functional MRI on the market. With unmatched clarity and versatility, VisuaStim SXGA is the perfect choice in visual stimulation displays for fMRI studies. Its compact, eyeglass-like design allows it to be used in all standard Headcoils. The crisp, dual 1280 x 1024 x 3 pixel resolution displays (display contrast ratio; 10,000:1) affords brilliant color and crystal-clear picture quality, free of color aberration or pixel dropout. Input from your PC allows real time 3D objects to be displayed to your subjects. The optional MREye eye tracking module adds even more versatility for your critical studies, allowing for a complete input/output device within the bore of the magnet. A standalone version of our eye tracking system is available for the PC platform, featuring great accuracy and easy set up at a low cost (about 1/3 the cost of any comparable systems). This is the only fMRI eye tracker on the market that includes a built-in camera and operates entirely inside the head coil. An optional reflective mirror is available for viewing any external visual paradigm presentation. We also have a full line of Audio and Video Systems for patient comfort applications including the new widescreen Cinema Vision.

воотн 622

RS²D

ZA des Maréchaux 13, rue Vauban, • Mundolsheim 67450 France Tél: + 33 (0)3 90 40 54 00 • Fax: + 33 (0)3 90 40 54 10 • E-mail: info@rs2d.com

www.rs2d.com

Founded in 2003 RS²D began operations by offering refurbished NMR systems. Very quickly the company launched a research and development program to build a new spectrometer, compact and modular, configurable version for imaging or/and spectroscopy.

Pioneer in preclinical imaging by developing and selling in 2011 the first MRI system dedicated for rodent with a superconducting cryogen free magnet. More recently RS²D developed in collaboration with Mediso innovative preclinical multimodal imaging solutions.

Based within the Eurometropolis of Strasbourg, the company enjoys an advantageous geographical location in the industrial area of Mundolsheim. She holds 800 m2 of workshop and offices and employs around 20 people.

Capitalizing on his experience, RS²D is more and more involved in big innovative development programs, like for the TRIMAGE European project to develop an optimized trimodality (PET/MR/EEG) clinical imaging tool for schizophrenia.

EXHIBITOR INFORMATION & BOOTH NUMBERS

воотн 601



SA Instruments, Inc.

65 Main Street • Stony Brook, NY 11790 USA Phone: +1 631 689 9410 • Fax: +1 631 689 9410 • Email: JHiz@i4sa.com www.i4sa.com

www.i4sa.com with MR, CT, PET, SPECT and Optical

SA Instruments, the worldwide leader in preclinical MR-compatible monitoring and gating systems, is introducing the Model 1035 MR-compatible, multi-parameter monitoring and gating system for veterinary use. SA Instruments, for more than a decade, has offered physiological monitoring and gating systems and other support products for small animal research. The new veterinary monitor will extend monitoring and gating capability to large animals. Systems are compatible

imaging environments. Parameters include ECG, temperature, respiration, blood pressure, oxygen

respiration, blood pressure, oxygen saturation, end-tidal CO2 and auxiliary input channels. Waveform and trend data can be captured, stored and displayed. Several advanced fiber optic sensors are available which are MR and CT-compatible. An ultra-miniature fiber optic pressure sensor provides real time pressure measurements in mice, rats and larger animals. Also available is a ventilator with remote, miniature, pneumatic valves that provides ventilation for animals as small as mice even in the MR environment. Systems are also available to accommodate monitoring and gating multiple animals in multiple imaging modalities simultaneously. Air and fluid based heater systems allow animal temperature to be regulated even in tight imaging setups.

ScanMed

9840 S. 140th Street, Suite 8 • Omaha, NE 68138 USA Phone: +1 402 934 2650 • Fax: +1 402 778 9699 • Email: sales@scanmed.com

www.scanmed.com

ScanMed is an OEM-certified MRI coil development company. All of our cuttingedge MRI coils provide excellent coverage, high SNR, and meet a wide variety of clinical needs.

Our product line includes the world's first wearable pelvic/prostate coil the Procure™ and the world's first fully flexible Blanket Coil. ScanMed also offers a variety of Semi-Flex™ coils including the Elbow/Wrist Coil, Shoulder/Knee Coil, and Long Bone Coil and rigid coils including Adult HNS Coil, Pediatric HNS Coil, Peripheral Vascular Array, Orbit and Mandible Coil, and Knee/Foot Coil. This year, ScanMed is introducing the first-ever Pediatric Interchangeable Head Coil and an innovative Dual-Tuned Lung Coil.

ScanMed is also the largest independently-owned MRI coil repair and refurbishment company in the world. With an extensive parts inventory, in-house component manufacturing, and a highlyskilled team of PhD diagnosticians, we can restore any coil to the safety and performance specifications of the OEM. ScanMed also specializes in MRI coil contract engineering and manufacturing. Our expert electromechanical product development team can take a device from conception to market rapidly and costeffectively. ScanMed's flex-space design facility offers large-scale manufacturing capabilities including ISO 13485 and/or ISO 9001 compliant component sourcing, assembly verification and validation testing, software creation, and 510(k) production.

воотн 700

Shelley Medical Imaging Technologies - A Division of Shelley Automation, Inc.

157 Ashley Crescent • London, ON N6E 3P9 Canada

Phone: +1 519 690 0874 • Email: bob.gravett@sympatico.ca • Email: bob.gravett@simutec.com

www.simutec.com

Shelley Medical Imaging Technologies is a leader in the development, manufacturing and distribution of highly accurate & realistic MRI/PET/CT simulation products for; diagnostic imaging, radiation therapy & endovascular techniques.

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- MRI compatible Linear Motion Stage, use independently or sync'd with Rotational version

- MRI compatible Rotational Motion Stage, use independently or sync'd with Linear version
- Torso, Lung, Spine & Tumor Anthropomorphic Phantom, PET-MRI-CT compatible
- Geometric distortion phantom
- Heart Motion Phantom compatible with MRI, CT & ultrasound
- Physiological flow pump systems, programmable
- QA Flow Phantoms, compatible with MRI, PIV, CT & ultrasound

- Blood mimicking fluids for MRI, CT & Doppler ultrasound
- Anatomically correct vascular models, including patient specific models
- Dynamic Left Ventricle Phantom with realistic functioning mitral & aortic valves
- Micro-CT Performance Evaluation Phantoms

We make custom anatomical structures such as vasculatures, hearts, valves & organs.

EXHIBITOR INFORMATION & BOOTH NUMBER

воотн 301

ISMRM GOLD CORPORATE MEMBER



At Siemens Healthineers, we are passionate about enabling healthcare providers worldwide to deliver high-quality patient care, and to do so affordably.

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www.siemens.com/healthcare

ing, and healthcare IT services – as well as further technologies for therapeutic and molecular diagnostics.

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воотн 726

Skope

Gladbachstrasse 105 • Zurich 8044 Switzerland Phone: +41 43 500 80 60 • Email: contact@skope.ch

www.skope.swiss

MR research methods.

Skope is pioneering dynamic magnetic field monitoring, thus empowering MR engineers and scientists to perform MR imaging at unprecedented accuracy and speed.

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We are looking forward to meeting you at booth 726!

воотн 622

Superconducting Systems, Inc.

900 Middlesex Turnpike • Billerica, MA 01821 USA

Phone: +1 978 935 2805 • Fax: +1 978 330 3022 • Email: pourrahimi@ssi99.com

www.ssi99.com

SSI was the first company to introduce 3T cryogen-free superconducting magnets to the pre-clinical MRI market, and now offers a variety of cryogen-free magnets for MRI applications. New products by SSI include compact cryogen-free magnets suitable to point-of-care MRI. SSI has full capabilities in the design and manufacture of superconducting magnets for a variety of medical applications including those requiring pulsed magnets.



Tesla Engineering, Ltd.

Water Lane, Storrington • West Sussex RH20 3EA UK Phone: +44 0 1903 74 3961 • Fax: +1 44 0 1903 74 5548 • Email: sales@tesla.co.uk

www.tesla.co.uk

Tesla Engineering, Ltd. was founded over 40 years ago to supply magnets for particle accelerators. Today, the Tesla group of companies has factories in the UK, the USA, and the Netherlands. The group has combined expertise in magnetics, composites, and precision manufacturing, and serves a wide range of wellknown customers in national and international laboratories (CERN, Fermilab, Brookhaven), and in several industries (MRI, Proton therapy, Radiotherapy, Semiconductor fabrication, Fusion).

In MRI, Tesla has been an independent supplier of gradient coils for clinical and pre-clinical MRI to many established OEM system manufacturers since 1985, and continues to design and manufacture state of the art gradients. More recently, Tesla was selected as a Strategic Development Partner by a major OEM to develop a new 7T 90cm UHF MRI magnet, the first customer unit shipped in April 2016. Tesla is currently manufacturing a 9.4T whole body MRI magnet.

Tesla's skills in cryogenics, electromagnets, superconducting magnets, and composites are being applied to a new range of products for the MRI industry, including specialized high field magnets for dedicated clinical applications.



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воотн 537

Thornhill Research

210 Dundas Street W. • Toronto, ON M5G 2E8 Canada Phone: +1 416 597 1325 • Fax: +1 416 597 1330

www.thornhillresearch.com

The RespirAct[™] gas flow controller is a device designed to control end-tidal gas concentrations in the lungs and blood.

It can be used in diagnostic procedures which measure vascular reactivity ie. the ability of the blood vessels to regulate blood flow in reaction to varying circumstances which affect blood supply and demand. Failure of the blood vessels to dilate or contract at the appropriate time can starve tissue for oxygen.

воотн 401

ISMRM SILVER CORPORATE MEMBER



Toshiba Medical offers a full range of diagnostic medical imaging solutions including CT, X-Ray, Ultrasound and MR, across the globe.

In line with our Made for Life philosophy, patients are at the heart of everything we do.

Our mission is to provide medical professionals with solutions that support their efforts in contributing to the health and wellbeing of patients worldwide.

Toshiba Medical

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www.toshibamedicalsystems.com

Our goal is to deliver optimum health opportunities for patients through uncompromised performance, comfort and safety features.

At Toshiba Medical we work hand in hand with our partners - our medical, academic and research community.

We build relationships based on transparency, trust and respect.

Together as one, we strive to create industry-leading solutions that deliver

an enriched quality of life.

For almost 35 years, Toshiba Medical has developed innovations in MR that improve operator workflow, image quality and above all patient comfort and safety.

Together, we put patients at ease, through unique technologies that deliver quiet scans, quicker exams and a safer patient experience thanks to our pioneering non-contrast applications.

воотн 728

TracInnovations

Borupvang 3 • Ballerup DK-2750 Denmark

Phone: +45 4026 6114, +45 3138 2850 • Email: info@tracinno.dk

www.tracinnovations.com

TracInnovations and our Tracoline system, TCL3

TracInnovations is a Danish company focusing on innovative solutions for image based diagnosis and treatment.

Motion causes image degradation which impairs the basis for diagnosis. Children and patients with involuntary motions are often not considered for scanning. The goal is to have an efficient and correct motion tracking system without compromising the operational scanner workflow.

TracInnovations Tracoline TCL3 prototype

is now available for Research Sites and the system ensures an unique markerless online monitoring and tracking. TCL3 is MRI compatible and designed for in-bore MRI and PET applications. It is demonstrated for MRI motion correction, retrospective as well as prospective, and for PET motion correction using image space and list-mode.

The TCL3 constructs high quality 3D surfaces from structured invisible infrared light, enabling markerless tracking of the patient's head - all supporting the operational workflow and the patient's comfort.

TCL3 is delivered with a TracSuite software package focusing on robust tracking and simple to use with a Graphical User Interface for real-time monitoring of patient movement.

TracInnovations support optimal motion tracking for correction solutions within innovative research studies.

This will be achievable with the new TCL3 system and in collaboration with Research Sites.

воотн 329

VPixx Technologies, Inc.

630 Clairevue W. Suite 301 • Saint-Bruno, QC J3V 6B4 Canada Phone: +1 514 328 7499 • Email: sales@vpixx.com

www.vpixx.com

VPixx Technologies develops specialized visual displays and data acquisition systems for vision and neuroscience research. VPixx will demonstrate its PROPixx DLP projector, now running up to 1440Hz. MRI installations can use the PROPixx with a full line of fiber-optic response boxes and audio stimulator.

VPixx will also be demonstrating the TRACKPixx, our innovative 2kHz MRI compatible eye tracker.

TOSHIBA MEDICAL



For almost 35 years, Toshiba Medical has developed innovations in MRI that improve operator workflow, image quality and above all patient comfort and safety.

Together, we put patients at ease, through unique technologies that deliver quiet scans, quicker exams and a safer patient experience thanks to our pioneering non-contrast applications.

Toshiba Medical's advanced techniques deliver new diagnostic applications and reduce scan times and contrast usage. Through the strength of our collaborations, we continue to develop advanced technologies together, further enhancing Toshiba Medical's established patient-focused MRI solutions.

Join Toshiba Medical's Lunch Symposium April 27 Thu. 12:00pm at Plenary Hall



Vantage **Galan** "3T

Visit us at Booth 401

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EXHIBITOR INFORMATION & BOOTH NUMBER



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www.wiley.com

ers care, their organizations succeed and the world benefits.

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www.zurichmedtech.com

ZMT Zurich Medtech is a Swiss enterprise providing high-end modeling software, validation equipment and best practices for targeted medical device applications in the field of MRI.

Company description: It's the knowledge

age – and it's Wiley's customers who lead

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ing quality education, the right skills

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research to fuel innovation. Our custom-

the world's knowledge economy.

Our Sim4Life revolutionary simulation platform combines computable human phantoms with the most powerful physics solvers and the most advanced tissue models. For the first time, an analysis of biological real-world phenomena and complex technical devices in a validated

anatomical environment is possible. This unique capability is expanded by IMAnalytics, the new gold standard in implant safety investigations, introduced at the ISMRM 2017. For the first time, it is possible to analyze millions of exposure conditions resulting from the different MRI technologies across the entire range of the patient population within only a few hours.

ZMT's simulation power is complemented by its unmet validation tools, including

fully characterized and ISO17025 calibrated solutions to perform all necessary MR-compatibility assessment of radiofrequency (RF) interactions with medical implants: piX is the first of its kind enabling RF characterization of medical implants, MITS implements testing under wellcontrolled RF conditions, and the unparalleled Time-Domain Sensor (TDS) provides frequency- and time-domain information of RF signals during MRI scanning. Visit us at booth 509 to learn more about our solutions first hand!

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